

Powerlifting USA
Post Office Box 467
Camarillo, CA 93011

Editor-in-Chief Mike Lambert
International Editor Andy Kerr
Feature Editor Dr. Ken Leistner
Research Editor Ron Fernando
Sports Medicine Editor Dr. Tom McLaughlin
Subscription Services Jean Lambert
Graphics/Layout In Joe Lambert
Statistician Herb Glosbrenner
Publisher Mike Lambert

'...the most important people in the production of this publication are the many hundreds of lifters, fans, meet directors, advertisers, and administrators who have made enormous contributions to its success....through their own love for the sport....this is their magazine.'

POWERLIFTING USA (ISSN 0199-8536) is published monthly for \$26.95 by Powerlifting USA Magazine Co., 2486 Ponderosa Dr. North, Suite D-216, Camarillo, CA 93010. Second-class postage paid at Camarillo, CA and additional mailing offices. POSTMASTER: Send address changes to POWERLIFTING USA, P.O. Box 467, Camarillo, California 93011.

SUBSCRIPTION RATES: (US funds only)
USA addresses, 1 yr.....\$26.95
USA addresses, 2 yr.....\$49.95
First Class Mail, USA, 1 yr.....\$48.00
Outside USA, surface mail.....\$36.00 US
Outside USA, air mail.....\$72.00 US

Telephone Orders
Subscription Problems
Call 805-482-2378

POWERLIFTING USA advertising rates available upon your request.

TABLE OF CONTENTS

Volume 14, Number 7 • February, 1991

AROUSAL & PERFORMANCE.....Dan Wagman.....8
ANXIETY & PERFORMANCE.....Quinn Millington.....12
IPF WORLD BENCH PRESS.....Dan Wagman.....14
SOVIETS & STEROIDS.....Leonid Yakovlev M.D.....20
TOP 100 FEATHERWEIGHTS.....E. Jean Lambert.....22
CHRONOBIOLOGY.....John Ware.....23
WENDY BROCIOSUS PROFILE.....Rich Stewart.....26
PHIL HILE INTERVIEW.....Bob Gaynor.....27
LARRY MILLER PROFILE.....Barry Herman.....33
MORE FROM KEN LEISTNER.....Dr. Ken Leistner.....34
BARB RESTER PROFILE.....Stephanie Whitting.....36
ASSISTANCE EXERCISES.....Doug Daniels.....38
ASSISTANCE EXERCISES.....Bryan Wadie.....38
ASK THE DOCTOR.....Mauro Di Pasquale M.D.....40
GLANDULARS.....Dr. Judd Biasiotto.....41
WORKOUT OF THE MONTH.....Jim Lawrence.....46
NATIONAL MEET QUALIFYING TOTALS.....59
UNCLASSIFIED ADS.....59
LARRY MINTZ TRIBUTE.....Artie Dreschler.....61
TOP 20 ADPPA 242 LB.....E. Jean Lambert.....76
COMING EVENTS.....Mike Lambert.....83

ON THE COVER.....1990 IPF 220 lb. World Champion Iuha Hyttinen of Finland psyches up briefly and then maintains an impassive demeanor during the rest of his preparation.

© 1991 Powerlifting USA

Reproduction of this magazine, in whole or part, is prohibited without written consent. Opinions expressed herein are those of the writer only, and may not be in agreement with PL USA

POWERLIFTING USA Magazine

ALL PURPOSE SUBSCRIPTION FORM

YES! SIGN ME UP!
Check one:

- NEW
 RENEWAL
 Address Change

(Indicate previous address)

\$26.95 for 12 monthly issues.
\$49.95 for 2 years (save 14.6%)

Payable to: 'Powerlifting USA',
Box 467, Camarillo, CA 93011.

Name _____ State _____ Zip _____
Address _____
City _____



Anabolic Muscle Building • Performance Enhancing • Energy Metabolizing • 100% Natural • 100% Legal

• 100% Guaranteed • Nutritional Powders • Weight Loss Formulas • Liquids • Vitamins • Minerals

• Herbs • Amino Acids • Nutritional Packs • Sport Beverages • Sport Nutrition • Maximum Potency

STRENGTH COMES IN ALL SHAPES AND SIZES

Strength Systems USA remains at the cutting edge of nutritional technology by providing what your body needs to build the body you want-at a price you can afford. For more information call 1-800-722-FIRM or 203-665-1116.

• Minimum Cost • Technologically Advanced • Mass • Density

• Strength • Growth • Cuts • Energy • Stamina • Power



The Future of Sports Nutrition

© 1991 Strength Systems USA, Inc.

Available through _____ and other high quality health food stores, gyms, and food markets in the USA, Canada, and Europe. Call the above numbers for the retailer or distributor nearest you. Strength Systems USA Labs, Inc., 2144 Berlin Pike, Newington, CT USA 06111

NEWS RELEASE

New products provide peak performance and healthy, safe, natural alternative to steroids.

With all the university studies and clinical research that has been completed, we now know that several products are extremely effective in gaining strength and muscularity.

Vanadyl Sulfate, Chromium Picolinate, and Ferulic Acid potentiate the function of insulin, which is "the body's primary anabolic hormone". They control the transport of protein, carbohydrate, and amino acids into muscle tissue. Insulin and growth hormone (GH) work together for optimum muscle growth.

Diosgenin and Smilagenin are steroid-like saponin. Scientists began searching for plant sources for such steroids as cortisone and the sex hormones back in the 1930's to reduce the expense of producing the substance from animal sources. In 1976, Russian scientists discovered steroid-like saponins possess an anabolic/androgenic ratio even more powerful than synthetic testosterone derivatives...with no harmful side effects.

Amino Acids are the simplest components of protein. They provide the body with energy and endurance and promote muscle and strength gains. They are essential to body growth and repair, and the release of growth factors for hormones. Aminos are a concentrated source of high-potency protein and contain no fat or cholesterol.

The products in this News Release are healthy, safe, natural alternatives to harmful and life-shortening synthetic steroids. These all-natural products provide the desirable protein sparing effect of steroids without the harmful side effects of water retention (edema), testicular atrophy, prostate carcinoma, and acne. Put more power into your weight training and live longer and stronger without steroids.

THE CLOSEST THING TO STEROIDS

The combination of these five natural products is as close as you can get to steroids.



BUY ALL FIVE... ONLY \$95.00 - A 25% SAVINGS!

DIOSGENIN SEPARATE PRICE - \$34.95 Diosgenin was shown to possess an anabolic/androgenic ratio superior to even the most powerful synthetic testosterone derivatives with 87% of the anabolic potency of testosterone, but only 7% of the androgenic effect. The result is a very powerful anabolic agent.	FRAG 75 SEPARATE PRICE - \$14.95 Ferulic Acid (Frag 75) has the ability to help the pituitary stockpile growth hormone and release it when needed. Tests show: 1. Increased muscle mass 2. Decreased body fat levels 3. Increased strength	SMILAGENIN SEPARATE PRICE - \$34.95 Smilagenin is a steroid-like saponin from the Smilax Omata. It gives approximately 60-70% of the results of synthetic anabolic steroids. It is 100% legal for competition with no harmful side effects.	CHROMIUM PICOLINATE SEPARATE PRICE - \$16.95 Scientific research shows that Chromium Picolinate combined with Diosgenin and Boron can dramatically increase growth hormone in the body and triple testosterone levels. It can produce a significant anabolic effect on skeletal muscle, increasing muscularity.	VANADYL SULFATE SEPARATE PRICE - \$20.95 Vanadyl Sulfate is a metabolic response modifier with insulin-like activity. The anabolic actions include increased transport of glucose and protein into muscles. It also helps the body to convert carbohydrates and protein into muscle tissue.
---	--	--	--	--

THE AMINO DEAL

TO achieve maximum size and strength gains, always use aminos with natural anabolic agents.

AMINO 1000 350 CAPSULES 1 BOTTLE \$22.95 2 BOTTLES \$34.95	AMINO 2100 325 TABLETS 1 BOTTLE \$25.95 2 BOTTLES \$38.90
--	---

PLEASE HAVE CREDIT CARD READY WITH EXPIRATION DATE OR SEND ATTACHED FORM WITH PAYMENT.

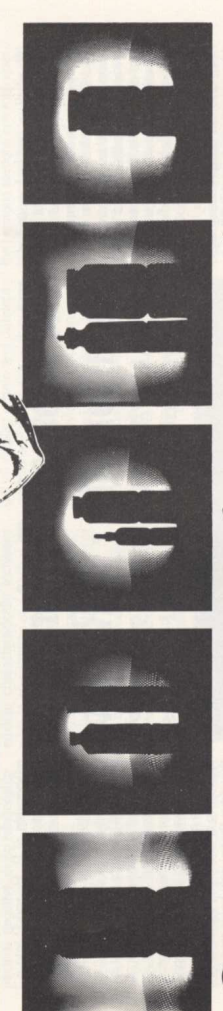
FOR PHONE ORDERS ONLY
1-800-STAY BIG
FOR FAST SERVICE 8 2 - 9 2 4 4
OR INFORMATION: 1-419-756-9427
FAX:..... 1-419-756-1504

PLEASE RUSH ME MY ORDER OF:
 Check or money order Visa THE NATUROID DEAL
 Mastercard American Express THE AMINO DEAL

CARD # _____ EXPIRATION DATE: _____
 TOTAL _____
 NAME _____
 ADDRESS _____
 CITY _____ STATE _____ ZIP _____
 PHONE _____
 WORLD VITAMIN SUPPLEMENTS • 1983 BELLWOOD DR. • MANSFIELD, OH 44904



We save you 40% and more!



Our prices are so low - we have to keep the brand names in the dark

	Sale		Sale
★ The Great Stuff ★	12.89	★ Ultimate Amino Tabs 2300 mg. ★	17.49
Pure Muscle Builder Banana Pwdr. 17 oz. 24.95		2300 mg. Free Form 335 tabs 34.95	
Ripped Fast Fat Burners	8.95	Mesobolone +	15.89
Universal 120tbl. 16.95		15 mg. 100 tabs 30.95	
Trimfast Formula	14.95	Smilax Alcohol Free	13.00
Choc/Van/Straw Pwdr. 1.38 + lbs. 25.95		High-Test 2 oz. 24.99	
Weight Gain Formula 1000 "New"	19.99	MCT Power Formula	6.95
Choc/Van/Straw 1000 4.36 lbs. 29.95		Med. Chain Triglycerides 16 oz. 9.95	
Metabolic Optimizer Formula II	19.89	Liquid Concentrated Amino's	11.99
Choc/Van/Straw pwdr. 3 lb. 29.95		32 oz. 17.95	
Muira Puama	16.89	Opti-APD Protein Capsule	8.45
1000 mg. 120 caps 32.95		(Excell Protein Diluted Form) 150 caps 15.95	
Ultra Yohimbe Bark	18.48	Desiccated Arginine Liver	12.89
1000 mg. 100 caps 36.95		30 gr. 500 tabs 24.95	
Frac (Ferulic Acid Lozengers)	9.39	Energy Packet Power Blend	8.45
150 mg. 100 subin 17.95		w/ Ginseng Guarana vit + min 30 pk 15.95	
Gamma Oryzanol	5.95	Women's 30 Day Multi Vit. + Min.	12.95
500 mg. 100 caps 10.95		30 day-pack 24.95	
100% Natural Cyclofenil	13.89	Anti Oxidants Vitamins + Minerals	7.45
50 mg. 50 tabs 26.95		90 caps 13.95	
100% Nat. G.H.B. PM Growth Formula	13.89	L-Arginine Pyroglutamate L/Lysine	7.45
100 mg. Bottle 26.95		HCL 800 mg 100 caps 13.95	
Carbohydrate Energy Formula "New"	11.95	Inosine Endurance Formula	13.69
Orange 3 lb. 22.95		1000 mg. 100 caps 26.95	
Branched Chain Aminos	10.98	L-Arginine / L-Ornithine	6.45
150 tabs 21.95		500 mg. / 250 mg. 60 caps 11.95	
Pro-Chromium Sulfate Pump	4.89	100% Egg Protein Powder	18.95
Synergist + Vanadyl 90 tabs 8.95		Universal Van. 40 oz. 34.95	
Lactic Acid Buffer Powder	10.79	Genesis Formula 30 day Pack Universal	21.45
Phosphate Bicarbonate & Carnosine 180 caps 15.95		(Vit + Min + Glands + Herbs + Aminos) 41.95	
Prof. Protein Formula	16.95	Advanced Multi Vit. & Minerals	27.95
Choc/Van/Straw Pwdr. 1.12 + lbs. 24.95		30 pks. 40.95	
Power Drink	13.99	Amino Formula 2000 "New"	18.99
Exercise & Recovery Drink 1.56 lbs. 19.95		150 tabs 28.95	
Chromium Picolinate	4.49	Anomia Scavengers	8.95
200 mcg. 100 caps 8.59		Protein Metabolizers 30 caps 16.95	
Tri-Boron	3.39	Cybergeneics Fusion AM & PM	29.95
3 mg. 100 caps 5.95		3 pk. kit 44.95	

Ask about our buy one, get one for \$1.00 policy • We accept MasterCard, Visa & Discover

CALL 1-800-634-8072

Monday - Friday
8AM - 7PM EST
Prices Subject To Change

Call for free catalog & weekly price specials • Shipping & Handling extra • Wholesale Available

POWER-RESEARCH

dedicated to bringing Science to the sport of Powerlifting

The Arousal - Performance Relationship - A Review

by DAN WAGMAN, B.S., 1990 USPF Sr. National Champion, 181 lb. Class



Ed Coan validated his calm and precise approach to powerlifting success with his world record lifts at the 1989 USPF Senior Nationals in Las Vegas.

"Psyched up", aroused, motivated, eager, anxious,estrated. All these terms are often considered to be synonymous with performance, especially in athletic events. Many athletes and coaches believe that the more aroused, motivated and "psyched up" an athlete is, the greater his or her performance will be. How often have we heard "He had a bad day today. I guess he wasn't motivated enough."

Yet, one can observe many elite athletes, with apparently different levels of arousal, performing at their best. As an example, I observed Ausby Alexander and Ed Coan break 1989 Senior Nationals. Ausby was incredibly "psyched" for everyone to see. Ed, on the other hand, was quite the opposite. He was very quiet and told, very calmly, one of the spotters to adjust the rack immediately before he started his lift. He would record a new personal best. I would like to state that Ausby was one who was more aroused than Ed. I say that if Ed would have been more "psyched" or "psyched" that he could have lifted more weight? Can one assume that high levels of arousal are directly related to one's demeanor?

In reviewing the scientific literature it was discovered that being aroused is a complex emotion and not necessarily performance enhancing. Furthermore, it is necessary to distinguish between the terms arousal and anxiety. They may not be considered as synonyms for the arousal one experiences prior to and during competition.

A multitude of theories and scientific terms have been developed in describing arousal. Sigmund Freud, as an example, referred to arousal as psychic energy, but also referred to that emotion as tension and anxiety (Martens, 1974). In an attempt to clarify what arousal is and how it can affect an athlete's performance, several definitions will be discussed. Different theories of arousal and the different levels of arousal and their effects on performance will also be presented.

DEFINING AROUSAL

With many different definitions of arousal, a simple way to describe arousal would simply be by stating that it is a physiological response to a situation that motivates, directs and integrates a person's behavior. In more specific terms, the level of intensity projected in an individual's behavior is termed arousal. In scientific research, the construct of arousal is used interchangeably with terms such as tension, activation, anxiety and drive (Duffy, 1962; Kaus, 1980; Landers, 1980; Passer, 1984). However, one needs to distinguish between anxiety and arousal and they

is correct, rather than stating it is correct or incorrect.

Although criticized, the inverted-U hypothesis is favored over drive theory for several reasons. First, habit hierarchies cannot be specified for motor performance in the P=FHD relationship. In some cases, a positive, negative, or no relationship between drive and arousal has been found. Secondly, sometimes when testing for drive, the inverted-U hypothesis has been found. Thirdly, the inverted-U hypothesis seems to supersede drive, in that when testing a positive linear relationship between arousal and performance, increases in performance may be found initially, but with further increases in arousal, a decrement in performance occurs. Thus, it may be concluded that the level of arousal was not increased enough, or was not elevated enough to begin with, due to imprecise measurement of arousal.

In summary, the inverted-U hypothesis finds support due to empirical evidence and its intuitive appeal. In addition, it may be generalized to both laboratory experiments and field experiments. One of the problems in dealing with the inverted-U hypothesis would be the difficulty in verifying that one has different levels of arousal in the different levels. Especially since a minimum of three different levels must be furthered (low, optimal, high). Furthermore, how does one define optimal levels of arousal? There are most certainly individual differences in physiological responses (Iso-Ahola & Hatfield, 1986).

Both drive theory and the inverted-U hypothesis have their place in researching the effects of arousal on performance. Rather than arguing theories, favor that they act together with the addition of cognition. At a time when cognitive and affective complex interactions in relation to motor performance were methodologically beyond reach, the inverted-U hypothesis was, with certainty, the most plausible explanation of the arousal/performance relationship. Recently, however, affect and cognition have become most valuable in arousal research. Affect and cognition may now be examined along with complex physiological differences that characterize various states of the inverted-U hypothesis (Neiss, 1988).

In re-examining the arousal/performance relationship, Burton (1988) found that one can, and indeed should, differentiate between cognitive and somatic anxiety and self-confidence. Thus, a multidimensional concept of anxiety must be considered. Cognitive anxiety is described as all the negative feelings about competition. It is characterized by worry, negative self-talk and unpleasant visual imagery. Cognitive anxiety arises when expectations of success become negative. Cognitive anxiety is strongly related to sport performance.

Somatic anxiety is the physiological component of anxiety which is directly related to autonomic arousal. Somatic anxiety is typically short in duration and consists of experiencing anxiety during locker room preparations, pre-contest warm ups and through the spectators. Somatic anxiety characteristically increases prior to competition and reaches its peak as the competition begins, then decreases rapidly. Somatic anxiety may therefore be expected to affect performance only in the beginning of the competition.

In conclusion, it must be recognized that cognitive worry has a much greater impact on performance than does somatic anxiety, which may be characterized by similitudes with physiological components of arousal. Thus, arousal is not singularly responsible for a given level of performance, as the effects of cognition

lower athletes, can tell the difference between high levels of arousal and some with low levels of arousal. This depends on skill, frequency, duration and intensity of arousal or anxiety (Passer, 1984). The optimal level of arousal may vary with age, learning experience, recent demands, and diurnal cycle. Generally, individuals may differ for genetic or environmental reasons which in turn may affect their temperaments (Zuckerman, 1979). Individual differences in the level of arousal could also be due to variations in environmental demands, type of nervous and endocrine systems, and genetics (Duffy, 1962; Orendine, 1970).

As in many other aspects of life, the label of spectator and investor take on a special meaning when applied to sports arousal. One could assume that arousal is more aroused than unstable (neurotic) people become aroused more easily than stable people (Kane, 1972). When talking with athletes, one often notices that some thrive on the presence of spectators, whereas others find spectators extremely disruptive to their performance. Often a highly concentrated individual will seek company of others and in finding company arousal will rise. Generally, if the initial motivational level is low, the production of others will increase arousal (Schachter, 1959; Cottrell, 1968). One can easily see how this can affect individuals differently. Many times the presence of others makes the competition stressful for some athletes. The amount of stress does not simply abate, but is rather inhibited or controlled. It would then greatly depend on the athlete on how well the stress is managed (Fenz and Jones, 1972; Green and Gange, 1977).

Other research indicates that autonomic arousal increases as performance increases as perceived and as the importance of the performance increases. But arousal can also be caused by excitement, elation and anger. It is hard to tell what form arousal takes in an in-

physiological response is typical for arousal (Lyttinen, 1964; Schmore, 1959; Soutstrom, 1984).

As different levels of arousal occur, different patterns of arousal are displayed. This is to say that a low level of arousal, a medium level of arousal, and a high level of arousal will all display certain and different symptoms. Additionally, as there is a very low correlation of physiological and mental symptoms from individual to individual, one person may show increased heart rate as a sign of arousal, but another person's arousal level may manifest itself in increased muscle tension. Thus, one would need to look at as many arousal measures as possible in order to determine the actual level of arousal at a particular point in time. Interestingly, Rusball (1979), discovered that elite athletes, but not lower athletes, can tell the difference

between high levels of arousal and some with low levels of arousal. This depends on skill, frequency, duration and intensity of arousal or anxiety (Passer, 1984). The optimal level of arousal may vary with age, learning experience, recent demands, and diurnal cycle. Generally, individuals may differ for genetic or environmental reasons which in turn may affect their temperaments (Zuckerman, 1979). Individual differences in the level of arousal could also be due to variations in environmental demands, type of nervous and endocrine systems, and genetics (Duffy, 1962; Orendine, 1970).

As in many other aspects of life, the label of spectator and investor take on a special meaning when applied to sports arousal. One could assume that arousal is more aroused than unstable (neurotic) people become aroused more easily than stable people (Kane, 1972). When talking with athletes, one often notices that some thrive on the presence of spectators, whereas others find spectators extremely disruptive to their performance. Often a highly concentrated individual will seek company of others and in finding company arousal will rise. Generally, if the initial motivational level is low, the production of others will increase arousal (Schachter, 1959; Cottrell, 1968). One can easily see how this can affect individuals differently. Many times the presence of others makes the competition stressful for some athletes. The amount of stress does not simply abate, but is rather inhibited or controlled. It would then greatly depend on the athlete on how well the stress is managed (Fenz and Jones, 1972; Green and Gange, 1977).

Other research indicates that autonomic arousal increases as performance increases as perceived and as the importance of the performance increases. But arousal can also be caused by excitement, elation and anger. It is hard to tell what form arousal takes in an in-



Ausby Alexander, one the other hand, is one of the most demonstrative athletes you will ever see - feeding off audience response and stimulating it even further.

symptoms being manipulated. It was concluded, that as physiological arousal governs the intensity of effort in the appropriate activity, it is accompanied by the appropriate thought patterns.

SYMPTOMS OF AROUSAL

One can distinguish elevated levels of arousal by their physical and mental symptoms. Physical symptoms would include elevated heart rate, blood pressure, blood sugar, EEG, skin conductance, skin temperature, and adrenal increased perspiration, frequent urination, heavy breathing, nervous movements, increased muscle tension, insomnia, nausea, and pupil dilation. Mental symptoms would include narrowing of attention, feeling fatigued and depressed, dizzy, confused and a sense of loss of control (Nideffer, 1976 & 1985). The aforementioned physical symptoms differentiate consistently among conditions and individuals and no single

measure, cognitive, behavioral, and autonomic arousal increases as performance increases as perceived and as the importance of the performance increases. But arousal can also be caused by excitement, elation and anger. It is hard to tell what form arousal takes in an in-

REFERENCES



Dan Wagman is a former U.S. Army Powerlifting Champion, who won the bronze medal at the 1990 IPF World Powerlifting Championships in Holland, and the silver in the 1990 IPF World Bench Press Championships, both in the 181 lb. class. He is presently a graduate student at Michigan State.

Oxendine (1970), assigns numerical values of arousal to certain sports skills, where the greater the number the higher the level of arousal must be to reach its optimum. 5 - Football, Running (220-440), Weightlifting 4 - Long Jump, Shotput, Swimming, Wrestling 3 - Basketball, Boxing, High Jump, Gymnastics 2 - Diving, Fencing, Tennis 1 - Archery, Bowling, Golf, Figure Skating The only problem with this design is that many sports require both speed and accuracy, thus resulting in different levels of arousal within the same sport. This makes it extremely difficult to predict optimum arousal levels using the Oxendine model. Landers (1986), states that as levels of arousal increase a narrowing of attention results. Nideffer (1976), sees this as a positive response at it helps an athlete focus on his/her task. Attentional narrowing is not viewed as a positive side effect by Landers, however, because as he points out, it is accompanied by a loss of sensitivity to environmental cues. Thus the proper level of arousal would depend on the attention level necessary (utilization of all necessary cues) to complete a task, and, of course, some athletes would become too anxious to complete a task. This tunneling effect, as Carroll (1980), terms it, mostly affects the performance in sports of complex tasks. As arousal increases, attention, as already mentioned, narrows, but so does the visual field. The higher the breadth of perceptual cues necessary to complete a task the more it will suffer under high levels of arousal. Thus, sports demanding a narrower level of attentional focus will tolerate higher levels of arousal than those with a wider focus. In fact, the higher the level of arousal, the more likely it is that the athlete will be directed solely at the bar and the head judge. We must also assume that performing the squat, bench press and the deadlift are not only simple motor tasks but also extremely well learned movements as hours every week are spent practicing them. In consideration of these sport specific factors one may conclude that a drive theory production would generally apply to powerlifting. Remember, however, that increases in arousal will result in narrowing of attention accompanied by a lesser ability to comprehend activities going on around the lifter; for the sport of powerlifting this may be considered a positive side effect of increased levels of arousal. One should not assume, however, that one's performance will continually increase as one gets more and more aroused or 'psyched', but rather keep in mind that one will eventually experience a drop in performance as proposed in the inverted-U hypothesis. It may be assumed that this will occur at a much later point in time in the arousal continuum due to the specifics of the sport. Individual factors such as experience, susceptibility to arousal and personality traits must all be considered when determining how high a level of arousal one desires in order to excel in powerlifting. Furthermore, cognitions and their effects must not be neglected in evaluating performance. In competition the powerlifter's goals obtained in the training cycle for the meet. This would frequently control any cognitive self-doubt as the weights that will be attempted are in relation to the achievements of the training cycle. Other ways, do not attempt a 630 lb. deadlift if you have only squatted 600 lbs. in training. An attempt of 605 or 610 lbs. would be reasonable and the attempt could be approached with a high degree of self-confidence. One way through simple experimentation in training sessions and competition, develop a most effective strategy in elevating arousal to one's own, very specific performance optimizing levels. These easy to follow steps for coaches and the individual athlete are proposed: 1) Know the athlete and their arousal levels and have a check list of positive arousal symptoms from which they cannot deviate. 2) An effort should be made to recapture previous good preparations and compare them to lesser performances in an attempt to achieve the same feelings observed in previous outstanding competitions or training sessions. 3) Development of consistent and predictable methods of competition preparation are crucial. If this article has generated any thoughts or questions, please feel free to contact me at: Don Wagman, 2345 N. Harrison Rd., No. 9, East Lansing, MI 48823; 517-351-9818. Acknowledgement: I would like to thank Dr. Martha Ewing for her assistance in writing this article.

More is Better' relationship in terms of athletic performance. At this point, the arousal/performance relationship could be confusing to an athlete or non-athlete, who feels that their performance lacks motivation. A very important question one may ask is: 'What then, is my optimal level of arousal?' The following review of optimal level theory (OLT) will address that question. In its simplest terms, proposes that every individual has their own optimal level of arousal, which is complex and arousal (Iso-Ahola & Hatfield, 1986; Carron, 1980). The diurnal cycle explains that throughout the day, the optimal level of arousal varies with the level of arousal that is regulated by the intrinsic diurnal rhythms. As an example, drowsiness which is below optimum during the day is optimum at night before sleep. Thus the optimal level of arousal throughout the day must track the diurnal levels and it also depends on the realities of the task demands (Zuckerman, 1979). It is suggested that when a state of optimal arousal has been reached, one has the ability to discriminate and select from the many available situational cues for Singer, 1975). It should be noted, however, that in non-athletes only, the amount of arousal necessary to complete the task is used (Duffy, 1962). Zuckerman (1979), suggests that arousal potential represents something like overall power to excite the nervous system, and to influence behaviour. It must be remembered that optimal performance and total concentration can only occur when the level of physical arousal matches the demands of the competitive situation. As stated previously, it is important to realize that individual differences in arousal exist and thus one should attempt to find one's optimal level of arousal by, for instance, comparing arousal levels with previous optimal performances (Nideffer, 1976). One might consult a training log or competition log in order to determine when one competed best and compare those arousal levels to competitions in which performance was low. It is extremely important for the coach to understand and accept the individualism factor, especially when he/she is a team coach. Coaches cannot give the whole team to work on psyche speech and expect it to make for all of the team members equally well. Some may benefit most in being laid back and some athletes know they literally need to 'psyche down' (Nideffer, 1985). It is also of importance for the coach or athlete to realize that the individual levels of optimal arousal for optimum level of performance must be able to be maintained and regulated throughout the competition. This becomes difficult when the sport takes hours such as tennis, baseball, soccer, and even powerlifting (Silva & Weighberg, 1984).



Kresti Vilmi of Finland, the 3 time IPF World Champion at 275 lbs., is normally quite stoic, until after the winning deadlift he shows his emotions.

greatly in the amount of arousal or 'psyche' necessary to perform well. A great deal of research relating to motor task and level of difficulty, and the necessary level of arousal in order to complete a task, has led to some general conclusions. As too much arousal may not be good because of increased muscle tension, three major tenets have been proposed. 1. High levels of arousal are optimal for performance in gross motor and endurance tasks. 2. High levels of arousal are considered as nonproductive when complex skills, fine muscle movement, coordination, steadiness and concentration are necessary. 3. A slightly above average level of arousal for normal or sub-normal motor tasks is recommended (Fenz, 1972; Iso-Ahola, 1986; Kauss, 1980; Martens, 1974; Oxendine, 1970; Silva 1974; Soustrom, 1984). Rushall (1979), in his research, has observed that low levels of arousal in an athletic setting will result in lethargic activity, lack of precision and vigor in actions, attention to distractors, deviations from the competition strategy, socializing, and waiting others. High levels of arousal, however, have been typically described as uncontrolled activity, perpetual motion without purpose, excessive information, scared appearance, deviation from precompetition strategy, and unusual behavior, socializing, and panic impression. In this context, it should be noted that intermediate levels of arousal are positively related to stimulus intensity, complexity, unpredictability, and incongruity. There is, however, a negative relationship between arousal and stimulus consistency and repetition or familiarity (Zuckerman, 1979).

OPTIMUM LEVEL THEORY

It should be apparent by now that arousal does not represent a simple

Burton, D. (1988). Do Anxious Swimmers Swim Slower? Reexamining the Elusive Anxiety-Performance Relationship. *Journal of Sport Psychology*, 10, 45-61. Carron, A. (1980). *Social Psychology of Sport*. Movement Publications, Ithaca, NY. Duffy, E. (1951). The Concept of Energy Specialization. *Psychological Review*, 58, 305-310. Fenz, W.; Jones, G. (1972). Individual Differences in Physiologic Arousal and Performance in Sport Parachutes. *Psychosomatic Medicine*, 34, 1-8. Green, R.G.; Gange, J.G. (1971). Drive Theory of Social Facilitation: Twelve Years of Theory and Research. *Psychological Bulletin*, 78, 125-148. Iso-Ahola, S.E.; Hatfield, B. (1986). *Psychology of Sports*. Wm. C. Brown, Publishers, Iowa. Kane, J.E. (1972). Psychological Aspects of Physical Education in a Sport. *Routledge Kegan Paul*, Boston. Kauss, D.R. (1980). The Arousal-Performance Relationship Revisited. *Research Quarterly*, 51, 77-90. Lyytinen, H. (1984). The Arousal-Performance Relationship. *Journal of Human Performance and Physical Fitness*, 18, 14-22. Martens, R. (1974). In: J.H. Wilmore (Ed). *Exercise and Sport Sciences Reviews*. Human Kinetic Publishers, Champaign, IL. Martens, R.; Gill, D. (1976). State Anxiety Among Successful and Unsuccessful Competitors Who Differ in Competitive Trait Anxiety. *Research Quarterly*, 47, 698-708. Neiss, R. (1968). Reconceptualizing Arousal: Psychobiological States in Motor Skills. *Psychologica*, 17(2), 101-103. Nideffer, R.M. (1976). The Inner Athlete: Mind Plus Muscle for Winning. Thomas Y. Crowell Co., NY. Oxendine, J.B. (1970). Emotional Arousal and Performance. *Research Quarterly*, 41, 732-734. Passer, M. (1984). In: J.M. Silva, R.S. Weinberg (Eds). *Psychological Foundations of Sports*. Human Kinetic Publishers, Inc., Ill. Rushall, M.F. (1979). *Psychology of Sport*. Pelham Books, London. Scanlan, T. (1984). In: J.M. Silva, R.S. Weinberg (Eds). *Psychological Foundations of Physiological Activity as a Function of Task Differences and Degrees of Arousal*. *Journal of Experimental Psychology*, 38, 117-128. Silva, J.M.; Weinberg, R.S. (1984). *Psychological Foundations of Sport*. Human Kinetic Publishers, Inc., Ill. Singer, R.N. (1975). Motor Learning and Human Performance. MacMillan Publishing Co., NY. Soustrom, R. (1984). In: J.M. Silva, R.S. Weinberg (Eds). *Psychological Foundations of Sport*. Human Kinetic Publishers, Inc., Ill. Spence, K.M.; Fisher, I.; McGarr, H. (1978). The Relation of Anxiety to Performance. *Journal of Experimental Psychology: Applied*, 4, 1-10. Spence, K.M.; Fisher, I.; McGarr, H. (1978). The Relation of Anxiety to Performance. *Journal of Experimental Psychology*, 32, 296-305. Spence, K.M.; Taylor, J.; Ketchell, R. (1956). Anxiety (Drive Level) and Degree of Competition in Paired-Associates Learning. *Journal of Experimental Psychology*, 32, 306-310. Spielberger, C. (1966). *Anxiety and Behavior*. NY Academic Press. Yerkes, R.; Dodson, J. (1908). The Relation of Strength of Stimulus to Rapidity of Habit Formation. *Journal of Comparative Neurology and Psychology*, 18, 459-582. Zuckerman, M. (1979). *Sensation Seeking: Arousal, Individual Differences, and Law*. Lawrence Erlbaum, Hillsdale, NJ.

CONCLUSION

How can all this information help the athlete to reach his or her optimal level of arousal? The answer is simple: by understanding the individual differences in arousal and the relationship between arousal and performance. This information can help the athlete to reach his or her optimal level of arousal and thus achieve his or her best performance.

POWER-RESEARCH

dedicated to bringing Science to the sport of Powerlifting

Anxiety in Experienced and Inexperienced Lifters as told to PL USA by Quinn Millington



Picture a normal gym. At one end, a seasoned, well-built lifter runs his hands through the chalk box and dives onto the platform, gasping for air expended in useless enthusiasm, and begins the lift. Only after the lift is nearly over does the lifter realize the need for competition technique.

The observable differences between experienced and inexperienced lifters in the gym are evident in their outward behavior. The lifter with years of training and exposure is confident, anxious, and yet composed. The new lifter, with a few months of training and maybe one competition, acts hastily and seems to lack any composure. These differences were the impetus for a simple study that measured the levels of anxiety between these two sets of lifters.

Heart rate is a measure of anxiety. Accordingly, I expected that any differences in anxiety between experienced and inexperienced lifters would appear as a difference in their heart rates. Just as an inexperienced lifter concentrates on strict control and proper navigation of an automobile and an experienced driver doesn't, I thought that an inexperienced lifter would need more concentration on technique to complete a lift successfully than an experienced lifter. Consequently, a comparison of the heart rates of the lifters to the effects of anxiety on the lifters' success of anxiety on the lifters' success.

Several lifters at two different competitions volunteered to participate in this study. These lifters were both inexperienced and experienced, several have competed on a national level. The pulse was monitored until the lifter departed for the platform. Consequently, all heart rates represent the anxiety of the lifter just seconds before the actual lift.

In the squat, the average heart rate for the inexperienced lifters was 96.9 beats/minute for all successful lifts. The average for missed attempts was 102.2, which is 5.3 beats/minute higher than the mean for successful lifts. The squat requires concentration, and often this lift can determine the outcome of the meet. This apprehension coupled with the fact that the squat is the first lift may serve to stimulate the anxiety already present in an inexperienced lifter. For the inexperienced lifter lacking competition exposure, anxiety detracts from the concentration needed to perform within the rules.

The wide range of heart rates dis-

played by the inexperienced group indicates that some individuals concentrated solely on the technical complexities of the squat and had low heart rates, while others with high heart rates demonstrated little or no platform control. A simple statistical explanation is difficult. The performance of the inexperienced lifter appears almost random in the squat. For the experienced lifters, the average heart rate was 123.7 beats per minute for all successful lifts. The standard deviation for the experienced lifters was less than that of the inexperienced lifters, meaning that the more experienced lifters were closer to the average, exhibiting less variation, and a much smaller range in heart rates. The ratio of good lifts at

the average was also much higher than the ratio for the inexperienced lifters. All of the missed attempts among the experienced lifters occurred between 110 and 120 beats per minute, well below the mean for successful lifts.

The bench press exhibited a slightly higher average heart rate among the inexperienced lifters than the squat. The mean was 102.2 beats per minute. A lower standard deviation of 10.3 may be evidence of a more controlled group of inexperienced lifters; that is, more of the inexperienced lifters were closer to the average. With the competition well under way, pre-competition anxiety has been eliminated and the lifters begin to fall into a more definite

pattern. The experienced lifters also fall in line with an average heart rate of 127.5 beats/minute for all successful attempts. A standard deviation of 11.4 demonstrates a still closer alignment of all successful lifts in relation to the average heart rate. Note also that the average for both groups of lifters has increased. However, the average for the experienced lifters remains significantly higher than the average for the inexperienced.

It is also important to point out that the mean heart rate for unsuccessful attempts in the bench was 114.4 beats/minute for the inexperienced lifters and exactly 100 beats/minute for experienced lifters. An elevated heart rate among inexperienced lifters correlates to a missed attempt, supporting the idea that an increased level of anxiety results in a decreased level of technical competency. Conversely, the average heart rate for a missed or failed attempt among experienced lifters was 100 beats per minute, significantly lower than the mean for their successful attempts, indicating a lack of anxiety results in a missed attempt among experienced lifters.

The deadlift was the most interesting, especially among the experienced lifters. Here their heart rates jumped to an average of 140 beats/minute. Again, the standard deviation dropped to 9.5, evidence that the lifters were yet closer to the mean in regards to successful attempts. The average heart rate for missed attempts among the experienced group was 116.7 beats per minute.

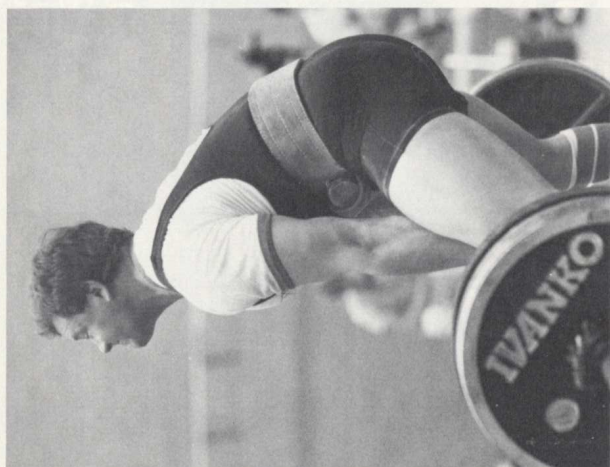
Two possible factors appear to contribute to the high heart rate associated with the experienced lifters' successful attempts. The most likely is that the lifters will add more weight for a shot at first place. To complete the lift is paramount, and the level of anxiety increases. Additionally, of the three lifts, the deadlift appears to require the least amount of technical concentration in a meet, allowing the lifter to function within the rules without a great deal of technical thought. The mean for a missed attempt for experienced lifters was 116.7 with a standard deviation of 5.77. Most missed lifts occurred in the range of 105.2 to 128.2. On the other hand, most of the lifts that were successful occurred between 121.0 and 159.0 beats/minute. This supports the idea that an increased level of anxiety results in a higher level of success for the deadlift among experienced lifters.

The mean heart rate for the inexperienced lifters increased as well to 119.7, but not to the extent that the experienced lifters' heart rates increased. However, the standard deviation also increased to 19.6, denoting a wide range of heart rates,

The mean for an unsuccessful attempt was 95.5 beats/minute, with a large standard deviation of 17.7, also indicating a wide range of heart rates.

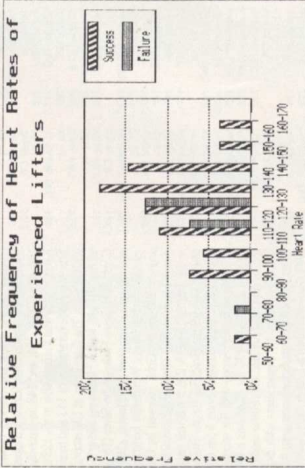
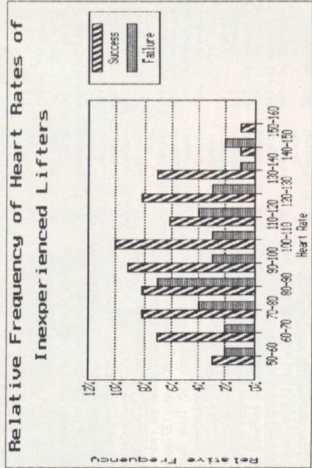
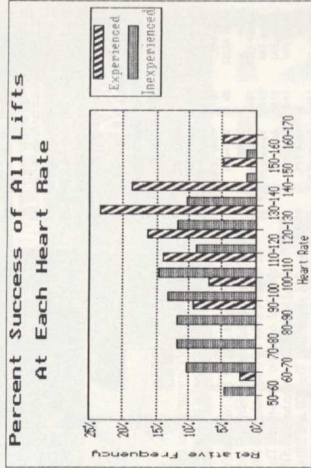
On this lift, the inexperienced lifters exhibited a trend similar to experienced lifters. As anxiety increased, so did the ratio of successful lifts. This supports the idea that the deadlift requires little technical thought in relation to the other lifts. As a consequence, the lifter can concentrate on the possibility of a successful lift.

It appears that some of the lifters lost interest because of continuing difficulties throughout the meet. To the inexperienced lifter, it is conceptual impossible to catch the apparent winner. The result is a loss in interest.



Quinn Millington was a phenomenal teenage lifter, setting numerous records. Now the lifetime drug free athlete is developing his intellectual capacity to understand the principles of successful competition efforts.

In summary, I found that the inexperienced lifters are adversely affected by anxiety in both the squat and the bench press, and the experienced lifters need the element of increased anxiety to successfully complete a lift in all events. In the deadlift, where a high level of concentration isn't needed, the inexperienced lifters competed best with an elevated heart rate (increased anxiety). However, the average, extended throughout the entire competition, indicates that the experienced lifters were more successful at an elevated heart rate than were the inexperienced lifters. This study stresses the importance of automating the skills in inexperienced lifters, allowing the increase in anxiety to act as an aid rather than a handicap.



Be Your Competitive Best

Durk Pearson & Sandy Shaw
DESIGNER FOODS™

LES CHENEY
3 Time National Masters
Champion, National
Record Holder, Natural
Nationals, USPF —
NASA, 1st place Masters
NASA International
Russian Meet 1990

FIRST COURSE
For Cutting Up — Lose
Fat Without Losing Size

BE YOUR BEST
Incredible New GH
Releaser — It Works!

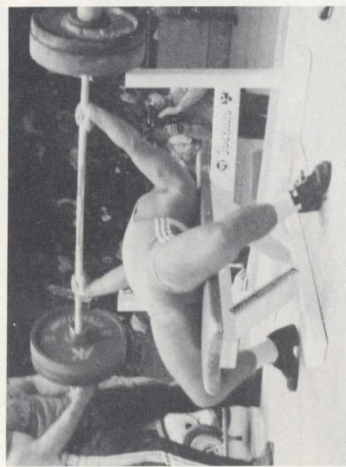
WOW
When You Need A Boost
or Pick-Me-Up to
Get Your Best Workout

Omnitrition International
Akron, Ohio
LES CHENEY
PAUL LOUNSBURY
216-699-6026
212-581-0062

DISTRIBUTORSHIPS AVAILABLE

I.P.F. World Bench Press Championships

as seen by USA Coach Dan Wagman



The 1st I.P.F. World Bench Press Championships were held on December 15-16 at the Walker Hotel in Russelsheim, Germany, which is only about 20 min. from Frankfurt. The training facility, meet site, and benches were only about 200 meters apart, which was very convenient and in walking distance. The gym was very nice with all the necessary equipment for powerlifting. The squat is not the favorite exercise of most lifters, even when you're a powerlifter, however here in Germany, when I worked out on Friday before the meet, I saw a lot of lifters who were going to bench. When I told them I was going to squat they all thought I was crazy and asked why I would do such a thing. I replied with the answer: "I should bench only two days before the meet. Shoulder strapping was the answer."

On Saturday, 17 disabled lifters started the meet. Ann Sondhi took the 105's with a strong 231 over John Tyrrell 115. Ali Aliqzali was the only lifter at 114 but with a 295 bench who can question a gold medal? The 125's were won by Andreas Klein's 181. In the 148 lb. class Mihaly Virag took his title strongly with a 297 over Ali Akper's 281 and Michael Paurobert's 198 attempt. Bernd Vogel was the only competitor at 165 and

recorded a great 396. At 181 Nick Silver's 380 outperformed Bela Bogdary's 358 and Ed Worn's 165 for the Gold medal. The 198 lb. class had only two competitors, Tim Toner and Fred Mockenize who benched 303 and 286 respectively. The 220's and 240's were split also with two lifters each. The 240's were won by Yui Ling Wu's smoked a 282 Gold medal over a 220. In the 260 lb. class, Stas's incredible feat of coming out of all the medals in the 114's went to Andrzej Stanoszek of Poland with a National record lift of 325. The Silver medal went to Chen Hsu with a lift of 248 followed by Christian Klein's Bronze medal and national record performance of 226 lbs. The 123 lb class dominated the U.S.'s first and only Gold medal. Clarence Flecker Jr. dominated this class with a 297 lift. Clarence felt that his third attempt choice of 308 was misjudged and that he should have taken 303 instead. Nevertheless he was very happy with his performance and he was the only lifter to be able to communicate with the Polish team members. It was funny to see the expressions on their faces, which seemed to say "A black man speaking Polish? How can this be?" The Silver and Bronze medals were awarded to Yuan Jung Chang and Chao Ping Chang from Chinese Taipei with respective performances of 259 and 253. The 132's were strongly contested with 8 lifters. This class was won by Juhana Järvinen who only made his opening attempt of 308. Second place and 294 twice, and the Bronze went to Frank Stas with a second attempt of 297. Stas was delighted with second attempt of 297 for 5th place. He couldn't quite look out the 314 needed for the Gold.

Scott Polke's (USA) missed attempts at 308 were quite upsetting to him as he had his eyes on the Gold. Although he felt he was not as strong as expected, he along with everybody else in the contest (except the judges) thought that his third attempt was perfect and deserved three white lights. At 148 Kurt Ruchow from FRG (East) dominated with a personal best of 385 followed by Marku Stappertbeck's lift of 363. Saban

Marku Stappertbeck's lift of 363. Saban

Marku Stappertbeck's lift of 363. Saban

Marku Stappertbeck's lift of 363. Saban

Marku Stappertbeck's lift of 363. Saban

Marku Stappertbeck's lift of 363. Saban

Marku Stappertbeck's lift of 363. Saban

Marku Stappertbeck's lift of 363. Saban

Marku Stappertbeck's lift of 363. Saban

Marku Stappertbeck's lift of 363. Saban

Salkanaho recorded a 358 which was a personal best and a Bronze medal attempt. At 165 the Gold medalist from Finland, Pentti Kalliolevo, made all 3 attempts with his third attempt at 396 being a PR. Hans Jaegen Kaale followed in second with 374. Peter Bartlett from Great Britain garnered the Bronze medal with only his opener of 363. The 181's showed some definite world class lifting with the Jr. World record holder class FRG benching a fantastic 485 for the Gold. Dan Wagman from the USA went 3 for 3 finishing off with an easy 462 for the Silver. He was quite satisfied with his performance as he was the only lifter to make a second attempt in the 181's. Peter Hübner from the Czech Republic, Mike Hübner from the Czech Republic, and the meet director, who also competed in this contest came back after missing 429 on a second attempt to smoke it and take the Bronze medal. Torsten Pecht moved 485 very impressively for a personal best and a gold medal in the 198's. Rudi Kollmann's 446 gave him the Silver medal, followed by Andreas König, the third German in a row, whose 429 placed him third. 485 seems to have been the magic number, as it was also the winning weight at 220, lifted by Arno Meisner from the FRG. He was followed by Arno 292, Schulte's 479, and Sami Vuori's 481. At 242, Italy's saw an attempt in the 198's, followed by Jorma Laaksonen in Finland with 490.

He was followed by his countryman Marko Palden who could only manage his opening attempt of 473. The Bronze medal went to Walker Kurda with a 446. At 275 two U.S.A. lifters started. Neither, however, could stop the fantastic Jack Johnson from Sweden who's 3 for 3 day produced a 540 for the Gold. Tony Haynes, a U.S. soldier stationed in Germany, was very impressive both physically and in his strength. His 3 for 3 day was completed with an easy 534 which left the crowd cheering in amazement and with no doubt that he had more in him. In the 300 lb. class, the USA and the FRG, incredibly muscular individuals, met the bronze medal with a second attempt at 696. He tried to overtake Tony for the Silver on bodyweight, but could not lock the lift out. In the Supers, Poland's Stephan Kozol took the Gold with 496 over Thomas Benoit from the USA who came back after a rocky start to put 485 through the roof. Tom showed up 30 min. before weigh-in and was told to lift in the Supers. By the end of the weigh-in he drank enough water to gain the necessary 10 pounds in bodyweight. He was the liftiest SHW which left Werner Selig in third place with a 468 attempt.

The lifters who were as follows: DISABLED: MEN - 1) Federal Republic of Germany, 2) Great Britain, 3) Hungary, WOMEN - 1) Federal Republic of Germany, 2) Finland, 3) Austria, 4) Chinese Taipei, 5) USA, MEN - 1) Finland, 2) Federal Republic of Germany, 3) Federal Republic of Germany (East), 4) USA, 5) Poland. Best lifters: MEN - Andrzej Stanoszek (Poland), WOMEN - Marion Hammang (Luxembourg), DISABLED - Ali Akhath (FRG). The only negative aspect of this otherwise perfectly run meet was that although Germany is now a unified nation, they still had an East and West team. When investigating this I learned that the I.P.F. organized the meet in West Germany, and that's why, even though I feel that when Germany unifies the world to recognize them as one nation they would, regardless of the IOC's stand on this matter, not take advantage of recent history and have only one flag and one anthem for their athletes. The 1991 I.P.F. World Bench Press meet is proposed to be held in Frankfurt, and the one in 1992 in Chinese Taipei. I would like to thank Rick Crum for generously supplying the team with USA Team T-shirts and to Ron Buland for taking some great meet pictures.

The lifters who were as follows: DISABLED: MEN - 1) Federal Republic of Germany, 2) Great Britain, 3) Hungary, WOMEN - 1) Federal Republic of Germany, 2) Finland, 3) Austria, 4) Chinese Taipei, 5) USA, MEN - 1) Finland, 2) Federal Republic of Germany, 3) Federal Republic of Germany (East), 4) USA, 5) Poland. Best lifters: MEN - Andrzej Stanoszek (Poland), WOMEN - Marion Hammang (Luxembourg), DISABLED - Ali Akhath (FRG). The only negative aspect of this otherwise perfectly run meet was that although Germany is now a unified nation, they still had an East and West team. When investigating this I learned that the I.P.F. organized the meet in West Germany, and that's why, even though I feel that when Germany unifies the world to recognize them as one nation they would, regardless of the IOC's stand on this matter, not take advantage of recent history and have only one flag and one anthem for their athletes. The 1991 I.P.F. World Bench Press meet is proposed to be held in Frankfurt, and the one in 1992 in Chinese Taipei. I would like to thank Rick Crum for generously supplying the team with USA Team T-shirts and to Ron Buland for taking some great meet pictures.

The lifters who were as follows: DISABLED: MEN - 1) Federal Republic of Germany, 2) Great Britain, 3) Hungary, WOMEN - 1) Federal Republic of Germany, 2) Finland, 3) Austria, 4) Chinese Taipei, 5) USA, MEN - 1) Finland, 2) Federal Republic of Germany, 3) Federal Republic of Germany (East), 4) USA, 5) Poland. Best lifters: MEN - Andrzej Stanoszek (Poland), WOMEN - Marion Hammang (Luxembourg), DISABLED - Ali Akhath (FRG). The only negative aspect of this otherwise perfectly run meet was that although Germany is now a unified nation, they still had an East and West team. When investigating this I learned that the I.P.F. organized the meet in West Germany, and that's why, even though I feel that when Germany unifies the world to recognize them as one nation they would, regardless of the IOC's stand on this matter, not take advantage of recent history and have only one flag and one anthem for their athletes. The 1991 I.P.F. World Bench Press meet is proposed to be held in Frankfurt, and the one in 1992 in Chinese Taipei. I would like to thank Rick Crum for generously supplying the team with USA Team T-shirts and to Ron Buland for taking some great meet pictures.

The lifters who were as follows: DISABLED: MEN - 1) Federal Republic of Germany, 2) Great Britain, 3) Hungary, WOMEN - 1) Federal Republic of Germany, 2) Finland, 3) Austria, 4) Chinese Taipei, 5) USA, MEN - 1) Finland, 2) Federal Republic of Germany, 3) Federal Republic of Germany (East), 4) USA, 5) Poland. Best lifters: MEN - Andrzej Stanoszek (Poland), WOMEN - Marion Hammang (Luxembourg), DISABLED - Ali Akhath (FRG). The only negative aspect of this otherwise perfectly run meet was that although Germany is now a unified nation, they still had an East and West team. When investigating this I learned that the I.P.F. organized the meet in West Germany, and that's why, even though I feel that when Germany unifies the world to recognize them as one nation they would, regardless of the IOC's stand on this matter, not take advantage of recent history and have only one flag and one anthem for their athletes. The 1991 I.P.F. World Bench Press meet is proposed to be held in Frankfurt, and the one in 1992 in Chinese Taipei. I would like to thank Rick Crum for generously supplying the team with USA Team T-shirts and to Ron Buland for taking some great meet pictures.

The lifters who were as follows: DISABLED: MEN - 1) Federal Republic of Germany, 2) Great Britain, 3) Hungary, WOMEN - 1) Federal Republic of Germany, 2) Finland, 3) Austria, 4) Chinese Taipei, 5) USA, MEN - 1) Finland, 2) Federal Republic of Germany, 3) Federal Republic of Germany (East), 4) USA, 5) Poland. Best lifters: MEN - Andrzej Stanoszek (Poland), WOMEN - Marion Hammang (Luxembourg), DISABLED - Ali Akhath (FRG). The only negative aspect of this otherwise perfectly run meet was that although Germany is now a unified nation, they still had an East and West team. When investigating this I learned that the I.P.F. organized the meet in West Germany, and that's why, even though I feel that when Germany unifies the world to recognize them as one nation they would, regardless of the IOC's stand on this matter, not take advantage of recent history and have only one flag and one anthem for their athletes. The 1991 I.P.F. World Bench Press meet is proposed to be held in Frankfurt, and the one in 1992 in Chinese Taipei. I would like to thank Rick Crum for generously supplying the team with USA Team T-shirts and to Ron Buland for taking some great meet pictures.

The lifters who were as follows: DISABLED: MEN - 1) Federal Republic of Germany, 2) Great Britain, 3) Hungary, WOMEN - 1) Federal Republic of Germany, 2) Finland, 3) Austria, 4) Chinese Taipei, 5) USA, MEN - 1) Finland, 2) Federal Republic of Germany, 3) Federal Republic of Germany (East), 4) USA, 5) Poland. Best lifters: MEN - Andrzej Stanoszek (Poland), WOMEN - Marion Hammang (Luxembourg), DISABLED - Ali Akhath (FRG). The only negative aspect of this otherwise perfectly run meet was that although Germany is now a unified nation, they still had an East and West team. When investigating this I learned that the I.P.F. organized the meet in West Germany, and that's why, even though I feel that when Germany unifies the world to recognize them as one nation they would, regardless of the IOC's stand on this matter, not take advantage of recent history and have only one flag and one anthem for their athletes. The 1991 I.P.F. World Bench Press meet is proposed to be held in Frankfurt, and the one in 1992 in Chinese Taipei. I would like to thank Rick Crum for generously supplying the team with USA Team T-shirts and to Ron Buland for taking some great meet pictures.

The burn. A little feels good. Too much can stop you dead in the middle of a rep.

Anyone who has worked their muscles to exhaustion knows the feeling painfully well. It's like a body part suddenly catching fire—cramping, aching, searing, binding up until you can't go on.

Lactic acid build-up is the cause. New Phos Fuel™ from TWINLAB is the prevention.

The ultimate lactic acid buffer, Phos Fuel is a scientifically designed, performance-enhancing supplement that contains the major lactic acid buffers in blood and muscle such as phosphate, bicarbonate and carnitine as well as a synergistic combination of lactate and energy metabolizers.

Taken before exercise, each Phos

Fuel capsule helps block lactic acid build-up, delaying the onset of muscle fatigue. Helping you maintain your "muscular cool" in the heat of intense competition or training, it also enhances oxygen utilization, muscular power and endurance.

The result? You can work out at a higher intensity for longer periods of time—doing more and heavier reps and sets than ever before.

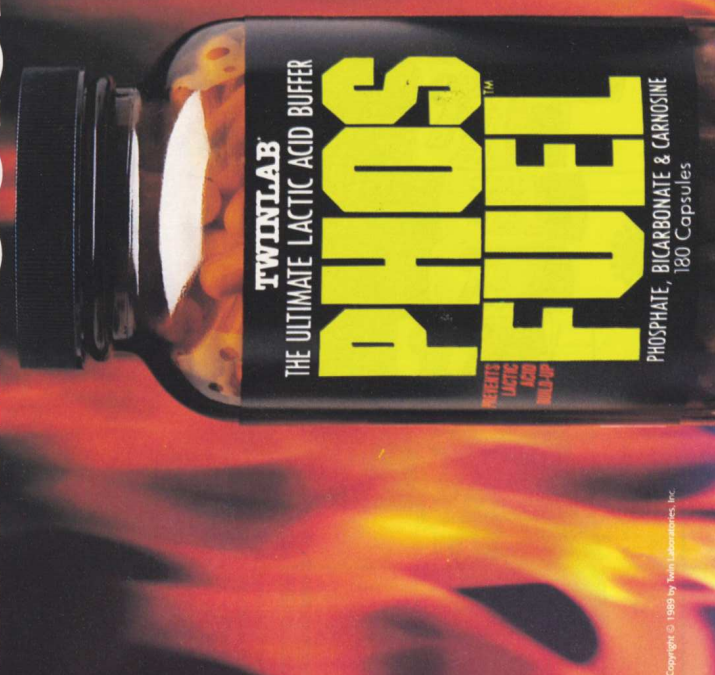
So add new Phos Fuel to your training table. And instead of burning yourself, inflame the competition at your next contest. Available at fine health food stores, gyms and General Nutrition Centers.

TWINLAB

TWIN LABORATORIES, INC. NEW YORK, N.Y. 11719 USA
WRITE FOR OUR FREE CATALOG

OFFICIAL LICENSEE
NATIONALS
SOCIETIES OF AMERICA
LOS ANGELES

FIRE EXTINGUISHER

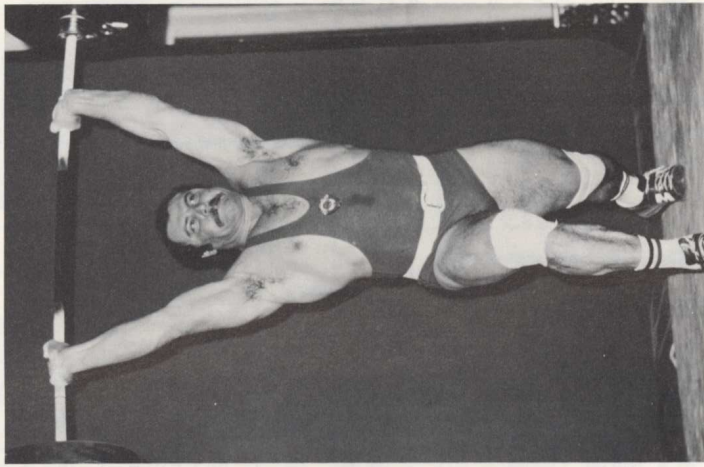


PHOSPHATE, BICARBONATE & CARNITINE
180 Capsules

POWER-RESEARCH

dedicated to bringing Science to the sport of Powerlifting

Anabolic Steroids and Soviet Sport an overview by Leonid Yakovlev M.D.



Soviet Athletes have had some involvement with steroids. Former Russian Olympic weightlifting record setter Anatoli Pisarenko was involved with a seizure of a large quantity of steroids in Canada (Bruce Klemens photo). Dr. Yakovlev, author of this article, was a former scientist in the Soviet sports organization, now living in the United States and sharing his knowledge.

athletes ask about in regard to anabolic steroids. These issues are often times what the Soviet scientists have in many cases so effectively analyzed.

The first thing to recognize and accept is that anabolic steroids are training drugs. This is an important distinction because most of the testing, unless it is random year round, is quite ineffective at catching athletes on anabolic steroids. An anabolic steroid need never be in an athlete's system at the time of competition, and those caught have simply been careless. Of the steroids, Soviet scientists know that those derivatives methandrostenolone (Dianabol), stanozolol (Anavar) and Winstrol, oxandrolone (Anavar) and oxymetholone (Anadrol, Nilivar) are most commonly used because they are water soluble and have fast clearance times. The down side is that they must be metabolized in the liver which can cause dysfunction to the liver and prostate cells. Of the oil based, fat soluble, injectable anabolic steroids, the esters of 19-nortestosterone (Nandrolone), testosterone propionate and cypionate have high anabolic ratios, and in addition can require several months to be cleared from the body.

While the Olympic Games testing for anabolic steroids began in 1976, it was not until 1984 that the primitive technology was updated to become more reliable and exact. Because only those steroids known by the testing labs could be uncovered, it was important for Soviet pharmacologists to develop new drugs of high anabolic and low androgenic action which were not detectable by current methods. While this was a popular quest, it was nonetheless not very necessary since select steroids could be easily cleaned from the body (due to their structure plus a special mechanical filtration) only 24 hours before competition and subsequent testing.

While detection during competition is of no concern to athletes who plan carefully, the detection through year round testing is. While random testing is not in general use as of yet, it may someday become a reality. To counter this problem Soviet scientists have three solutions: 1) to develop new anabolic steroids which are not detectable under any known test, 2) to expand the use of steroids which can be removed through mechanical filtration within 24 hours, and 3) to revert to non-steroidal agents with high anabolic effect. All three of these are strong possibilities within the Soviet sport pharmacology process. The only critical task is to get athletes and coaches to go along with this program, which is itself not an easy task. I believe the best option is to

The subject of anabolic steroid use in sports has been a re-occurring topic among powerlifters and other athletes for many years. Much has been written about the use and misuse of anabolic steroids in sport, both by medical experts as well as by journalists, athletes, coaches, and steroid users. While some of this information has no doubt been accurate and of great value to lifters, there is much more anabolic steroid information that can, and should, be supplied to American athletes. Recently, thanks to greater openness and mutual collaboration between sport researchers in the USA and the USSR, a great deal of new information about steroid research and application could be obtained from experts within the Soviet Union's major steroid testing laboratories. An overview of some of this information is presented here for the first time ever outside the East Bloc. It is hoped that athletes who better know the global and international facts about steroids in sport will become better educated as to their risks and benefits, and thus make wiser decisions about their use.

Historically, steroid use by athletes in the USSR and other East Bloc countries has been strictly controlled by physicians, who from the start accepted them as performance enhancing drugs with powerful positive effects on strength and power when combined with an optimal training and recovery program. In contrast, up until the late 1980's many scientists and physicians in the USA denied the effectiveness of steroids on sport performance, even though athletes noticed otherwise. The lack of scientific based education in the USA over the past several years opened the floodgates for a variety of pseudo experts, steroid gurus, and gym rats to lay claim to the "real facts" about anabolic steroids in sport. During this same time, Soviet sport scientists were conducting highly scientific and applied anabolic steroid research on top athletes within the East Bloc. The two most powerful institutes of steroid research, one in Leipzig, East Germany, the other in Leningrad, Soviet Union, both contributed to a great understanding of the short and long term use of the drug in athletics.

This brief article can only outline some of these discoveries. For more information it is suggested looking for future articles about this subject, as well as consulting the new book "Anabolic/Androgenic Steroids in Soviet Sport" published by SRI. First of all, recognize that the State Central Sport Committee of the USSR (Goskomsport) has for many years accepted and promoted the use of anabolic steroids as an integral part of their training plans for top athletes. Since the late 1960's, laboratory and applied research, and the distribution of the drugs has been openly con-

We also have discovered from many years of controlled testing on elite athletes that the genetically determined factors of each individual can be classified to maximize the effects of training. Various body systems work together to make the unit function. This range between maximal and minimal limits depends on the number of recruited genes which vary in each athlete. Anabolic steroids work through hormonal-genetic interaction and activate gene expression within muscle cells. However, the top level to which the steroids can stimulate transcription is individually limited by the number of active genes within the cells.

Moreover, particularly when the anabolic steroids have been used for a long period of time, all the genes are in an active state. Further stimulation by larger doses of steroids will not be effective. The approach is to use smaller doses to approach the liver with metabolites which can be quite toxic. This is a common occurrence among untested athletes in the liver cells are particularly susceptible to uncontrolled hyperplasia (splitting) which results in hepatoma (liver disease). As precautions, Soviet sport physicians regularly prescribe hepatoprotectors, diagnostic tests and cleansing routines for the highest level athletes.

The process of homeostatic self-regulation is used to predict impairments in fitness and work capacity long before the obvious visible

manifestations due to steroids occur, as well as to provide the athletes with the optimal plans for their individual training, recovery, and anabolic steroid programs. Hormonal tests with dekamethasone (synthetic analog of the natural glucocorticoid, cortisol) and methandrostenolone (synthetic derivative of testosterone) are effectively used to predict an athlete's individual reaction to the anabolic steroid/training/recovery complex, and thus to prevent adaptation. This will then result in optimal training gains.

One thing is clear as to what the future holds for anabolic steroids in sport. I would anticipate that within the next few years some very concrete and exact tests will be used which can determine exactly whether or not an athlete has taken a steroid over the previous twelve months. In fact, this is already a possibility with the application of biochemical (endocrine) profiling. Because of this, along with the possible breakup of a centrally planned sport complex within the USSR, the possibility of Soviet athletes resorting to natural means of training enhancement seems imminent. Much work has been done on natural preparations of high anabolic and androgenic factors. With to be expanded laboratory facilities and equipment, the possibility of expanding the use of Soviet natural plant and animal based pharmacology seems likely. In fact, we have made great progress in developing long term programs us-

"Anabolic/Androgenic Steroids in Soviet Sport" by Leonid Yakovlev is now available in the USA from Sports Research International. Order #RCS-828-8565. For more information contact: P.O. Box 3339, Walnut Creek, CA 94598. Visa/MC orders call 1-800-828-8565.

Anabolic Androgenic Steroids in Soviet Sport

Volume I

By Leonid Yakovlev M.D.

Discover the real facts about ANABOLIC STEROIDS

For the first time ever, learn about anabolic steroids as used by top East Bloc athletes. Writings from the All-Union Steroid Research Laboratory, Leningrad, USSR, this book represents over 30 years of intense anabolic steroid research conducted on the Soviet Union's leading testing labs, plus hundreds of practical studies conducted on elite Soviet athletes. Written by Soviet Pharmacologist Leonid Yakovlev M.D.

PREVIOUSLY CENSORED INFORMATION INCLUDES:

- Complete and detailed anabolic steroid programs used by top Soviet athletes
- How East Bloc athletes avoid anabolic steroid detection in national and international drug testing
- Soviet monster steroids with three times the anabolic effects of American anabolic steroids
- And Much, Much, More.

To order the "Anabolic Androgenic Steroids in Soviet Sport" book, Call Now USA/Canada Credit Card Order 1(800) 828-8565

Please rush me _____ copies @ \$25.00 each. (S&H included in price) = _____

Foreign Orders Add \$5.00 = _____

CA Residents Add 7% Sales Tax. (S1.75 each book) = _____

TOTAL ENCLOSED = _____

Enclosed Find: Check M.O. Visa/Mastercard

Card No. _____

Exp. Date _____ Signature _____

Name (as it appears on card) _____

Address _____

City _____ State _____ Zip _____

MAIL TO: SPORTS RESEARCH INT'L, P.O. Box 3339, Walnut Creek, CA 94598

POWERLIFTING USA MAGAZINE
 for USA lifters competing
 December 1989 to November 1990
TOP 100
 132 lb./60 kg.

PL USA TOP 100 Achievement Awards	SOQUAT	BENCH	DEADLIFT	TOTAL
	1 535 Heath, D., 51690	402 Heath, D., 1101290	622 Cant, L., 1114190	1460 Heath, D., 51690
	2 539 Westbrook, K., 1211890	375 Lawrence, L., 1117190	375 Shackelford, N., 1110190	1427 Cant, L., 1114190
	3 512 Stiles, R., 317190	534 Sullivan, T., 47790	534 Sullivan, T., 47790	1383 Suttles, L., 47790
	4 505 Taylor, L., 421190	338 Suttles, L., 47790	338 Suttles, L., 47790	1325 Blake, H., 102090
	5 501 Cant, L., 1114190	335 Byrnes, C., 422990	525 Blake, H., 102090	1240 Payne, P., 1211890
	6 508 Calhoun, R., 31790	329 Calhoun, R., 31790	525 Oton, B., 1211890	1245 Oton, B., 1211890
	7 500 Carver, A., 31790	325 Scatzo, L., 107790	510 King, C., 414190	1245 Doppo, T., 91190
	8 485 Oton, B., 1211890	319 Oton, B., 1211890	501 Ricks, V., 101390	1245 Taylor, W., 101390
	9 485 Taylor, W., 101390	319 Maxwell, P., 21390	500 Meribidge, M., 91190	1240 Meribidge, M., 91190
	10 479 Cox, T., 216190	314 Sherrill, J., 101490	490 Edmondson, D., 22290	1225 Butler, C., 31290
	11 479 Cox, T., 216190	314 Sherrill, J., 101490	490 Edmondson, D., 22290	1225 Butler, C., 31290
	12 479 Cox, T., 216190	314 Sherrill, J., 101490	490 Edmondson, D., 22290	1225 Butler, C., 31290
	13 479 Cox, T., 216190	314 Sherrill, J., 101490	490 Edmondson, D., 22290	1225 Butler, C., 31290
	14 479 Cox, T., 216190	314 Sherrill, J., 101490	490 Edmondson, D., 22290	1225 Butler, C., 31290
	15 479 Cox, T., 216190	314 Sherrill, J., 101490	490 Edmondson, D., 22290	1225 Butler, C., 31290
	16 479 Cox, T., 216190	314 Sherrill, J., 101490	490 Edmondson, D., 22290	1225 Butler, C., 31290
	17 479 Cox, T., 216190	314 Sherrill, J., 101490	490 Edmondson, D., 22290	1225 Butler, C., 31290
	18 479 Cox, T., 216190	314 Sherrill, J., 101490	490 Edmondson, D., 22290	1225 Butler, C., 31290
	19 479 Cox, T., 216190	314 Sherrill, J., 101490	490 Edmondson, D., 22290	1225 Butler, C., 31290
	20 479 Cox, T., 216190	314 Sherrill, J., 101490	490 Edmondson, D., 22290	1225 Butler, C., 31290
	21 462 Edmondson, D., 22290	308 Meribidge, M., 91190	485 Williams, E., 42190	1215 Scatzo, L., 107790
	22 462 Doppo, T., 91190	308 Averbach, L., 62090	485 Averbach, L., 62090	1215 Scatzo, L., 107790
	23 462 Doppo, T., 91190	305 Perrenoud, R., 8490	485 Taylor, W., 101390	1207 Taylor, W., 101390
	24 460 Lewis, W., 321190	305 Allen, R., 11390	480 Crub, M., 42890	1200 Sisk, L., 10590
	25 460 Lewis, W., 321190	303 Arthacke, R., 62290	479 Sandoval, R., 21390	1190 Maxwell, P., 21390
	26 460 Lewis, W., 321190	303 Arthacke, R., 62290	479 Sandoval, R., 21390	1190 Maxwell, P., 21390
	27 460 Lewis, W., 321190	303 Arthacke, R., 62290	479 Sandoval, R., 21390	1190 Maxwell, P., 21390
	28 460 Lewis, W., 321190	303 Arthacke, R., 62290	479 Sandoval, R., 21390	1190 Maxwell, P., 21390
	29 457 Meribidge, M., 91190	303 Miller, A., 31890	473 Taylor, W., 101390	1184 Segel, S., 62990
	30 457 Miller, A., 31890	303 Miller, A., 31890	473 Taylor, W., 101390	1184 Segel, S., 62990
	31 451 Farris, W., 317190	303 Carr, L., 1114190	470 Collins, R., 31390	1170 Hoff, J., 121790
	32 451 Farris, W., 317190	300 Blake, R., 21390	470 Swann, T., 31390	1170 Hoff, J., 121790
	33 451 Farris, W., 317190	300 Williams, L., 10190	465 McCoy, C., 31290	1165 Benvenuto, J., 111790
	34 451 Farris, W., 317190	295 Day, P., 21890	465 Maier, D., 490	1165 Benvenuto, J., 111790
	35 448 Coghlan, J., 42990	295 Day, P., 21890	465 Maier, D., 490	1162 Soon, S., 102090
	36 448 Coghlan, J., 42990	295 Day, P., 21890	465 Maier, D., 490	1162 Soon, S., 102090
	37 448 Coghlan, J., 42990	295 Day, P., 21890	465 Maier, D., 490	1162 Soon, S., 102090
	38 448 Coghlan, J., 42990	295 Day, P., 21890	465 Maier, D., 490	1162 Soon, S., 102090
	39 448 Coghlan, J., 42990	295 Day, P., 21890	465 Maier, D., 490	1162 Soon, S., 102090
	40 448 Coghlan, J., 42990	295 Day, P., 21890	465 Maier, D., 490	1162 Soon, S., 102090
	41 440 Monberg, M., 91190	290 Morgan, P., 22890	457 Fenville, S., 47190	1140 Johnson, D., 42190
	42 440 Monberg, M., 91190	286 Spingard, L., 1215890	457 Nichols, T., 8490	1140 Ricks, J., 101390
	43 435 Grier, C., 31290	286 Jones, A., 10690	455 Palko, A., 102090	1135 Frantz, E., 32490
	44 435 Grier, C., 31290	286 Feaster, C., 102090	451 Gillet, J., 12190	1135 Frantz, E., 32490
	45 435 Grier, C., 31290	286 Feaster, C., 102090	451 Gillet, J., 12190	1135 Frantz, E., 32490
	46 435 Grier, C., 31290	286 Feaster, C., 102090	451 Gillet, J., 12190	1135 Frantz, E., 32490
	47 435 Grier, C., 31290	286 Feaster, C., 102090	451 Gillet, J., 12190	1135 Frantz, E., 32490
	48 435 Grier, C., 31290	286 Feaster, C., 102090	451 Gillet, J., 12190	1135 Frantz, E., 32490
	49 435 Grier, C., 31290	286 Feaster, C., 102090	451 Gillet, J., 12190	1135 Frantz, E., 32490
	50 435 Grier, C., 31290	286 Feaster, C., 102090	451 Gillet, J., 12190	1135 Frantz, E., 32490
	51 435 Grier, C., 31290	286 Feaster, C., 102090	451 Gillet, J., 12190	1135 Frantz, E., 32490
	52 435 Grier, C., 31290	286 Feaster, C., 102090	451 Gillet, J., 12190	1135 Frantz, E., 32490
	53 435 Grier, C., 31290	286 Feaster, C., 102090	451 Gillet, J., 12190	1135 Frantz, E., 32490
	54 435 Grier, C., 31290	286 Feaster, C., 102090	451 Gillet, J., 12190	1135 Frantz, E., 32490
	55 435 Grier, C., 31290	286 Feaster, C., 102090	451 Gillet, J., 12190	1135 Frantz, E., 32490
	56 435 Grier, C., 31290	286 Feaster, C., 102090	451 Gillet, J., 12190	1135 Frantz, E., 32490
	57 435 Grier, C., 31290	286 Feaster, C., 102090	451 Gillet, J., 12190	1135 Frantz, E., 32490
	58 435 Grier, C., 31290	286 Feaster, C., 102090	451 Gillet, J., 12190	1135 Frantz, E., 32490
	59 435 Grier, C., 31290	286 Feaster, C., 102090	451 Gillet, J., 12190	1135 Frantz, E., 32490
	60 435 Grier, C., 31290	286 Feaster, C., 102090	451 Gillet, J., 12190	1135 Frantz, E., 32490
	61 418 Slater, A., 51990	280 Segal, R., 42890	440 Gerrish, P., 12989	1090 Qualls, T., 32190
	62 418 Slater, A., 51990	280 Segal, R., 42890	440 Gerrish, P., 12989	1090 Qualls, T., 32190
	63 418 Slater, A., 51990	280 Segal, R., 42890	440 Gerrish, P., 12989	1090 Qualls, T., 32190
	64 418 Slater, A., 51990	280 Segal, R., 42890	440 Gerrish, P., 12989	1090 Qualls, T., 32190
	65 418 Slater, A., 51990	280 Segal, R., 42890	440 Gerrish, P., 12989	1090 Qualls, T., 32190
	66 418 Slater, A., 51990	280 Segal, R., 42890	440 Gerrish, P., 12989	1090 Qualls, T., 32190
	67 418 Slater, A., 51990	280 Segal, R., 42890	440 Gerrish, P., 12989	1090 Qualls, T., 32190
	68 418 Slater, A., 51990	280 Segal, R., 42890	440 Gerrish, P., 12989	1090 Qualls, T., 32190
	69 418 Slater, A., 51990	280 Segal, R., 42890	440 Gerrish, P., 12989	1090 Qualls, T., 32190
	70 418 Slater, A., 51990	280 Segal, R., 42890	440 Gerrish, P., 12989	1090 Qualls, T., 32190
	71 405 Smith, L., 16990	275 Cleatman, M., 12289	440 Lowder, N., 102090	1080 Fernandez, E., 111090
	72 405 Smith, L., 16990	275 Cleatman, M., 12289	440 Lowder, N., 102090	1080 Fernandez, E., 111090
	73 405 Smith, L., 16990	275 Cleatman, M., 12289	440 Lowder, N., 102090	1080 Fernandez, E., 111090
	74 405 Smith, L., 16990	275 Cleatman, M., 12289	440 Lowder, N., 102090	1080 Fernandez, E., 111090
	75 405 Smith, L., 16990	275 Cleatman, M., 12289	440 Lowder, N., 102090	1080 Fernandez, E., 111090
	76 405 Smith, L., 16990	275 Cleatman, M., 12289	440 Lowder, N., 102090	1080 Fernandez, E., 111090
	77 405 Smith, L., 16990	275 Cleatman, M., 12289	440 Lowder, N., 102090	1080 Fernandez, E., 111090
	78 405 Smith, L., 16990	275 Cleatman, M., 12289	440 Lowder, N., 102090	1080 Fernandez, E., 111090
	79 405 Smith, L., 16990	275 Cleatman, M., 12289	440 Lowder, N., 102090	1080 Fernandez, E., 111090
	80 405 Smith, L., 16990	275 Cleatman, M., 12289	440 Lowder, N., 102090	1080 Fernandez, E., 111090
	81 405 Smith, L., 16990	275 Cleatman, M., 12289	440 Lowder, N., 102090	1080 Fernandez, E., 111090
	82 405 Smith, L., 16990	275 Cleatman, M., 12289	440 Lowder, N., 102090	1080 Fernandez, E., 111090
	83 405 Smith, L., 16990	275 Cleatman, M., 12289	440 Lowder, N., 102090	1080 Fernandez, E., 111090
	84 405 Smith, L., 16990	275 Cleatman, M., 12289	440 Lowder, N., 102090	1080 Fernandez, E., 111090
	85 405 Smith, L., 16990	275 Cleatman, M., 12289	440 Lowder, N., 102090	1080 Fernandez, E., 111090
	86 405 Smith, L., 16990	275 Cleatman, M., 12289	440 Lowder, N., 102090	1080 Fernandez, E., 111090
	87 405 Smith, L., 16990	275 Cleatman, M., 12289	440 Lowder, N., 102090	1080 Fernandez, E., 111090
	88 405 Smith, L., 16990	275 Cleatman, M., 12289	440 Lowder, N., 102090	1080 Fernandez, E., 111090
	89 405 Smith, L., 16990	275 Cleatman, M., 12289	440 Lowder, N., 102090	1080 Fernandez, E., 111090
	90 405 Smith, L., 16990	275 Cleatman, M., 12289	440 Lowder, N., 102090	1080 Fernandez, E., 111090
	91 405 Smith, L., 16990	275 Cleatman, M., 12289	440 Lowder, N., 102090	1080 Fernandez, E., 111090
	92 405 Smith, L., 16990	275 Cleatman, M., 12289	440 Lowder, N., 102090	1080 Fernandez, E., 111090
	93 405 Smith, L., 16990	275 Cleatman, M., 12289	440 Lowder, N., 102090	1080 Fernandez, E., 111090
	94 405 Smith, L., 16990	275 Cleatman, M., 12289	440 Lowder, N., 102090	1080 Fernandez, E., 111090
	95 405 Smith, L., 16990	275 Cleatman, M., 12289	440 Lowder, N., 102090	1080 Fernandez, E., 111090
	96 405 Smith, L., 16990	275 Cleatman, M., 12289	440 Lowder, N., 102090	1080 Fernandez, E., 111090
	97 405 Smith, L., 16990	275 Cleatman, M., 12289	440 Lowder, N., 102090	1080 Fernandez, E., 111090
	98 405 Smith, L., 16990	275 Cleatman, M., 12289	440 Lowder, N., 102090	1080 Fernandez, E., 111090
	99 405 Smith, L., 16990	275 Cleatman, M., 12289	440 Lowder, N., 102090	1080 Fernandez, E., 111090
	100 405 Smith, L., 16990	275 Cleatman, M., 12289	440 Lowder, N., 102090	1080 Fernandez, E., 111090

PL USA TOP 100 Achievement Awards



Powerlifting USA TOP 100 Achievement Awards are printed in Red and Gold ink on exquisite paper, and embossed with the gold seal of Powerlifting USA Magazine, and signed by Mike Lambert. They specify your name, TOP 20, 50, or 100 ranking division, weight class, and actual numerical ranking in your class. The price for this documentation of your achievements is \$5. We also offer a wood grain plaque with a clear cover, ready to hang. The certificate and display plaque are available together for \$18.95. If you have appeared on a TOP 100 list, you are eligible. Send your name, street address, weight class, lift, date, and made, the amount of weight, and the list that your name appeared on. Send \$5 per certificate or \$18.95 for certificate and deluxe mounting plaque, payable to Powerlifting USA, Box 467, Camarillo, CA 93011. CA residents add 6% sales tax.

NEXT MONTH... TOP 148s

Corrections: Carl Mustari's deadlift of 520 at the All Marine D. Eaton Invitational should have appeared on the TOP 100 148 lb. class list. O. Sjuwade and R. Craft both appeared on the ADFFPA TOP 20 list. In the same class, 1110 Hamilton, B., 111090 and 1110 Gerrish, P., 12989 were listed. In the results of the WPC Worded Cup, R. Rosenfield should have received credit for lifts of 440 303 602 in the Masters 198, 353-39 age group. In the same results, G. Zapp (242 lb., 35-39) should not have received credit for a 347 bench, and D. Eaton should have been credited with 374 292 473. In the same class, Anderson and Ham have been credited with 374 347 374. Jim Piacco should have been credited with a 440 bench press and 220 lb. class listing for the ADFFPA. The lift he made in the ADFFPA Region III Championships (148 lb.) should be for the lifts of Gil G. Alvarez, Jr. at 190 lbs and 148 lb. and Ed. Aza, squat, 202 bench, and 463 deadlift, totaling 1130 lbs. The WCF was incorrectly listed as 24 lbs. We handle a large volume of statistics when producing these ranking lists and we do make mistakes in processing the data for these lists. In addition, we do not publish the results of many meets which are therefore not available for compilation on the results. Where rounded down in lift USA, results are published in PL USA, and where rounded up in PL USA, results are published in lift USA. Box 467, Camarillo, CA 93011. For a more in-depth future issue in Powerlifting USA.

POWER-RESEARCH
 —dedicated to bringing Science to the sport of Powerlifting—

CHRONOBIOLOGY
 by Strength Coach JOHN WARE
 Northeast Missouri State University



Peak Performance at a specific moment in time is what Powerlifting, like all other sports, is all about.

Bull Stewart hopes to bring all the elements of his lifting performance into phase at the ADFFPA Lifetime Drug Free Nationals, to be held at Arizona State University on February 9th.

biological activity known as circadian rhythms. Sleep is one of the key components in this study of circadian rhythms. In terms of strength performance, sleep has always been equated with healing, growth, and an anabolic environment for muscle tissue growth and recuperation. Some of the recent findings in sports science raise interesting questions about why people sleep, whether there is an absolute need for sleep, and how this passive period might be manipulated to produce greater muscular growth and strength gains. The popular belief that sleep is essential to growth and the repair of the body's tissues is based on studies finding that certain anabolic or tissue building hormones, such as human growth hormone, are released in greater quantities during the sleep cycle. In fact, the breakdown of tissues or catabolism, and assembly of biological cycles that affect physical parameters and strength levels. One of these cycles is known as the diurnal rhythm. This consists of diurnal morning and evening patterns of activity. These are marked by peaks of body temperature and motor skill efficiency over the entire day. The subject may also include peaks in the perception of fatigue and arousal. Diurnal rhythms vary considerably among individuals and affect performance in various sports differently. This opens the possibility of custom made training schedules.

The application of chronobiology to the field of strength training is still in its earliest stages. It's true promise lies in the potential to manipulate the body's biological clock to enhance performance levels. Although the "biological clock" seems an abstract idea, recent research has identified it as a pineal size cluster of about 10,000 neurons in the brain. This small cluster of neurons controls many of the body's physiological cycles. This may include the release of hormones, the release of these hormones, the release of these hormones. This has tremendous potential implications for the field of strength training.

biological activity known as circadian rhythms. Sleep is one of the key components in this study of circadian rhythms. In terms of strength performance, sleep has always been equated with healing, growth, and an anabolic environment for muscle tissue growth and recuperation. Some of the recent findings in sports science raise interesting questions about why people sleep, whether there is an absolute need for sleep, and how this passive period might be manipulated to produce greater muscular growth and strength gains. The popular belief that sleep is essential to growth and the repair of the body's tissues is based on studies finding that certain anabolic or tissue building hormones, such as human growth hormone, are released in greater quantities during the sleep cycle. In fact, the breakdown of tissues or catabolism, and assembly of biological cycles that affect physical parameters and strength levels. One of these cycles is known as the diurnal rhythm. This consists of diurnal morning and evening patterns of activity. These are marked by peaks of body temperature and motor skill efficiency over the entire day. The subject may also include peaks in the perception of fatigue and arousal. Diurnal rhythms vary considerably among individuals and affect performance in various sports differently. This opens the possibility of custom made training schedules.

The U. S. Olympic Committee has been involved in a number of studies designed to investigate the effects of time on the biological clocks of athletes. Among the areas of interest are the sleep patterns of athletes. Most athletes believe sleep is essential for optimum levels of performance. However, in terms of hard facts there is very little which we know about actual physiological and athletic effects of sleep loss on athletic activity.

biological activity known as circadian rhythms. Sleep is one of the key components in this study of circadian rhythms. In terms of strength performance, sleep has always been equated with healing, growth, and an anabolic environment for muscle tissue growth and recuperation. Some of the recent findings in sports science raise interesting questions about why people sleep, whether there is an absolute need for sleep, and how this passive period might be manipulated to produce greater muscular growth and strength gains. The popular belief that sleep is essential to growth and the repair of the body's tissues is based on studies finding that certain anabolic or tissue building hormones, such as human growth hormone, are released in greater quantities during the sleep cycle. In fact, the breakdown of tissues or catabolism, and assembly of biological cycles that affect physical parameters and strength levels. One of these cycles is known as the diurnal rhythm. This consists of diurnal morning and evening patterns of activity. These are marked by peaks of body temperature and motor skill efficiency over the entire day. The subject may also include peaks in the perception of fatigue and arousal. Diurnal rhythms vary considerably among individuals and affect performance in various sports differently. This opens the possibility of custom made training schedules.

biological activity known as circadian rhythms. Sleep is one of the key components in this study of circadian rhythms. In terms of strength performance, sleep has always been equated with healing, growth, and an anabolic environment for muscle tissue growth and recuperation. Some of the recent findings in sports science raise interesting questions about why people sleep, whether there is an absolute need for sleep, and how this passive period might be manipulated to produce greater muscular growth and strength gains. The popular belief that

POWER PROFILE

a detailed PL USA look at some of the best lifters in the world

Wendy Brocious as told by her coach RICH STEWART

Many lifters dream of the day when they might become a World Powerlifting Champion. A great deal of hard work, sweat, and years in the gym are what's necessary to achieve this dream. Wendy Brocious has what it takes and has achieved her World Champion status in just 2½ years of competing. This young lady is among the strongest drug free women lifters ever in the 123 pound class.

I met Wendy just ten months ago. She was working out at the base gym at Langley Air Force Base, Virginia. She was told of my involvement with powerlifting over the years as a lifter and trainer with the USAPF Powerlifting in terms of reworking the record

books in her weight class. With her hard work and dedication, it was a coach's dream to witness her preparation for competition with training lifts of 320x3 in the squat, 190x2 in the bench and 330x2 in the deadlift. However, she developed a slight flu and didn't lift to her capabilities, bombing in the bench. Even though she bombed, her squat National Record if she had finished the meet. Although she was disgusted with her performance and didn't want to compete for a while, I talked her into competing in the USPF Virginia State Championships one more time. Wendy was sure glad that she chose to lift, setting two state records in the squat and total. Based on her 830 lb. total, she decided to train with yours truly for the APF Senior National Championships in Pittsburgh, PA.

We both are native Pennsylvanians and saw this as a chance to compete in front of friends and relatives. Her training lifts were all going well and it appeared this young lady was on her way to a great contest. Beaming with confidence, she landed a personal record 363 lb. squat, a 187 lb. bench, and a personal record 358 lb. deadlift for a 909 lb. total. This performance placed her second and qualified her for the WPC Worlds in Italy. Her only obstacle was arranging a way to defray the cost of traveling. After the Seniors, champion lifter Gene Bell and Dave Pattaway had informed Wendy of some contacts they



WENDY BROCIOS at the 1990 A.P.F. Senior Nationals in Pittsburgh.

BREXON'S GYM EQUIPMENT, INC.
FEDERAL HILL ROAD, MILFORD, N. H. 03055
603-673-7781

Check these features not usually found on other bench presses.

- Safety Hooks
- Built-in Plate Rack (weights not incl.)
- Accessory Shoe takes optional arm curl & leg lift
- Assembles in minutes
- Rack holds 600 lbs.
- Rack reverses for squats

\$149.95
Price includes freight to 48 states, shipped UPS in 2 days

Many other items are available. Call or write for free catalog.

SPECIAL:
All three for **\$159.50**
Offer ends 3-31-91

Stock #C-72
Olympic Bench Press w/ Incline

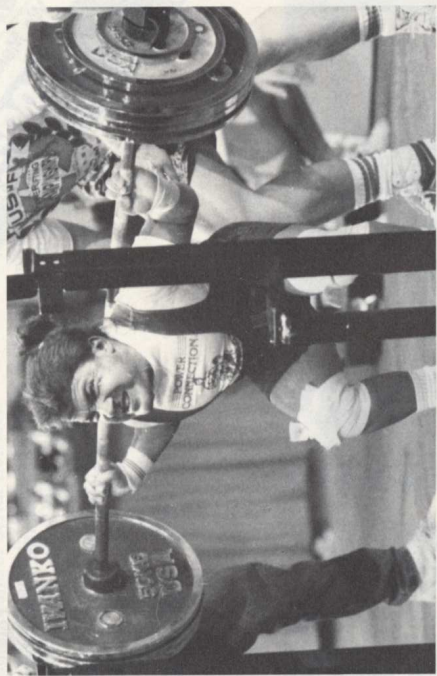
C-8
Arm Curl
\$38.75

C-12
Leg Lift
\$39.50

INTERVIEW

Personal dialogue between PL USA Magazine and the Sport's Greatest Names.

PHIL HILE interviewed by BOB GAYNOR



This interview with Phil Hile was conducted shortly after his victory at the ADFPA Nationals. Phil was the first lifter (followed immediately by Dave Pattaway) to win all three National Championships in one year.

Bob: Please give us some personal information on yourself.

Phil: My name is Phil Hile. I stand a very proportional 5'0" tall with a normal training weight of 117 lbs., with only 9% of that being body fat. My hometown is Latrobe, PA, and I am the youngest out of eight children. In 1989 graduated with a 3.58 GPA from West Virginia Wesleyan College, where I majored in Adult Fitness and Psychology. I am currently a second year Graduate Assistant at Marshall University of West Virginia, working towards my Masters in Adult Fitness/Career Rehabilitation. In my assistantship, I performed comprehensive fitness testing on the students/staff and community of Marshall University, but my main responsibility is with the Marshall University Diabetes Exercise Program. I plan to be married May 18th to a beautiful 5'8" lady named Angela Hazlett. I have already started to look for employment in the spring when I graduate. I would like to work in a well established cardiac rehab center or in fitness and/or medical research.

Bob: How did you get started?

Phil: I was 7 years old when I first picked up a barbell owned by my brother D.J. and it has been ever since. At 10 years of age, I was benching my own bodyweight for 15 reps. I began to seriously train in 1983 with the help of my Phys. Ed. teacher, Mr. Frouen and a masters lifter by the name of Oats Mears. With their help I competed in and won my first high school powerlifting contest held in Nitawan, PA in 1984, and I have been growing stronger and stronger ever since. My father, whom I love so much, has been my backbone of support throughout my lifting career. Out of 30 contests that I have entered he has only missed two due to his heart condition. Do you have any future goals?

Phil: I have achieved most of my goals, but in the future I would like to win the I.P.F. World Championship and one day be the strongest man in the world, pound for pound. Another goal, beyond lifting, is to be asked by Arnold Schwarzenegger or Sylvester Stallone to be in one of their upcoming movies. How do you feel about steroids?

Phil: I have never used anabolic-androgenic steroids nor any other illegal performance enhancing drug (P.E.D.'s), and I never will. Having an educated background, I have been taught, and I will preach, of the dangers of P.E.D.'s usage/abuse. The risks involved with these drugs indeed outweigh any of the supposed benefits. I will abide by my legitimate means that work and throw the door open to the door.

Bob: Phil, how do you set up your training program?
Phil: During off-season, I am proud to be drug free (as you can tell) from taking P.E.D.'s who reads this article, then I have done more than I have

of abdominal work all year long, because the misconception is the source of gravity for most people. Strong abs will give greater stability to the athlete in addition to prevention of lower back injury. I also implement a 10-15 minute flexibility session before and immediately following my workout.

During the on-season, I follow the formula that most powerlifters use, I gradually increase my intensity while I gradually decrease my frequency and duration of exercise. The Less Equals More regimen works best for me. I perform pause squats and half squats during my leg workout. I use light to medium weight and I descend to the bottom position and just stay in that position 3-5 seconds per rep. I feel that this gives me an explosive ability as well as increasing the flexibility of my hips. After my regular 7 sets of full squats, I pack on weight that I am not accustomed to doing and perform half squats, which stimulates my leg muscle fibers and stabilizers like nothing I have ever done before.

Bob: What advice would you have for beginners?
Phil: The best advice I could give to the beginner would be to educate yourself. Get the sport of powerlifting. Get a couple of good lifting magazines. Use what you read well. Practice proper techniques of basic strength exercises. Increase your weights whenever possible while maintaining proper form. Most importantly,

stay away from drugs that saturate athletics today. BE PATIENT AND YOU WILL BE STRONG.
Bob: What are some of the titles you've won and records you've set?

Phil: Weight Class 52 KG - 114 lbs. - USPF Pennsylvania Teenage Champion and Best Lifter in the Lightweight Division; National Teenage Champion and Record Breaker, Camden, Maine, 1986 - National Teenage Champion and Record Breaker, St. Louis, Missouri, 1987 - National Collegiate Champion and Record Breaker, Norman, Oklahoma, 1989 - National Collegiate Champion and Record Breaker, Ft. Worth, Texas, USPF Senior National Champion, Las Vegas, Nevada (1162 total), 1990 - USPF National Champion, Las Vegas, Nevada (1162 total).
Hollywood, Florida, July 14th, 1992, 248 sqm, 264 bench, 473 deadlift, 1162 total. Qualified to compete in the I.P.F. World Championships in the Hague, Netherlands, APF Senior National Champion and Best Lifter in the Lightweight Division, Pittsburgh, PA, August 4th, 1993, press - 270, bench - 479, deadlift - 1195, total, ADFPA Senior National Champion, Chicago, Illinois, September 24th, 1994, 248 sqm, 264 bench, 451 deadlift, 1128, total. Best Man to lift 1128.
Note: ADFPA lift all 3 Nationals. From April 1987 to present. * - In World Record, * * - ADFPA American (National Record)

TENZER
ADVANCE DESIGNS
 We Make Power Gear A Science

1-800-222-6897
 IMMEDIATE SHIPPING

214-236-4012

The LEVER BELT

patent #4541152



- Tightens up to 3 1/2" tighter than any other belt made
- Tightens or releases in less than one second
- Stays firmly shut. The tighter you wear it the firmer it holds
- Adjustable tightness
- Competition legal in all U.S. and world organizations
- First introduced to the powerlifting world by "Dr. Squat" Fred Hatfield, Ph.D.
- Provides more safety than conventional belts
- Hi tech in design and appearance
- Belt made of thick leather and suede for the maximum support
- Lifetime guarantee

\$94, Introductory Price \$62

POWER PROFILE

a detailed PL USA look at some of the best lifters in the world

He's closer to 40 than 30. He's small (by bodybuilding standards) tipping the scales at a whopping 150 lbs. He's diabetic, needing four shots of insulin per day. He wears eye glasses and this nice boy is every Jewish mother's dream, he's a doctor. However, the reason for this article is that Larry Miller is arguably a candidate for consideration as the best drug free bench in the world.

Larry didn't make spectacular lifts overnight, as he's trained for 22 years, but steady progress is what Larry is all about. He's learned an awful lot in his 36 years and I'll try to relay a small part of it here, but first a little background.

I met Larry a few years after high school when I was the 'Big Shot'. I had set records in winning the Ohio State Olympic Weightlifting title and was preparing for the Olympic Trials of 1976. The same age as me, Larry was a tough little bench presser, lifting over 250 lbs at 123 lbs or so. We got close after I blew out my knee and my chances of an Olympic berth. Larry pulled me out of my depression by becoming my training partner and teaching me about the 'bench'. By 1980 Larry had finished dental school and was lifting 300 lbs or so as a featherweight.

Drugs were still a big part of Olympic lifting and I discussed steroids with Larry, but even though they had been an 'accepted' part of strength sports up until that time Larry adamantly preached against their use. To the argument that 'everyone is doing them', Larry would say, 'Everyone except me'. Over the next ten years Larry continued to work out (mostly in his basement) and concentrated on the bench press. Doctors Thomas Isakov and Nichols all had a part in helping to keep Larry's body in one piece as the diabetes and shoulder injuries got so bad that nerve blocks were given to stop the pain. This 'impingement syndrome' is not uncommon among 'specialists' and his overdeveloped asymmetry put pressure on the nerves. Larry has since rounded out his training by becoming a three lift competitor and has balanced his physique with bodybuilding. By 1987 Larry benched 352 lbs and took 3rd in the Open Ohio State meet. He discovered the ADFPA in May and introduced himself by winning the title with a 370 lbs. state record.

Larry then started getting involved in the organization and feels strongly that the ADFPA is one of the best federations out there and has done a great deal to promote the sport. Larry has since become the State Chairman of the ADFPA. Recently

squats, then finishes off with some arm work and, as stated previously, close up a hard workout. It doesn't seem like a lot of work, Larry is lifting protein but in intensity and recovery are the watchwords of progress. Too many lifters veterinarian as to set mature lifts. Larry refuses to set himself for injuries. He's squatted over 400 lbs. and deadlifts about 450 lbs. He feels that he can lift over 1000 lbs in the other lifts' to add to his bench press. That would put him around a 1500 lb total. As he gets closer to a meet he drops his reps to 6, six weeks out. 5, five weeks out until the meet. Every couple of weeks he'll do negatives for 5 reps or so and feels it helps keep his mind and body geared for heavy weight. He doesn't take a lot of supplements, but does watch his food carefully, always with a close watch on his glucose. He does take chromium as it's been shown to have a positive effect on diabetic metabolism.

Larry's form is the culmination of years of trial and error. He lifts with precision and technique from his perfect full body arch (his hips stay in light contact with the bench), but his foot placement ensures a significant leg drive to the upper body. Warm up and stretching along with aerobic conditioning are all part of this athlete's fitness program. Larry excels in other sports as well. He once won a 'Fastest Serve' tennis contest at an incredible 120 mph. His most prized accomplishments to date, however, are his three young sons and his beautiful, supportive wife, Julie. Putting up with a competitor's schedule, added to his dental practice, and the craziness of his dieting quality Julie for the 'Medal of Honor'. Larry's father and brothers and sisters all have played their part in Larry's success. His talented and competitive family boasts doctors, lawyers, and pharmacists and the family is very close. Brothers David and Steven trained with Larry from the beginning and until a few years ago David could give Larry a run for his money. Larry's level headed, determined approach assure a continuing assault on the drug free record book and promotion of the sport he loves. Congratulations, Larry! You're an inspiration to all of us.

NOTE: A former Olympic weightlifter, Barry Herman has represented the US and Israel as a member of their national teams. He's certified by the American College of Sports Medicine and is considered a leader in the field of personal training. Barry is president of Fit For You, Inc., a chain of personal training facilities.



LARRY MILLER at left, with Ed King of King's Gym in Bedford Heights, OH. (Herman)

Larry has been training at King's Gym in Bedford Heights, Ohio and credits owners Ed and Frank with helping him break the 400 lb. barrier. Both are very supportive of drug free powerlifting. Larry's progress is continuous and steady. He's had many close calls in training with over 400 lbs., but meet days have been a nightmare as he fights to keep his glucose under control. Nerves and stress have forced him to take four times his usual insulin amount the day of the meet. This dose is enough to do him harm under normal circumstances. Keeping his blood glucose at normal levels is tough enough while eating his regular diet, but Larry has found that dieting and 'making weight' prevented him from being able to control his diabetes when added to the stress of competition. Therefore, Larry keeps his bodyweight near his competition class weight year round. Larry is a lifetime drug free lightweight who believes in the integrity of honest competition and frowns upon the lifters who normally weigh a weight class or two above and take diuretics to establish 'records'. By the end of 1989 the healthy, pain free, controlled diabetic was finally able to show what he had been capable of with a 385 lb. lift and two close calls at 400 lbs. On August 19, Larry finally did it with a 402.1/4 lb. lift. This unofficial ADFPA record was just a sign of things to come as a month later

Larry hit a 410 lbs with room to spare. The judges felt Larry was good for at least another 10 or 15 lbs. A 420 lb. lift made in late September in training puts him within 'shooting distance' of the world's best and I've learned not to put anything past him. Now, let's take a look at how this 'mini' superman trains.

Larry trains with his friend Tom Laifey who also helps Larry at his meets. When Larry benches he wears an Ernie Frantz bench shirt and trains with a larger version of his competition shirt. Larry uses three different shirts in training, and credits the shirt with helping to keep his shoulders healthy and reinforcing his form. Larry trains three days per week, Sunday, Wednesday, and Friday. He doesn't pyramid and he only hits his chest twice a week with one of the close grip benches. Larry doesn't train his shoulders at all, feeling that they get worked enough during chest training and he feels that leverage movements (lateral raises, forward raises, etc.) are dangerous to his chronically injured joint. Larry doesn't do a lot of heavy low rep lifts, again, he feels that the stress is conducive to injury. Instead, he works with heavy 8s, doing 3x8 on most of his major exercises. His Wednesday bench day is flat bench, declines and dumbbell benches. Friday is his back day with deadlifts, t-bar and pulls. Sunday is his leg and arm day. Larry

Do you need a training partner in order to fulfill your potential as a powerlifter? Without thinking of the typical reflexive response would be of course, 'A bit more thought might reveal' of course, if only to spot! There is a major difference between having a training partner or partners and a spotter. In the ideal situation, one could benefit from one or more training partners. Unfortunately, this assumes an awful lot of good training partners are few and far between. Although much of the following discussion may seem simplistic, too many lifters collect a variety of training partners and their lifts suffer for it. In many cases, they would be far better off training by themselves or getting a neighbor who had good basic strength to lift the bar off of them after missing a squat or bench press.

First things first: Even with a smart and capable training partner, one's equipment must be as safe as possible. This means a bench that is sturdy and will not fall apart under the stress of a heavy lift. Laugh if you will but it's happened to me and I've seen it more than two or three times. I lifted in a meet in San Diego in the late 1960s where the bench that I used was an unpadded wooden model that groaned under the weight of anything more than three hundred pounds, and sagged noticeably when the big guys got on it. The uprights should be adjustable or set so that you can safely and comfortably take and then re-place the bar. With my seven pec

More From Ken Leistner



Dr. Ken's beloved Malverne High School Mules had an undefeated football season and were uncscored upon during the regular season, winning the Rutgers Cup. This was the first time in history that a school from the small school classification was recognized as the Number One team in the area. Strength training done at Dr. Ken S. Leistner's home gym, and the school weight room (which was donated through the years by Dr. Ken, Ralph, and Jimmy of the equipment co.) played a large role in the team's success. Photo by Dr. Ken S. Leistner, C. Cannon, Ralph, Dr. Ken, and K. Lockwood, some of the Mules's stars (photograph courtesy Dr. Ken)

Assuming that all necessary safety items are in place, what about a real training partner? A partner to be effective, that is to say, to increase your three lifts. Anything less than this constitutes a spotter. Chances are you can find a spotter, but if there isn't a real one for you, your lifting partner, the cheerleader, eventually finds other things to do with his or her time.

Another lifter who is interested in improving their lifts, especially a gifted lifter who might be offering for a personal level meet, is often seen as an ideal partner. He or she will obviously push you to greater lifting heights, will probably be stronger than you, providing you with a good spotter, and will no doubt be enthusiastic. From long experience, this isn't true in many, many cases.

The lifter who is preparing for a major meet is usually interested in their lifts going up, not yours. Yes, you may be enthusiastic to share the bench or squat rack with a potential Senior National champion, but this relationship often deteriorates into "Me Ramah, You Spear Carrier." If this potential champion is a good friend who is sincerely interested in your improvement, while also kicking his or her lifts up, you have a good training mate. Otherwise, expect the honeymoon phase, while the rest of the training cycle is spent working around those movements deemed to be most important to the better lifter.

A non-lifter, but one who is enthusiastic about whatever type of training they are doing, and who is at least knowledgeable about what you're trying to accomplish, can, and in my case, has been an excellent training partner.

Jack Lawrence was a football and lacrosse player who was far more interested in physique training than making big lifts. However, when we were in our late teens and early twenties, he trained hard and consistently, and wanted me to finally bench press four hundred as much as he wanted his arms to stretch the tape one more inch. He knew how to spot, did not mind doing it and would come to the gym to help me even if he had nothing planned for himself that day. I reciprocated, and tried to push him to the point where his 'pump' would explode his pecs, even though I hadn't the foggiest notion as to why he would have such a goal.

We both wanted the other to succeed, even if our goals were divergent. This is the key to a good training partner. If selfishness is the order of the day, if only for a few days prior to a meet, a real training partner will overlook the obvious, and be supportive. It helps if that partner also is a powerlifter, but often, petty jealousies and envy erode the relationship between powerlifting partners. If there are few in your locale who are interested in seriously pursuing the three lifts, don't despair. There will be many who share a similar temperament and a desire to improve, with an honest desire for your improvement. That's the man or woman you want in the gym with you.

Dr. KEN LEISTNER

More From Ken Leistner



Dr. Ken's beloved Malverne High School Mules had an undefeated football season and were uncscored upon during the regular season, winning the Rutgers Cup. This was the first time in history that a school from the small school classification was recognized as the Number One team in the area. Strength training done at Dr. Ken S. Leistner's home gym, and the school weight room (which was donated through the years by Dr. Ken, Ralph, and Jimmy of the equipment co.) played a large role in the team's success. Photo by Dr. Ken S. Leistner, C. Cannon, Ralph, Dr. Ken, and K. Lockwood, some of the Mules's stars (photograph courtesy Dr. Ken)

order to fulfill your potential as a powerlifter? Without thinking of the typical reflexive response would be of course, 'A bit more thought might reveal' of course, if only to spot! There is a major difference between having a training partner or partners and a spotter. In the ideal situation, one could benefit from one or more training partners. Unfortunately, this assumes an awful lot of good training partners are few and far between. Although much of the following discussion may seem simplistic, too many lifters collect a variety of training partners and their lifts suffer for it. In many cases, they would be far better off training by themselves or getting a neighbor who had good basic strength to lift the bar off of them after missing a squat or bench press.

First things first: Even with a smart and capable training partner, one's equipment must be as safe as possible. This means a bench that is sturdy and will not fall apart under the stress of a heavy lift. Laugh if you will but it's happened to me and I've seen it more than two or three times. I lifted in a meet in San Diego in the late 1960s where the bench that I used was an unpadded wooden model that groaned under the weight of anything more than three hundred pounds, and sagged noticeably when the big guys got on it. The uprights should be adjustable or set so that you can safely and comfortably take and then re-place the bar. With my seven pec

He Thinks It's All Bull Until He Tries HOT STUFF!

Fellow Powerlifters —
I'm sick and tired of getting ripped off by supplement companies! They promise fantastic results — all they really do is take your hard-earned money. In fact, I've never to get sucked in again. That's why I professed pretty firmly when a gym buddy told me about HOT STUFF.
"Give me a break," I said. "I'm not falling for that advertising crap again."
"No listen — this stuff's for real. It's different. It really works," he responded. "You gotta try it. He was so convincing. I figured "Oh, hell! Just one last time!"

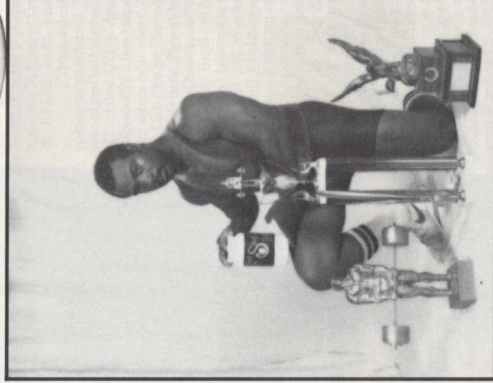
That's Why I Was Surprised When I Saw The Results...
Damn! This stuff is real! After just a few days on HOT STUFF I began to feel something extra in my workouts. At first I thought it was my imagination. A few more workouts — and still some strange new drive. Could it be? Was I so anxious for HOT STUFF to work that I was kidding myself? Was I so determined not to be ripped off again that my mind was playing tricks on me? I wanted more proof.

I Got More Proof After Two Weeks...
I am a very precise powerlifter. I couldn't train for world championships without drawing on my many years of experience. I plan everything down to the last detail — diet, training routines, exercise poundages. I know my body well and that's why my workout poundages are calculated exactly for each week of my cycle. What I'm trying to say, is that I can tell within a few pounds, how strong I'm getting each week.

That's why I was so amazed when after two weeks into my strength cycle, I was toying with weights I should just have been making.
"You make those weights look awfully easy. Wilkie," one of my training partners commented. I stopped for a minute and thought about it. He was right. Something strange was going on here. Then I remembered that the only thing different was HOT STUFF. I was beginning to believe! And by the time that cycle was over I had no doubts. I had never used a product like HOT STUFF. Not only did it increase my strength, I even lost several inches around my gut. Boy, was that a bonus!

HOT STUFF

Amazing New Product Makes A Believer Out Of World Champion Willie Bell — He Thinks It's All Bull Until He Tries HOT STUFF!



STUFF. But the real proof can only come when you try a can for yourself. That's when we really have to put up or shut up. Because if HOT STUFF can't do what we say... you'll never buy it again. It's that simple, but HOT STUFF users do buy it again... and again... and again. Now it's your turn to find out why.

NOW AVAILABLE AT GYMS & HEALTH STORES EVERYWHERE OR ORDER BELOW
1-800-537-7671

RUSH ORDER FORM

Send me HOT STUFF, a try. Please send my order as soon as possible.
 1 lb. canister \$24.95 (plus \$3.50 postage and handling)
 2 lb. canister \$47.00 (plus \$5 postage and handling)

Check Money Order Master Card Visa
 Card Number _____
 Expiration Date _____
 ORDER TOLL FREE 1-800-537-7671 (24 hour service)
 Name _____
 Address _____
 City _____ State _____ Zip _____
 Name for Bill to: _____
 Mail to: _____
NATIONAL HEALTH PRODUCTS
 Dept. HS1
 731 Kirkman Road, Orlando, FL 32811

This product is dedicated to the memory of Thomas Clavda, Sr. whose love, support & guiding spirit made it all possible.
© Copyright 1990

I Think That You Can Benefit Too — And That's Why I'm Telling My Story!
I'm really not the type of guy to go around endorsing supplements. I'm just a hard core powerlifter who was pleasantly surprised by an unusual product. When I found something good, I think it should be shared.

Since you have your doubts as I did, then try one can of HOT STUFF. It won't cost you too much to find out if I'm right and besides — it's a good protein supplement too. But I think you will be as impressed as I was.

There's Never Been A Product Like HOT STUFF!
Can stories like Willie's really be true? Here's why HOT STUFF contains just about every bodybuilding supplement known to man

— Yohimbe, Dibencozide, Smitax, Chromium, Boron, Gamma Oryzanol, Transferulic Acids, Ginseng, Carnitine, Arginine Pyroglutamate, Mexican Yam, BCAA's, CoQ10, Sterols, Glutathione, Germanium, Digestive Enzymes and much more. All of these powerful nutrients are blended into a single, delicious tasting, easy-to-mix powder.

But even that's not the good news. The real story is that HOT STUFF works outrageously well. In the two years that it's been available, it has developed a passionate following of thousands of bodybuilders and powerlifters. Everyone who uses it freaks out at the results. There has never been a product like HOT STUFF. Just talk to anyone who's used it — someone like Willie, for instance — and they'll tell you exactly the same thing. **HOT STUFF REALLY WORKS!** And that's the truth. Muscle gains of 30-35% and fat loss of 15% are possible in just six weeks.

Prove It For Yourself! Try One Can...
Talk is cheap, as they say. We could fill up this entire magazine singing the praises of HOT

GYM & DEALER INQUIRIES WELCOME

POWER PROFILE

The quiet intensity on the platform—the clean technique and the heavy poundage—Barb Rester is memorable for this, but you also remember her because she is startlingly attractive. Coppertan black hair, big brown eyes, dark complexion. Petite frame, all capable of totaling 180 pounds at less than a 116 lb. bodyweight.

Barb Rester ranks near the top of her weight class with a 170 bench, 314 squat and a 325 deadlift. Women who come into powerlifting with this kind of strength generally have a background in athletics. Ask Barb about her background and she'll answer, "No, I never did any athletics. I just wanted to get into shape." There must be more to it than this or that was a hum-dinger of shape-up program!

Then you find out that she loved to do push-ups as a young girl (laying the ground work for a big bench) and that her interests include rock climbing, tennis, archery, skiing and hiking. Sounds athletic to me, but back in 1984, when we assume she was out of shape, Barb started weight training for an entire year on Universal machines and noticed that she did seem to be lifting heavier weights than other women.

Barb then found a coach and friend, Jerry Richards, at Southern Illinois University where she was a graphic artist for the Wellness Center. Jerry taught her the skills of powerlifting and coached her through training cycles. She entered her first meet that fall. Her goal in all of this was to have fun and to develop her own potential. Barb went on to compete in three meets a year, collecting state and regional titles along the way. She entered her first Nationals in 1987.

The ADFPA Women's Nationals in Tempe, Arizona, was where Barb's joy at winning second place was dampened by the initiation of a sustained conviction that her middle name was "choke". She found out that she lifts much better in the gym than at meets, especially National competitions. The next year at the nationals produced the same results. Second place was close, but not good enough for her.

At the 1989 ADFPA Women's Nationals in Orlando, Florida, Barb was five kilos behind Mindy Garner following the benches. Would this be the year? When the dust settled a de-

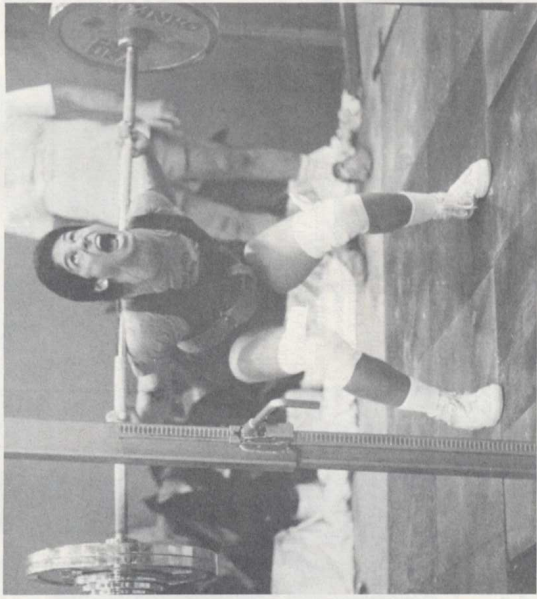
and lat pulls. Light bench days include narrow grip benches, incline benches and military presses. Deadlifts are always trained sumo style and are followed by bent over rows, 1-bar rows, pull-ups and sit-ups. Abs are worked every training day, and that amounts to four times a week. For aerobics, Barb last walks four to five times a week for forty-five minutes.

And how does the petite frame stay petite? What are the dietary secrets that keep her bodyweight and fat at a minimum? Barb actually eats more when she is training for a meet. Otherwise, eating—she says—is not a high priority. Her diet at work, many outside interests and now graduate school keep her busy so that meals are often a piece of meat and the other five in that order. The food intake is not total! The biggest aid to her training diet is often her training diet of healthy foods and then freezing individual meals so that they can later be reheated at her convenience. Barb does not take supplements, except for multivitamins.

Her game plan for the 1990 Nationals included several changes. First of all Barb established herself in another weight class, 111 lb., by winning her weight class and Best Lifter in addition to Best Squat, Bench and Deadlift at the 1989 Viking Open in Chicago. Every meet she competed in since then in the 111 weight class brought much success. Not too long ago at an Southern Illinois University Open meet, she set a new American record in the bench, 173 pounds at 111 pounds of bodyweight. This made her feel optimistic about her chances at the 1990, where Ken Leistner identified her as one of the favorites.

Of course, there has been a change in her current coach's status. Remember that saying about "Always a bridesmaid? She is a bridesmaid no longer. Barb has married Dom Crivolino, her training partner, friend and fiance. They met, of course, in the SIU weight room.

Barb is extensively active in the ADFPA, where her friend—and the author of this article—Stephanie Whiting is also a serious participant, both as a lifter and as an administrator. We wish the best of luck to Barbara in her future lifting efforts.



BARB RESTER at the 1989 ADFPA Women's Nationals in Florida. (photo by Linda Finnegan)

and the relationships that she has formed through lifting have helped her to become a more well-rounded individual. Finding herself capable of self direction and self growth, Barb has grown from a painfully shy introvert to a more self-aware, self-confident person.

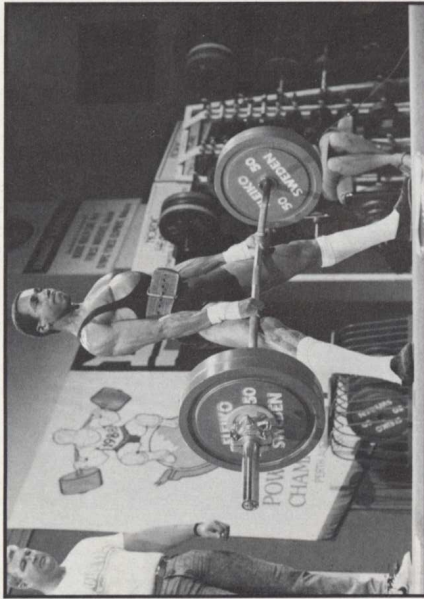
Giving to others and helping the growth of drug-free lifting prompted Barb to chair the Drug Education committee of the ADFPA, a committee established at her suggestion. What are her feelings towards drug use in powerlifting? As a wellness advocate, Barb sees no place for performance enhancing drugs in sports. "Steroids are a crutch." She feels especially hurt when she sees teens using steroids and so she does her best to educate the students in her area. The best lesson is gleaned from her own example, push yourself with hard training and let each workout count.

In training on squat days, Barb will also do walk-outs, front squats, heavy leg presses, leg curls and calves. On heavy bench days, she superset flat flies with wide grip benches. This is followed by lying tricep extensions, tricep push-downs

TEAM BODYBUILDING FORMULAS

Supplements of Substance

BEING #1 & NATURAL IS QUITE AN ACCOMPLISHMENT!



DAVID PATTAWAY

#1 123 lb'er in the USA & Natural!

YMCA National Champion • NASA Grand Nationals Champion • 5 Time USPF National Champion
APF National Champion • ADFPA National Champion • 3 Time Silver Medalist, IPF World Championships
APF World Record Holder (SQ 501 lbs, DL 556 lbs, Total 1,300 lbs) • ADFPA American and National Record Holder

TEAM BODYBUILDING doesn't pay me to endorse their products—their products don't need endorsement. But let me tell you, I do use TEAM BODYBUILDING FORMULAS...being natural, you have to have an edge. TBF is my edge!

David E. Pattaway

We are proud to have played a small part in David's success. For the past 5 years, David has used nothing but TEAM BODYBUILDING Supplements. Our Amino Density is his protein tablet.

Take the taste of Muscle Intensity, in either vanilla or chocolate...another of David's favorites.

- 5830 Amino Density 1900 MG 500 tablets\$34.99
- 5830 Amino Density 1900 MG 325 tablets\$22.99
- 6722 Muscle Intensity - Chocolate 50 oz\$26.00
- 6723 Muscle Intensity - Vanilla 50 oz\$26.00

Send Check or Money Order to:
TEAM BODYBUILDING, INC.
P.O. Box 1412 • Chesapeake, VA 23327

Distributed by

BOSS

Bob O'Leary Sports Supplements
(800) 666-8870

TEAM BODYBUILDING

European Headquarters
Stoffelweg 1 • 8820 Wädenswil • Switzerland
Tel./CH-(0)1/780 92 17

TEAM BODYBUILDING
Canadian Headquarters
Joe Servello • Ontario
(705) 476-9471

LASER REFLECTIONS • P.O. BOX 642 • CHESAPEAKE, VA 23125-0442

STARTIN' OUT

A special section dedicated to the beginning lifter

Most powerlifters use assistance exercises to improve their totals, but some assistance work is ineffective. Let's examine a few common assistance moves, like hammer curls, often thought of as the powerlifters' curl. It is believed that performing these dumbbell curls in a thumbs up fashion is the way to go for a bigger bench. How can limiting the action of the bicep muscle be more beneficial than performing a dumbbell curl using a full range motion and the supinating or twisting function of the bicep muscle? Let's work all aspects of the bicep by curling dumbbells with a full extension and contraction by starting from the fully extended position with your palms facing to the rear. As the bell is curled up, rotate the hand to the palms up position. At the top, twist the pinky side of your hand in to the shoulder to fully contract the bicep. On the way down, reverse this procedure, but don't do the rotating all at once. Spread it out evenly and smoothly over the movement. Take about twice as long to lower the weight as you did to curl it up. As you curl, don't let your elbows flare out from the body, as this adds the delts to the move. Try to move the elbow slightly forward on the curl up. Use a weight that allows strict form on 90% of the reps of each set.

Shoulder shrugs are probably the best exercise for the traps and deadlift lockout power. However, in our quest to pile on the weight, the range of motion of this exercise suffers. Use a heavy weight, but only as heavy as can be shrugged all the way up. One trick is to hold the last rep of each set at the top for a count of three, then try to stomp it even higher and hold again for a count of three.

Along with shrugs, partial lockouts in the power rack are often used to improve the deadlift. A lifter I trained out weights he just tore off the floor. He could, however, do 5 above the knee lockouts with the same weight he couldn't lockout on the platform. What's wrong? When he did partials in the rack, he would position himself in a quarter squat and using little, if any, lockout muscle. He couldn't lock out in competition because his leverage position was completely different. Try positioning yourself in the rack as you would be at that point in the deadlift. You'll have to use less weight, but you'll be working the desired position.

Most big benchers rely on close grip benches for adding trap power, but many lifters use too close of a grip to extract maximum benefit. I've seen guys using a hands touching grip and then complain about wrist strain. Not only does too close of a grip cause extra wrist strain, but controlling the weight is difficult and you use less weight. A shoulder width grip will give your triceps all the extra work they need while reducing wrist strain, increasing control of the bar, and letting you pile on more iron. It seems best to hit your chest a little lower than normal for a regular bench.

Lats are important in all three lifts and for many, pull-downs or chin

Assistance Exercises



Training Special Olympics Coaches at the Rocky Mountain Gym in Roy, Utah owned by USPF President Jan Shendow and his wife Lynda. The training school was conducted by Chip Hultquist and resulted in 20 coaches being certified for powerlifting in the Special Olympics, where over 100 athletes are expected to compete in the future. According to Chip, Special Olympics coaches are the "mainstream" lifters. Anyone interested in playing an important role in Special Olympics Powerlifting can write Chip Hultquist at 907 Allegood Court, Tallahassee, FL 32303 or him a call at 904-385-1210.

Many lifters make assistance exercises the main aspect of their training. This is not as it should be. How do you incorporate assistance exercises into your training plan? First, you have to assess what weaknesses you have to improve. Don't do something just because everyone else is; do things because you need to. Second, always use large muscle group exercises instead of isolation exercises. Try to find exercises that are close to the 3 lifts in movement patterns. Close grip benches are better than tricep extensions. An exception is the shoulder area, which is hard to 'shore up' without isolation exercises.

Third, you need to plan the level of assistance work, which will roughly correspond to the type of training you are doing on the 3 lifts. This must be fine tuned to the exercises you are doing and how well they lend themselves to different ranges. Good movements are not particularly well suited to high reps, but rows and tricep exercises are. Here are my favorite assistance exercises based on particular weaknesses in any of the 3 lifts. SQUAT: High bar squats done to below parallel, leg presses with feet closer than normal stance and full range of motion, 'bottom squats' (narrow stance, upright torso, down to 2-3 inches below parallel and up

DOUG DANIELS

to 2-3 inches above parallel). BENCH: incline presses at a steep angle to hit the pecs/delt in the chest. Military presses with a grip about 8-10" wide. These exercises will help your bench in general. They do not address any single weakness. The following exercises will help you if you have a poor rear end/bench to full range of motion, tricep weakness, weightlifter's dips done with full stretch at the bottom, and finally retractors (this is a bar/trap exercise done on a bench that allows full stretch on the bench as if to do a row with a narrow grip. Also, simply squeezing your shoulders back together with your arms and finish off with a slight pull with your arms. The total range of motion is 4-8"). The retractors will help you stabilize your rear bench and allow you to maintain your position on the bench more effectively.

To aid your lockout you can try hammer curls or any tricep exercise. Lockout type problems often can be remedied by using a power rack and a shortened range of motion with an overload. This type of training is very individualized so I can't recommend it without knowing the specifics of your situation but it can be effective. DEADLIFT: my 2 favorite exercises of all assistance work are high pulls done in a power rack and good mornings. These 2 exercises will do more for your deadlift than any other exercise, possibly including the deadlift as well. Other exercises are any type of row (T-bar, bent over, cable, etc.) Retractors are also excellent for the deadlift and most forms of shrugs including the bent forward shrug Fred Hatfield popularized a few years ago. This is done by simply leaning forward at the waist and away from your body rather than up with the bar next to the body. This is more effective for maintaining that flat back, so necessary for successful deadlifting.

These are my selections of assistance exercises to use for each of the lifts. Now you need to select from that list and put it together with your training on the 3 lifts. Remember these are complementary exercises, not the main focus of your training. I normally pick 1-2 exercises for each lift and split them out per day. This gives you 6-9 exercises per day on your 2 big training days. The third training day I put in an entire workout shoulder girdle work that is done as injury prevention. By choosing the exercises this way you will develop all the necessary muscle groups for powerlifting and along the way a balanced physique. You can use a different approach to really focus in on a particular lift, but be careful of overtraining that lift!

You don't have to do any assistance exercises at all if you don't think you need them (Ernie Frantz never did any during all the years I trained with him). If you choose to do them, try this approach rather than something more haphazard and see if the results are not better.

BRYAN WADIE

Natural Choice Vitamin Co. Introduces Lever Action II Competition Belts



Lever Action Competition Belts

- The lever action allows you to tighten your belt fast and easy.
- Approved by all Federations.
- Featuring Ultra Nap™ Chap Suede splits.
- Bullhide Leather for strength and weight.
- Belt and Buckle protected by U.S. patent No. 4541152.

Multi Color Lever Action II.....\$75.00

13 mm Thick, 10 cm Wide

One Color Lever Action I.....\$61.00

13 mm Thick, 10 cm Wide, Suede both sides

One Color Lever Action

2 1/2 Tapered.....\$59.95

13 mm Thick, 10 cm Back

New Wrap 16™

3 pr. \$39.95 2 pr. \$27.95 1 pr. \$16.50

The Ultra Power Fabric

New Wrap 12™

3 pr. \$27.00 2 pr. \$19.95 1 pr. \$10.95

New Wrist Wrap 16™

3 pr. \$27.00 2 pr. \$18.95 1 pr. \$9.95

The Ultra Power Fabric

New Wrist Wrap 12™

3 pr. \$24.00 2 pr. \$17.00 1 pr. \$8.95

To order please call 1-800-445-6512

or if mailing write to:

The Natural Choice Vitamin Co.

707 E. Illinois Ave.

Peoria, Illinois 61603

Add \$3.00 postage, 30% for Air Mail. Master Card, Visa Accepted, Illinois residents please add 7 1/4% sales tax. Orders processed and shipped same day as received with Money Orders. Personal Checks allow 10 days to clear.

Ask the Doctor

This column will answer questions about drugs used by athletes and detection techniques for these drugs. Because of the demand, I will occasionally answer questions concerning health and training problems which do not directly relate to drug use and detection. If you wish a personal response to your questions send \$15 to cover office and secretarial expenses. Please, no questions about how and when to use anabolic steroids. Send questions to: Mauro Di Pasquale, MD, 23 Main St., Warkworth, Ontario, Canada K0K 3K0.

DEAR MAURO: My doctor has told me that my cholesterol is high and that this will cause me problems if it's not brought down. He has told me to cut down on animal fats, eggs and dairy products. I've heard from some people about some high cholesterol being good. Some others have told me that it's alright to eat eggs and cheese if you are working out. I'm confused by all this and wonder if you could tell me who's right. I've also read that anabolic steroids can increase your cholesterol. When I had the cholesterol test I was on Anadrol and Primo. Would this have caused my high cholesterol? Also, the doctor said that if diet didn't work, I might have to take some medicine to bring my cholesterol down. What do you think I should do? What would be the best drug to take - with the fewest side-effects? **Jan P.**

DEAR JAN: The research on cholesterol has definitely shown that it is unhealthy to have a high blood cholesterol, and that the level of blood cholesterol can be affected by the amount of cholesterol in your diet. So it's a good idea to follow your doctor's advice on what to eat and what foods to avoid. There's a lot of false information on cholesterol floating around. I'll try and explain the known facts on cholesterol.

There is both good and bad cholesterol. HDL (high density lipoproteins) is known as good cholesterol because it transports cholesterol to the liver where it is metabolized. A high HDL means that less of the cholesterol is around to clog the arteries and cause heart disease. The higher the HDL the lower the total body cholesterol and the lower the heart disease risk. LDL (low density lipoproteins) is known as bad cholesterol since it is the cholesterol that can build up in the walls of your arteries and thus limit the amount of blood getting to the heart and other tissues - leaning you more prone to heart attacks (and other problems). The higher the LDL, the higher the total body cholesterol and the higher the heart attack risk.

The consensus in the medical community is that raising HDL and lowering LDL are the two most important preventative measures for those who are at an increased risk of heart disease, but there are also other fats besides cholesterol which are important. High blood triglyceride levels when accompanied by low HDL levels also seem to further increase heart attack risk. Therefore, in order to minimize your risk against heart disease, your serum LDL and triglycerides should be low, and your HDL should be relatively high.

Of course, there are other factors besides blood cholesterol levels that increase your risk for heart disease - such as high blood pressure, cigarette smoking, a sedentary lifestyle, being overweight, and good old everyday stress. In your case, the use of anabolic steroids could have been a significant factor. It would appear that these other risk factors increase the heart attack risk because they tend to lower HDL and raise triglyceride levels.

In your case, I would get a repeat cholesterol screen done. It might well be that the main culprit was your anabolic steroid use. If it's still high this time around, then I would definitely modify your diet and your lifestyle. The way to go about this is not to take in too much saturated animal fats (such as egg yolks, butter, fatty red meat etc.), to increase your intake of linoleic acid (a polyunsaturated fatty acid which has been shown to lower serum cholesterol), to regular your body weight down, to keep your cardiovascular system fit by regular workouts, not to smoke, and not to use anabolic steroids. If after doing all this (or if you can't manage to change your lifestyle) your blood cholesterol levels are still off, then you might have to resort to using drugs to keep your cholesterol levels in order. The best drug for this job has recently been shown to be gemfibrozil (Lopid). This drug effectively decreases heart attack risk by lowering LDL and serum triglyceride levels, and raising HDL levels. Compared to other drugs which have been used in the past, the side-effects of using gemfibrozil are relatively low.

There are a few more drugs in the works that seem to work as well or better than Lopid, with much fewer side-effects. One of them is called Lovastatin and has just been approved by the U.S. Food and Drug Administration. The product is the first to be approved from a new class of drugs that control the synthesis of cholesterol in the liver by inhibiting the enzyme HMG-CoA reductase. Inhibition of your enzyme forces the liver to remove cholesterol from your blood in order to produce bile acid.

If you have to resort to using drugs for your elevated cholesterol, drop me another line and I'll send you some more detailed information.

DEAR MAURO: Last March while taking a physical exam, I was discovered having high blood pressure. At the time it was 185/105. Since that time I have been given countless tests and nothing can be found that is causing

I'd like to say a few hundred words about glandulars. That's right - glandulars. They're making a comeback, you know? Now that steroids are getting major attention from local and national law enforcement, many health enthusiasts are pushing glandulars again. Not long ago I noticed at least five major publications carrying full-page ads touting the magnificent benefits that can be derived from ingesting glandulars.

Actually, glandulars were really hot in the late 70s and early 80s. At that time, I really wasn't into nutrition, but I had been told 2 or 3 times by individuals who were supposedly "in the know," that a normal, well-fed human being could never be improved upon by any type of nutritional supplementation. I had also read a great deal of research concerning nutrition, all of which clearly indicated that such supplements as vitamins, amino acids, and food supplements were worthless as ergogenic aids. Consequently, Pies, and Domino's supreme pizzas without onions. Still, the talk about glandulars had me wondering.

You see, there were so many liters running around saying that to be successful you had to take glandulars, that I wondered if the substance might not be worth an investigation. I went out and bought one of those liters to find out what glandulars were all about. Surprisingly, all I knew about glandulars was that to be successful, you had to take them. The funny thing was that I ran down just about everyone of those glandular-promoting liters, and not a single one of them could explain how glandulars worked. In fact, the only thing they could say was that they worked as good, if not better, than steroids. Now that's saying something. However, rather than accepting the claimed ergogenic effects of glandulars as the product of some type of sympathetic magic, I decided to research the matter myself. What I found was quite interesting.

Simply stated, glandular therapy is the use of glandular and organ substances to enhance the function of an individual's organs and glands. The key concept behind this therapy is that like cells help like cells. For instance, it is believed by the proponents of this theory that if you eat liver, your own liver will be improved. The logic behind this idea is that glandular tissue contains intrinsic factors that are distinct from vitamins, minerals, hormones, or enzymes, and that these intrinsic factors are cell specific - meaning that the cells we eat will specifically affect just like Pavlov paired the bell with food. After a number of trials of pairing the light with the shock, the worms eventually developed an association reflex between the light and the contracting response. When the light and the contracting response were paired to contract when they saw the light, even though the shock wasn't given. The light had become a conditioned stimulus (CS) and the contracting, a conditioned response (CR). Once the researchers had conditioned the planarians to the light, they chopped them into little bits and fed the pieces to hungry, untrained planarians.

During my research, I actually found a laboratory study that seemed to indicate that very possibility. In 1960, Reeves Kimble, Barbara Humphries, and James McCormick conducted an experiment to see if they could transfer intelligence from one planarian (flatworm) to another. The first thing they did was to condition the flatworm to respond to a trough of water and then passed an electrical current through the water. Of course, the flatworms contracted violently.

Dr. Judd

Glandulars.. One More Time by Dr. Judd Biasiotto, World Class Ent.



Another group of flatworms were fed bits of other flatworms who were not conditioned to the light. As it turned out, the flatworms that had eaten the conditioned worms responded to the light (CS), while the planarians who ate the unconditioned worms didn't respond to the light. It seems that the intelligence of the flatworms had been enhanced by eating their educated kin.

I also found that when flatworms are injected with the RNA from donor worms who were taught worming information, the worms still learned related material faster than other worms who were given injections of RNA from uneducated donors. According to this, negative information is better than no information. Perhaps the most amazing study involved flatworms that were fed both positive and negative instructions. The planarians were given a "worm stew" made up of some donors who were trained to do the same thing in exactly the opposite way. Those poor worms learned slowest of all; the conflicting behavioral tendencies they received

As would most animals who received such a shock. In this case, the shock is an unconditioned stimulus (UCS) and the contracting of the worms is the unconditioned response (UCR). In other words, the worms didn't have to learn to contract when they were shocked. What the researchers wanted to do, though, was to condition the worms to contract when they saw a light without the shock being presented. No big deal, they simply just like Pavlov paired the bell with food. After a number of trials of pairing the light with the shock, the worms eventually developed an association reflex between the light and the contracting response. When the light and the contracting response were paired to contract when they saw the light, even though the shock wasn't given. The light had become a conditioned stimulus (CS) and the contracting, a conditioned response (CR). Once the researchers had conditioned the planarians to the light, they chopped them into little bits and fed the pieces to hungry, untrained planarians.

ed made learning more difficult than at all. They showed their conflict not only by learning slowly, but they were unable to make up their minds. Often their indecision was so great, that they simply refused to learn any new material. I guess this means that you're not what you eat, but rather who you eat, or if you're going to eat someone's brain, make sure it has all the answers.

Now I know you're asking yourself, what if I ate an animal's brain? Would I act like an animal? Well, try it - what do you have to lose? On a more serious note, it is believed by glandular theorists that cellular factors are not species specific, but rather organ specific. This means that you don't have to eat a human brain to enhance your own brain - most any brain will do. For instance, if you eat a monkey's brain, your brain will benefit. It sounds like it should be the opposite way, doesn't it? According to theory, although we are far more advanced than other animals, concentrates of animal brain tissue supposedly contain intrinsic factors that would improve our own brain chemistry.

Apparently most liters aren't interested in developing their minds, because most of the glandulars they consume are ones that will supposedly give them an anabolic effect by boosting the body's production of hormones. For instance, the organs and glands they usually consume are liver, orchis, thymus, heart, kidney, lung, pituitary, adrenal, prostate, pancreas, and hypothalamus.

The question is - do they really work? Would this hormone production increase strength and other physiological functions? I don't know, nor does anyone else. First of all, it has never been scientifically proven that glandular tissue concentrates can enhance organ and gland activities in any other way than by their vitamin, mineral, and protein content. In fact, the intrinsic factors that are supposedly contained in raw glandular tissue, and which are supposedly distinct from vitamins, minerals, hormones, or enzymes, have never been identified. Of course, that doesn't mean that these intrinsic factors do not exist. Remember, three decades before Casimir Funk identified them.

Another point is that there is no research to substantiate the theory that glandulars are organ specific and not animal specific. It has never been shown that the raw cellular material of a bovine liver will enhance the liver of a human being in any way other than its nutritional content.

Support the glandular theory, they lack considerable methodological control. Thus the results of these studies must be interpreted with caution. There's also the fact that you're not a worm, literally speaking, anyway. We are more evolutionarily advanced than a simple flatworm. To make an inference from a flatworm to a human being would be, at best, ridiculous. Not only that, these studies were not designed to answer the question of whether cellular factors are species specific, organ specific, or both. Through glandulars may be making a comeback, as far as promotion and sales, there's still no research to indicate that they are truly ergogenic.

WORKOUT of the Month

JIM LAWRENCE BENCH PRESS

The majority of my cycles are set up for an 8-10 week period. I prefer training 4 days/week with Wednesday and Tuesday off. Monday and Tuesday are considered heavy days, while Thursday and Friday account for my light days. I must stress that light days are defined as 80% of heavy days, no less - no more. My typical week would consist of the following: Monday - chest, triceps, Thursday - chest, triceps, legs, Friday - back, legs.

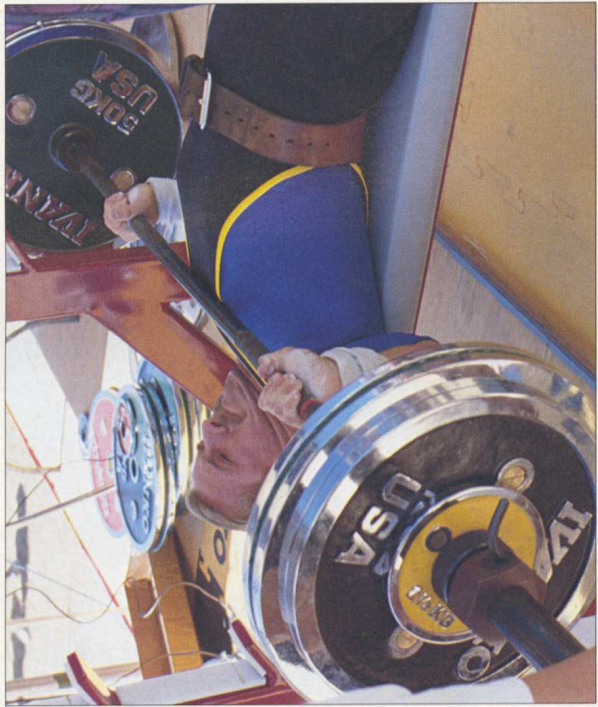
All my lifts are done emphasizing strict form, never bouncing the weight. I am totally against forced reps because of the unnecessary pressure being applied to the joints. Also, forced reps usually result in a sloppy form unless you have a great spotter.

I prefer benching with my back flat on the bench with no arch. I prefer a grip which allows the hands to touch a 90 degree angle when the bar touches my feet. I began training with the Inzer shirt. This shirt is always one size larger than the shirt I will use at the meet. The shirt helps prevent injuries and allows me to use much heavier poundages as the meet approaches.

My main concern is to avoid over-training at all costs. This is why my chest routine involves only 2 exercises per body part, twice a week. The chest training itself consists of bench presses followed by dumbbell presses. Next, I train the triceps. I prefer cable grip presses followed by either cable push downs or tricep extensions. I finish this workout by training the biceps. My favorite movements here are seated incline dumbbell curls and standing barbell curls.

This routine is designed for a lifter who has a current max of 300 lbs. After completion of this program I feel a lifter should be capable of benching 315 lbs. I recommend doing benching 315 lbs. in the same order each week, as listed under Week 1. As for dumbbell presses, pushdowns and tricep curls select a weight that is reasonable for the amount of sets and reps I suggest. Then simply take 80% of that weight to determine the poundage for the following light day. For example, say someone uses 70 lb. dumbbells for 3 sets of 6 reps of presses on the heavy day. This means that same person will use 56 lb. dumbbells for 4 sets of 8 reps on the next light day. Remember, light days are meant to be light. There should be no struggle whatsoever. This allows your

A new concept in weight training instruction. A workout by workout, set by set rep work program, with the most advanced training techniques offered by the top powerlifting authority. Each month, a different lift is analyzed. For those of different strength levels than the starting weights in direct proportion, simply increase or decrease the training weights in direct proportion. For example, if your lift is 400, and a starting lift for the program is 500, multiply the training poundages by .8 (400 divided by 500); if your lift is 600 multiply the poundages specified by 1.2 (600 divided by 500).



Jim Lawrence has been chasing the ADPPA American Bench record at 132 since 1985. On Nov. 17th 1990 at the ADPPA Southwestern Championships his set ended when he pushed up 362.5 lbs. at a bodyweight of 131 lbs. "My thanks and appreciation goes out to all my friends in Wisconsin and Arizona who made this lift possible."

muscles to fully recuperate before the next heavy workout.

Week 1: Monday (Heavy Day) - Bench Press - Barx20, 135x10x2, 185x7, 225x5x3 (3 sets) Dumbbell Press 3 sets of 6 reps for entire cycle. Close Grip - 175x5x3 Pushdowns - 6 sets of 6 reps for entire cycle. Bicep Curls - 6 sets of 6 reps for entire cycle. Thursday (Light Day) - Bench Press - Barx20, 135x10x2, 175x8x4 (4 sets) Dumbbell Press - 4 sets of 8 reps for entire cycle. Bicep Curls - 6 sets of 8 reps for entire cycle. Bicep Curls - 6 sets of 8 reps for entire cycle. Bicep Curls - 6 sets of 8 reps for entire cycle.

Week 2: Monday - Bench Press - Barx20, 135x10x2, 185x7, 225x5x3. Close Grip - 180x5x3. Thursday - Bench Press - Barx20, 135x10x2, 180x8x4. Close Grip - 145x8x4.

Week 3: Monday - Bench Press - Barx20, 135x10x2, 185x7, 230x5x3. Close Grip - 185x5x3. Thursday - Bench Press - Barx20, 135x10x2, 185x7, 235x2. Close Grip - 185x8x4.

Week 4: Monday - Bench Press - Barx20, 135x10x2, 185x7, 225x2, 245x3x3. Close Grip - 190x5x3. Thursday - Bench Press - Barx20, 135x10x2, 175x5, 195x6x4. Close Grip - 155x8x4.

Week 5: Monday - Bench Press - Barx20, 135x10x2, 185x7, 225x2, 250x3x3. Close Grip - 195x5x3. Thursday - Bench Press - Barx20, 135x10x2, 175x5, 200x6x4. Close Grip - 160x8x4.

Week 6: Monday - Bench Press - Barx20, 135x10x2, 185x7, 225x2, 255x3x3. Close Grip - 200x5x3. Thursday - Bench Press - Barx20, 135x10x2, 175x5, 205x6x4. Close Grip - 165x8x4.

Week 7: Monday - Bench Press - Barx20, 135x10x2, 185x7, 235x2, 265x2x2 (pauses with shirt). Close Grip - 205x5x3.

Week 8: Monday - Bench Press - Barx20, 135x10x2, 185x7, 235x2, 285x2nd, 305, 3rd - 315.

For questions concerning this routine, contact Jim Lawrence, 900 W. Grove Pkwy. No. 1099, Tempe, AZ 85283. Phone - 602-839-0392. Lots of luck with your benching!

Thousands Now Compete Successfully Who Never Thought They Could!

Dear Friends, "The times they are a changing." And, as a matter of fact, they have changed... for the better. The statement, "Thousands Now Compete Successfully Who Never Thought They Could!", has never been truer than it is today.

But it wasn't always that way. It wasn't too long ago powerlifters felt they would have to resort to other than natural means, the chemical route, if you will, in order to be competitive. But with advances in nutritional science, specifically in the area of sports and strength athletes the best part we've only scratched the surface! Even that attitude has also changed. And for powerlifters and strength athletes the best part who choose to use chemicals, not only to our fellow powerlifters of natural supplement use, but in realizing the importance of the inherent dangers of chemical use, and increased protect themselves from the inherent dangers of chemical use, and increased making the transition to training athletes, we are constantly seeking better and more sophisticated nutritional programs to help us in our quest for greater strength and recuperation. First and foremost, it should be emphasized and re-emphasized that our daily food intake of dietary protein, carbohydrates, and a small amount of fats is the basis of all good nutrition. It is of great importance to point out, though, that even with the best balanced diet you can create, extra supplementation is a very necessary requirement for today's competitive powerlifters.

The search for highly effective nutrients to assist us in our quest for greater strength and power has always been a priority. The never-ending search for the nutrient or combination of nutrients which would offer us, as powerlifters, a natural solution to the chemical program has become even more complex.

On the following pages Marathon Nutrition has made it more difficult for us to arrive at which one is best. The mere fact that there have been many natural nutritional breakthroughs advanced nutritionally. The mere fact that there have been many natural nutritional breakthroughs form offer a solution for powerlifters and strength athletes has made it more difficult for us to arrive at which one is best. These four categories, 1) the Aminos, 2) Natural Growth Enhancers, 3) Performance Enhancers, and 4) Micro Nutrients (Vitamins & Minerals) cover every aspect of nutritional supplementation powerlifters and strength athletes require. Although every individual product has been designed to work well on its own, for optimum results utilize at least one product from each category. That's not a requirement just sound nutritional advice. Please review the following pages carefully and in case you have any questions or want some advice on setting up an optimal food supplement and how you can intelligently apply them to your training and competition.

Best regards,
George S. Zangas

Marathon
NUTRITION & DISTRIBUTING COMPANY, INC.
1229 Via Landela, Palos Verdes Estates, CA 90274 (213) 519-7111

QUESTIONNAIRE
ATTITUDES AND OPINIONS OF POWERLIFTERS

Send to FRIENDS UNIVERSITY RESEARCH, P.O. Box 780471, Wichita, KS 67278

SECTION I

1. Please check whether you are: Male Female
2. What is your birth date? _____
3. What is the approximate income of your household?
 Under \$9,999 \$10,000 - \$24,999 \$25,000 - \$49,999 \$50,000
4. How many powerlifting associations do you belong to? _____
5. What is your zip code? _____
6. Which powerlifting associations do you belong to?
1. _____ 2. _____ 3. _____ 4. _____

SECTION II Listed below are several groups of questions that are ranked from Strongly Agree to Strongly Disagree. Please indicate your feelings by marking the appropriate answer.

- | | | | | | | |
|----------------|-------|--------------|------------|-----------------|----------|-------------------|
| Strongly Agree | Agree | Mildly Agree | No Opinion | Mildly Disagree | Disagree | Strongly Disagree |
|----------------|-------|--------------|------------|-----------------|----------|-------------------|
8. I would like to see more drug testing.
 9. I prefer the polygraph.
 10. I prefer the urinalysis.
 11. I do not care if a meet is tested.

SECTION III

- Where I live, I would like to participate in more:
12. Bench press meets
 13. Dead lift meets
 14. Three lift meets
 15. Training camps/seminars
 16. Bench press meets on a cruise ship

SECTION IV Please rate the type of awards you would like to receive at Meets you attend.

- | | | | | | |
|---|---|---|---|---|---|
| 5 is most desirable and 1 is least desirable. Circle your answer. One or more choices may be ranked the same. | 5 | 4 | 3 | 2 | 1 |
|---|---|---|---|---|---|
17. Plaques
 18. Wood & plastic trophies
 19. Sculptured trophies with powerlifting figures
 20. Medals
 21. Banners
 22. Flags
 23. Crystal Glass
 24. Sculptured trophies without powerlifting figures

SECTION V Please list the most important factors at a Meet that will influence you to return and compete again.

- | | | | | | |
|---|---|---|---|---|---|
| 5 is most important and 1 is least important. Circle your response. | 5 | 4 | 3 | 2 | 1 |
|---|---|---|---|---|---|
25. Starting on time
 26. Skill of spotters
 27. Announcing of lifting order
 28. Size of warmup room
 29. Temperature of room
 30. Consistency of judging
 31. Type of trophy given

SECTION VI Please list the most important factors to you in selecting which Meets you will attend.

- | | | | | | |
|---|---|---|---|---|---|
| 5 is most important and 1 is least important. Circle your response. | 5 | 4 | 3 | 2 | 1 |
|---|---|---|---|---|---|
32. How far will you travel to attend a State Meet? 250+ 100-249 50-99 0-49
 33. How far will you travel to attend a Regional Meet? 250+ 100-249 50-99 0-49
 34. How far will you travel to attend a National Meet? 250+ 100-249 50-99 0-49
 35. How many non-lifters accompanied you to the last meet you attended? 4 3 2 1 0

SECTION VII This section is for you to express your opinions more fully.

36. Does the type of award being given influence your decision to enter a Meet? Yes No
37. Does the Meet Director influence your decision to enter a Meet? Yes No
38. Does the sanctioning organization influence your decision to enter a Meet? Yes No

SECTION VIII This section is for you to express your opinions more fully.

39. If I could have any kind of trophy or award, I would want _____
40. The one thing I like least about a Meet is _____
41. The one thing I want most out of competing in powerlifting is _____
42. Is there anything else you would like to say? _____

Bulletin Board

this is the place to look for organizational news, notices, and other information for USPF New York. Send your address to: Larry Bagnoli, New York, NY 10076, 518-661-5843, or to the address on the USPF Executive Committee and chairs the Law & Legislation Committee. Write to: NEA, 1109 Pine Heights Drive, Atlanta, GA 30324, 205-394-4721, or to the address on the USPF Executive Committee.

Buc Samson Lines and the noted trophy designer can be reached in the Northeast at: P.O. Box 1325, Noble, OK 73068. * there is a hotline for the SAAS (Strong Athletes Against Steroids) organization, whose goals include education of young athletes about the dangers of anabolic steroids. They can be reached at 708-297-SAAS. * regarding the NASA Quality Classic on January 26/27 - it was a qualifier for the NASA Grand Nationals, Harrisburg, PA, June 7/8/9, 1991. Top 3 winners in each division and in each weight class. * the USPF National Collegiate Qualifying totals have been changed and are reflected in the totals shown in this issue of PL USA. * the new USPF Region II Powerlifting Champion is Robert Keller, 1017 Harbor Dr., Palmyra, NJ 08065, 609-829-1309. * Dave Geminal of North Salem, NY requests that meet directors indicate the age and weight class of masters lifters in the meet results they submit, so masters can keep track of their competition. * due to lack of response the APF Submaster class will not be adopted, and the women's qualifying totals for the 1991 Nationals will be dropped. *

NASA Inzer Bench Tour
27 Oct 90 - Greensboro, NC (kg)
Women
105 lb. W. Morgan 55
A. Schmeidmill 72.5
148 lb. D. Filler 77.5
D. Barnsmoen 70
Men
181 lb. R. Glascock 175
L. Marr 120
165 lb. S. Norton 170
C. Mangum 122.5
181 lb. R. Holding 187.5
R. Backnall 185
220 lb. G. Con 202.5
G. Cox 182.5
W. Buckley 200
C. Hill 167.5
I. Chambers 207.5
C. Harris 207.5
S. Shaw 160
J. Cum 217.5
A. Thompson 160
(Thanks to N.A.S.A. for results of this contest.)

1st Animal House Open
16 Jun 90 - Milwaukee, WI
Men
S. Brock (23) 650
D. Ward (217) 435
J. Arino (165) 420
D. Reshel (181) 590
* indicates World Record (WPC). (Thanks to Greg Reshel for the results of this competition)

2nd Pittsburgh Bench Press Classic

Weight	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
135	W. Carter	535	J. Macara	370	400	360	R. Kominski	370	370	370
150	J. Weise	350	R. Rouch	325	325	325	325	325	325	325
165	M. Backman	500	M. Backman	500	500	500	500	500	500	500
181	L. Prodiemo	500	J. Galick	405	405	405	405	405	405	405
197.5	L. Wyocki	455	A. Schneider	290	290	290	290	290	290	290
212.5	D. Barro	530	P. Diers Light	370	370	370	370	370	370	370
227.5	R. Russell	505	S. Stewart	345	345	345	345	345	345	345
242.5	S. Demarco	495	A. Cooley	340	340	340	340	340	340	340
257.5	I. Deval	565	Masters Inv	580	580	580	580	580	580	580
272.5	R. Poindever	580	J. Prodiemo	580	580	580	580	580	580	580
287.5	H. Harris	460	L. Wyocki	455	455	455	455	455	455	455
302.5	Best lifter	500	F. Deone	400	400	400	400	400	400	400

Best lifter in season: F. Deone, best lifter inv season: W. Carter. (Thanks to Jeff Wright for results)

ADPFA Falcon Open 1990
14 Oct 90 - Colorado Spgs, CO (kg)
123 Schillinger 140
32 Taylor 140
148 Moore 205
165 Jensen 122.5
181 Jensen 112.5
197.5 Caronolo 147.5
212.5 O'Dward 185
227.5 Bates 137.5
242.5 Pomponio 235
257.5 Martinez 215

ADPFA Falcon Open 1990
14 Oct 90 - Colorado Spgs, CO (kg)
123 Schillinger 140
32 Taylor 140
148 Moore 205
165 Jensen 122.5
181 Jensen 112.5
197.5 Caronolo 147.5
212.5 O'Dward 185
227.5 Bates 137.5
242.5 Pomponio 235
257.5 Martinez 215

ADPFA Falcon Open 1990
14 Oct 90 - Colorado Spgs, CO (kg)
123 Schillinger 140
32 Taylor 140
148 Moore 205
165 Jensen 122.5
181 Jensen 112.5
197.5 Caronolo 147.5
212.5 O'Dward 185
227.5 Bates 137.5
242.5 Pomponio 235
257.5 Martinez 215

ADPFA Falcon Open 1990
14 Oct 90 - Colorado Spgs, CO (kg)
123 Schillinger 140
32 Taylor 140
148 Moore 205
165 Jensen 122.5
181 Jensen 112.5
197.5 Caronolo 147.5
212.5 O'Dward 185
227.5 Bates 137.5
242.5 Pomponio 235
257.5 Martinez 215

ADPFA Falcon Open 1990
14 Oct 90 - Colorado Spgs, CO (kg)
123 Schillinger 140
32 Taylor 140
148 Moore 205
165 Jensen 122.5
181 Jensen 112.5
197.5 Caronolo 147.5
212.5 O'Dward 185
227.5 Bates 137.5
242.5 Pomponio 235
257.5 Martinez 215

Weight	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
187.5	Guerreno	197.5	197.5	195	560	560	560	560	560	560
190	DeHerrera	187.5	115	182.5	480	480	480	480	480	480
198	Lynn	275	165	295	735	735	735	735	735	735
205	Berg	250	137.5	262.5	655	655	655	655	655	655
212.5	McDermott	232.5	137.5	185	637.5	637.5	637.5	637.5	637.5	637.5
220	Lewis	205	102.5	215	522.5	522.5	522.5	522.5	522.5	522.5
227.5	Garland	220	114	190	297.5	297.5	297.5	297.5	297.5	297.5
235	Logan	250	167.5	257.5	675	675	675	675	675	675
242	White	242.5	147.5	257.5	622.5	622.5	622.5	622.5	622.5	622.5
250	Arria	230	152.5	247.5	630	630	630	630	630	630
257.5	Lynn	255	172.5	240	667.5	667.5	667.5	667.5	667.5	667.5
265	McDermott	182.5	115	182.5	480	480	480	480	480	480
272.5	Cass	232.5	137.5	195	565	565	565	565	565	565
280	Ishmael	177.5	107.5	190	475	475	475	475	475	475
287.5	Women	235	147.5	272.5	655	655	655	655	655	655
295	Sorwell	150	90	180	420	420	420	420	420	420
302.5	Noble	192.5	92.5	182.5	467.5	467.5	467.5	467.5	467.5	467.5
310	Schillinger	100	47.5	157.5	365	365	365	365	365	365
317.5	Teens	140	77.5	165	382.5	382.5	382.5	382.5	382.5	382.5
325	Schillinger	140	77.5	165	382.5	382.5	382.5	382.5	382.5	382.5

Team record, results courtesy Bruce Anderson

Team record, results courtesy Bruce Anderson

Team record, results courtesy Bruce Anderson

Team record, results courtesy Bruce Anderson

Team record, results courtesy Bruce Anderson

Team record, results courtesy Bruce Anderson

Team record, results courtesy Bruce Anderson

Team record, results courtesy Bruce Anderson

Team record, results courtesy Bruce Anderson

Team record, results courtesy Bruce Anderson

Team record, results courtesy Bruce Anderson

Team record, results courtesy Bruce Anderson

Team record, results courtesy Bruce Anderson

Team record, results courtesy Bruce Anderson

Team record, results courtesy Bruce Anderson

Team record, results courtesy Bruce Anderson

Team record, results courtesy Bruce Anderson

Team record, results courtesy Bruce Anderson

Team record, results courtesy Bruce Anderson

Team record, results courtesy Bruce Anderson

Team record, results courtesy Bruce Anderson

Team record, results courtesy Bruce Anderson

Team record, results courtesy Bruce Anderson

Team record, results courtesy Bruce Anderson

Team record, results courtesy Bruce Anderson

Team record, results courtesy Bruce Anderson

Team record, results courtesy Bruce Anderson

Team record, results courtesy Bruce Anderson

Team record, results courtesy Bruce Anderson

Team record, results courtesy Bruce Anderson

Team record, results courtesy Bruce Anderson

Team record, results courtesy Bruce Anderson

Team record, results courtesy Bruce Anderson

Team record, results courtesy Bruce Anderson

Team record, results courtesy Bruce Anderson

Team record, results courtesy Bruce Anderson

Team record, results courtesy Bruce Anderson

Team record, results courtesy Bruce Anderson

Team record, results courtesy Bruce Anderson

Team record, results courtesy Bruce Anderson

Team record, results courtesy Bruce Anderson

Team record, results courtesy Bruce Anderson

Team record, results courtesy Bruce Anderson

Team record, results courtesy Bruce Anderson

Team record, results courtesy Bruce Anderson

Team record, results courtesy Bruce Anderson

Team record, results courtesy Bruce Anderson

Team record, results courtesy Bruce Anderson

Team record, results courtesy Bruce Anderson

Team record, results courtesy Bruce Anderson

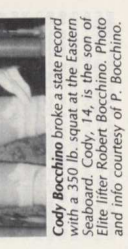
Team record, results courtesy Bruce Anderson

Team record, results courtesy Bruce Anderson

Weight	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
145	MCI Sr	145	112.5	175	432.5	432.5	432.5	432.5	432.5	432.5
152.5	ADPFA Falcon	152.5	112.5	175	432.5	432.5	432.5	432.5	432.5	432.5
160	ADPFA Falcon	160	112.5	175	432.5	432.5	432.5	432.5	432.5	432.5
167.5	ADPFA Falcon	167.5	112.5	175	432.5	432.5	432.5	432.5	432.5	432.5
175	ADPFA Falcon	175	112.5	175	432.5	432.5	432.5	432.5	432.5	432.5
182.5	ADPFA Falcon	182.5	112.5	175	432.5	432.5	432.5	432.5	432.5	432.5
190	ADPFA Falcon	190	112.5	175	432.5	432.5	432.5	432.5	432.5	432.5
197.5	ADPFA Falcon	197.5	112.							

Eastern Seaboard Classic
17 Nov 90 - Brooklyn, NY

Women	SQ	BP	DL	Total
K. Robinson	225	115	225	565
Team 114-181	530	240	510	1280
C. Bocchino	330	170	350	875
H. Medina	445	315		
Team 198-SHW	570	380	530	1480
M. Teichert	500	340	610	1450
N. Devona	490	290	485	1265
V. Medina	275	250	330	855
Open				
114 lb.	255	165	310	730
132 lb.				
150 lb.				
V. Medina	370	215	405	990
P. Russo	275	250	330	855
V. Medina	370	230	430	1030
A. Alzoi	330	200	300	830
P. Salomon				
165 lb.	530	240	510	1280
K. Lambert	530	240	510	1280
M. Williams	385	370	450	1195
D. Wilson				
181 lb.	500	340	610	1450
M. Teichert	485	285	440	1110
198 lb.				
S. Perdomo	470	365	610	1445
M. Masters	525	285	630	1440
P. Salomon	450	320	530	1300
220 lb.				
F. D'Angelo	720	440	560	1720
J. Corra	550	365	600	1515
J. Corra	385	345	580	1510
T. Wright	525	365	570	1460
242 lb.				
H. Hillborn	660	440	685	1785
A. Reis	715	370	655	1740
C. Meyner	585	375	525	1485
275 lb.				
R. Capocchia	580	350	485	1415
SHW				
Canada	830	465	685	1980
198-SHW: Tony Canella (results courtesy PAC)				



Cody Bocchino broke a state record with a 350 lb. squat at the Eastern Seaboard. Cody, 14, is the son of Elite lifter Robert Bocchino. Photo and info courtesy of P. Bocchino.

National Peanut Festival
6 Oct 90 - Dothan, AL (kg)

Masters	SQ	BP	DL	Total
H. Morgan	235	150	295	625
D. Green	215	150	237.5	572.5
P. McFadden	355	192.5	285	832.5
R. Wright	365	192.5	285	832.5
Armed Forces	295	187.5	282.5	765
D. Sharfield	135	82.5	177.5	415
Novice	123 lb.			
E. Terry	160	115	175	450
S. Grubbs	172.5	125	255	600
D. Sharfield	237.5	152.5	337.5	727.5
155 lb.	155	82.5	177.5	415

181 lb.	137.5	97.5	172.5	407.5
J. Thompson	237.5	150	295	627.5
M. Dinklin	232.5	165	285	672.5
D. Liska	165	102.5	205	472.5
V. McKinney	140	90	142.5	372.5
165 lb. <td></td> <td></td> <td></td> <td></td>				
C. Gross	292.5	185	295	772.5
M. Pilcher	275	172.5	282.5	730
220 lb. <td></td> <td></td> <td></td> <td></td>				
B. Baker	315	192.5	285	832.5
E. Bailey	295	217.5	300	812.5
M. Montgomery	337.5	200	285	812.5
S. Davis	295	187.5	262.5	745
C. Meyner	295	187.5	262.5	745
V. Usery	237.5	137.5	272.5	647.5
V. Y. King	237.5	137.5	272.5	647.5
242 lb. <td></td> <td></td> <td></td> <td></td>				
B. Turner	285	197.5	285	747.5
SHW				
B. Prater	172.5			
R. Prater	172.5			
122 lb. <td></td> <td></td> <td></td> <td></td>				
J. Thompson	115	220 lb. <td></td> <td></td>		
132 lb. <td></td> <td></td> <td></td> <td></td>				
J. Thompson	97.5	E. Brown	217.5	
148 lb. <td></td> <td>S. Davis</td> <td>200</td>		S. Davis	200	
182.5	D. Green	150		
162.5	R. White	150		
162.5	V. Cochran	207.5		
157.5	B. Turner	175		
135	V. Usery	187.5		
181 lb. <td></td> <td></td> <td></td>				
H. Gaddis	185	P. Brown	167.5	
H. McKee	150	SHW		
D. Hillborn	130	B. Criter	175	
D. Hillborn	130	B. Criter	135	
175				

The 7th Annual National Peanut Festival drew a total of 65 lifters, a slight decrease from last year, but an excellent turnout nonetheless. Joey in the Teenage (16-17) with a squat of 275 lb. (606.25 lbs). The 220 lb. class was very strong with Jerome Bailey on top. Edgah Brown and Steve Holland, Sheila Holmes and Ralph Archibald. Thanks to all the judges, spotters/loaders, and other people whose assistance was so valuable: David Sewell, Sandy Ellis, Donna Farney, Betty Smith, Steve Holland, Sheila Holmes and Ralph Archibald. Special thanks to Charles Paulk and Phil Sullivan because if it was not for those two guys the lift would have been impossible. The 220 lb. lift, this meet could never take place. (Thanks to Mark Farmer for results of this competition)

APF New Hampshire Championship
10 Nov 90 - Keene, NH

Teenage	SQ	BP	DL	Total
A. Eaves (191)	385	275	405	1065
Juniors				
P. Farina (120)	330	240	415	1085
K. Kidder (227)	265	215	345	825
J. Medina (148)	140	80	205	425
L. Farina (148)	140	80	205	425
L. Lameroux (148)	155	245	500	1200
T. Weeks (217)	325	245	575	1145
D. Farand (152)	365	245	485	1095
F. Pflizer (154)	370	245	555	1170
M. Bourque (204)	455	300	500	1255
E. Silk (177)	395	265	430	1045
Light Women (132)	395	180	305	780
L. Meivier (143)	325	160	290	775
K. Valler (138)	210	95	275	580
123 lb. <td></td> <td></td> <td></td> <td></td>				
E. Brownstein	430	240	415	1085
148 lb. <td></td> <td></td> <td></td> <td></td>				
A. Eaves	455	245	500	1200
C. King	350	230	365	945
B. Duran	245	305	300	850
L. Farina	140	80	205	425
B. Amblaw	360	350	400	1120
F. Pflizer	370	245	555	1170
D. Farand	365	245	485	1095
D. Poiratien	445	350	580	1575
M. Bissonetie	475	325	485	1285
E. Silk	350	265	430	1045
D. Brownstein	650	405	650	1705
S. McElroy	515	400	570	1485
H. Nunes	440	350	475	1360
J. Morandano	590	270	530	1220
L. Morandano	385	275	485	1065
220 lb. <td></td> <td></td> <td></td> <td></td>				
T. Weeks	635	325	575	1535
D. Podziwiski	530	340	520	1390
D. Podziwiski	530	340	520	1390
F. Bingham	335	250	325	910
242 lb. <td></td> <td></td> <td></td> <td></td>				
P. Boucher	765	475	720	1960
A. Hickey	525	400	615	1540
K. Kidder	650	375	630	1655
A. Boutin				
SHW				
L. Grande	740	460	780	1980
Boutin, Bob Rice, Jason Krossos, Andy Jones, Miller, Joe Romano, Steve Buzdick, Head Judge: D. Farand, Referee: Matt Durant, and the Strapholers. Team Title: Kidder's Gym from Keene, NH. I would like to thank all helpers who put up with my hoisting, yelling and basic crap. You're a helluva bunch of people. Thank you.				

AMERICAN DRUG FREE POWERLIFTING ASSOCIATION
COMPLETE ALL ENTRIES

PLEASE PRINT

LAST NAME: _____ FIRST NAME: _____ INITIAL: _____

STREET ADDRESS: _____ CITY: _____ STATE: _____ ZIP CODE: _____

AREA: _____ TELEPHONE NO.: _____ DATE: _____

AGE: _____ SEX: _____ U.S. CITIZEN: YES/NO _____ U.S. OLYMPIAN: YES/NO _____

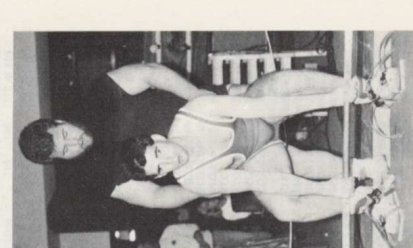
REGISTRATION FEE: \$20.00 HIGH SCHOOL \$15.00

In recognizing the need for Drug Usage Detection, I agree to submit to any testing procedure deemed appropriate by the ADFFA or its agents and shall accept the results and the consequences of such tests.

APPLICANTS: Fill out card completely and mail with fee to: **ADFFA**, 100 S. ACADIAN THRU - SUITE F, BATON ROUGE, LA 70806. (504) 383-1111. FAX: (504) 383-1111. U.S. MAIL PERMIT NO. 1000

We had 3 women competing. Gail Pariseelli won Best Lifter in only her 3rd competition. Weighing 132 and totaling 780, she is certainly someone to watch for. Lee-Mettler who won the 1989 title with a total of 1085, was coached by Kathy Walker in 35 and doesn't look it, has a good coach, Marcia Bosa. There was one teenage lifter, Andy Eaves, whom I've trained in the past. He did a nice 1200 total the first time he started competing in 1992. Congratulations to the winners. Mike Bourque from Dover, NH, a big strong man who lifts very well. In place from Cheshire MA was Fred Pflizer, who at 154 lbs., pulled an easy

555 deadlift. Fred is 45 years old and a former master's national champion. In the 123 class was Eric Brownstein who, though, still easily won best lifter which was a huge trophy. In the 220 class, the 1989 title holder, Steve Buzdick, with an easy 1055 bench for an APF state record. Second went to Charlie King of Rochester, NH. Third place went to Lee-Mettler from Mansfield, MA who was big Bob Moore with a 1655 total and he had a 1000 lb. bench. In 1st place from Keene, NH was Kory Kildner. In 1st place from Keene, NH was only 22. Unfortunately, he tore a pec in the bench, but still did 515 for a state record. Kieran is the NH state champion for the A.P.F. and also the 1989 state champion. He is a very strong lifter, one superheavy, but he's a pleasure to watch. His name is Lou Grande from Danvers, MA. Lou had 805 in the deadlift, but this time weighed 296 and still did 515 for a state record. Kieran is still on the lean side for a super. Till next time. Your friend in Power, Louie Lapointe. (Thanks to Kieran Kidder for the results of this contest.)



Lee Farina shows tremendous effort with a 185 deadlift. Lee was in a tragic car accident where he was paralyzed and could no longer move his legs. He is now a big lift super and is not only a big lift super, but also a great person to lift. Lee is backed up on his lift by the meet director of the APF New Hampshire Championships, Kieran Kidder, who provided this photo.

WORLD CLASS ENTERPRISES Presents
GOING BEYOND

1. Fundamentals of Fitness..... \$7.00
2. 2001 - A Sports Odyssey..... \$8.00
3. Hypnotize Me and Make Me Great..... \$7.00
4. Lifting in the 8th Dimension..... \$8.00
5. Take Control - Weight Reduction..... \$8.00
6. Make Me Great - 6 Tapes of Mind Control \$29.95 + \$2 handling
7. The Odyssey Continues..... \$10

ANY 2 BOOKS \$13.00
ANY 3 BOOKS \$19.00

Send Check or Money Order Plus \$2.00 Postage & Handling to:
(Add \$3.00 Outside USA)
WORLD CLASS ENTERPRISES, INC.
3209 Jacqueline Drive - Albany, Georgia 31705

ORIGINS POWER BAR

DEALER INQUIRIES INVITED

MAC Texas Power Bar \$179.00
MAC Texas Squat Bar (now available) \$240

The MAC TEXAS POWER BAR has been used in more World and National Championships than all other brands combined. Make sure you don't get a cheap imitation or counterfeit. Order directly from MAC Barbell.

SEND ORDER TO: **MAC BARBELL EQUIPMENT** (214)263-4828
1601 N.W. Dallas, Grand Prairie, Texas 75050 Toll Free 1-800-942-0338
Please send me the following item(s) Freight Collect:

Name _____ Address _____
City _____ State _____ Zip _____

Check here for free MAC Barbell Equipment Catalog

PLUSA02

Reverchon Class II

SQ	BP	DL	Total
440	259	424	1124
451	276	451	1198
479	286	501	1267
440	303	501	1245
496	325	485	1306
505	275	518	1295
440	308	496	1245
501	402	584	1488
518	330	518	1366

SQ	BP	DL	Total
451	336	485	1273
479	351	501	1332
402	259	502	1168
380	308	440	1129
424	325	402	1151

SQ	BP	DL	Total
451	336	485	1273
479	351	501	1332
402	259	502	1168
380	308	440	1129
424	325	402	1151

SQ	BP	DL	Total
451	336	485	1273
479	351	501	1332
402	259	502	1168
380	308	440	1129
424	325	402	1151

(lower) 905.66 and Curt Page (upper) 1014.5. ... DePague's of Madine, Illinois. Meet Director: Tom ...
 7, 1991. General information on this contest can be obtained by contacting: Tom Beadle, Athletic ...
 319-642-3304. (Thanks to Tom Beadle for results)

ISCI Power Meet
 30 Sept 90 - Boise, ID
 Total
 123 321* 231 401 933*
 148 321 231 401 933*
 155 281 206 406* 873

Jimson 315* 246 431* 993*
 181 351* 241 451 1043
 199 321 246 401 968
 198 201 186 271 658

401 301 451 1153
 401* 301* 476* 1178
 401 301 451 1153
 401* 301* 476* 1178

Sept 30, 1990 the stage was set for the 1st official ISCI weightlifting program meet in the gym at the Idaho State Fair (ISCF). The ...
 (NALL), ISCI Weightlifting program and the Recreation Dept. The large crowd on hand to ...
 personal and institutional records. For many it was their first experience and they provided excellent competition. All competitors showed ...
 sport. The meet was well run and organized. Thanks to meet personnel Ed Biggs, Tony Fish, Rob Huffman, Andy Jaegers, Craig Krus, Scott ...
 and Ted Nakano and the meet coordinator, Doug ...
 and our outstanding Director Phil Hawkins, for their continued support and assistance. Doug ...
 Adult for the results of this competition.)

John Williams a blind lifter, competing at the Reverchon Championships (photo courtesy Vicky Finch)

148 lb.
 M. Helgeson 330 215 390 935
 165 lb.
 Monthly
 181 lb.
 J. Taylor 560 300 540 1400
 B. Mayfield 264 209 330 804
 M. Castagnoli 374 226 402 1003
 F. Lamb 336 231* 492 970
 B. Moore 308 148 374 832
 G. Roberts 507 303 474 1284
 F. Mullin 286 319 330 937
 R. Ivie 655 501 595 1752

Record for that category, Best overall lifter: Ronnie Ray, 1752 lbs. and Phea Willie, 1504 lbs. Special Olympics: Mike Wood (770) and John ...
 September 15, 1990, was fantastic. The powerlifters and their guests are a fun group of people to work with, but it's a shame I only get to see them once a year. I know you must hear this often but I would like to mention my deepest appreciation to all the volunteers, ...
 because of their hard work. I know you must be a very capable judge. (J.B. Adams (head judge), James Capchard, Rocky Ray, Ronnie Ray, Jr., Bud- ...
 class and under: Best Lifters: Shawn Carson

15 Sept 90 - Dallas, TX
 Total
 440 259 424 1124
 451 276 451 1198
 479 286 501 1267
 440 303 501 1245
 496 325 485 1306
 505 275 518 1295
 440 308 496 1245
 501 402 584 1488
 518 330 518 1366

451 336 485 1273
 479 351 501 1332
 402 259 502 1168
 380 308 440 1129
 424 325 402 1151

451 336 485 1273
 479 351 501 1332
 402 259 502 1168
 380 308 440 1129
 424 325 402 1151

123 321* 231 401 933*
 148 321 231 401 933*
 155 281 206 406* 873

315* 246 431* 993*
 351* 241 451 1043
 321 246 401 968
 251 246 376 873

401 301 451 1153
 401* 301* 476* 1178
 401 301 451 1153
 401* 301* 476* 1178

Sept 30, 1990 the stage was set for the 1st official ISCI weightlifting program meet in the gym at the Idaho State Fair (ISCF). The ...
 (NALL), ISCI Weightlifting program and the Recreation Dept. The large crowd on hand to ...
 personal and institutional records. For many it was their first experience and they provided excellent competition. All competitors showed ...
 sport. The meet was well run and organized. Thanks to meet personnel Ed Biggs, Tony Fish, Rob Huffman, Andy Jaegers, Craig Krus, Scott ...
 and Ted Nakano and the meet coordinator, Doug ...
 and our outstanding Director Phil Hawkins, for their continued support and assistance. Doug ...
 Adult for the results of this competition.)

ISCI Power Meet
 30 Sept 90 - Boise, ID
 Total
 123 321* 231 401 933*
 148 321 231 401 933*
 155 281 206 406* 873

315* 246 431* 993*
 351* 241 451 1043
 321 246 401 968
 251 246 376 873

401 301 451 1153
 401* 301* 476* 1178
 401 301 451 1153
 401* 301* 476* 1178

Sept 30, 1990 the stage was set for the 1st official ISCI weightlifting program meet in the gym at the Idaho State Fair (ISCF). The ...
 (NALL), ISCI Weightlifting program and the Recreation Dept. The large crowd on hand to ...
 personal and institutional records. For many it was their first experience and they provided excellent competition. All competitors showed ...
 sport. The meet was well run and organized. Thanks to meet personnel Ed Biggs, Tony Fish, Rob Huffman, Andy Jaegers, Craig Krus, Scott ...
 and Ted Nakano and the meet coordinator, Doug ...
 and our outstanding Director Phil Hawkins, for their continued support and assistance. Doug ...
 Adult for the results of this competition.)

ISCI Power Meet
 30 Sept 90 - Boise, ID
 Total
 123 321* 231 401 933*
 148 321 231 401 933*
 155 281 206 406* 873

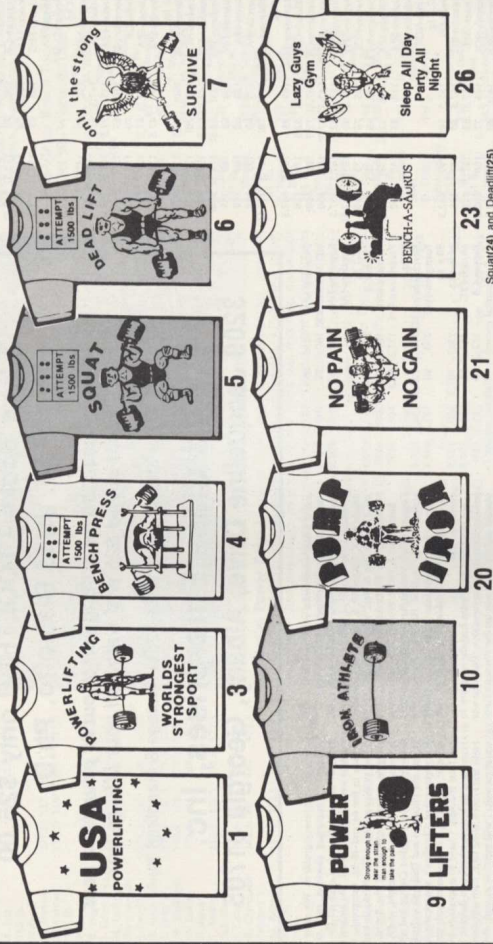
315* 246 431* 993*
 351* 241 451 1043
 321 246 401 968
 251 246 376 873

401 301 451 1153
 401* 301* 476* 1178
 401 301 451 1153
 401* 301* 476* 1178

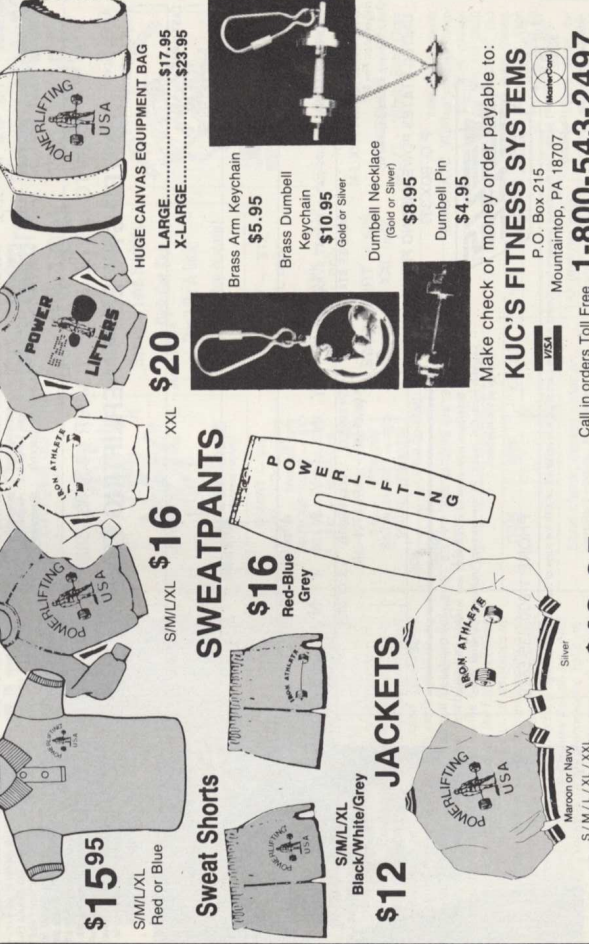
Sept 30, 1990 the stage was set for the 1st official ISCI weightlifting program meet in the gym at the Idaho State Fair (ISCF). The ...
 (NALL), ISCI Weightlifting program and the Recreation Dept. The large crowd on hand to ...
 personal and institutional records. For many it was their first experience and they provided excellent competition. All competitors showed ...
 sport. The meet was well run and organized. Thanks to meet personnel Ed Biggs, Tony Fish, Rob Huffman, Andy Jaegers, Craig Krus, Scott ...
 and Ted Nakano and the meet coordinator, Doug ...
 and our outstanding Director Phil Hawkins, for their continued support and assistance. Doug ...
 Adult for the results of this competition.)

KUC'S FITNESS CLOTHES & ACCESSORIES FOR THE STRENGTH ATHLETE

T-SHIRTS - \$9 ea. (some prints available in Muscle Tanks - Sweatshirts - Ragtops) sizes S/M/L/XL/XXL



STAFF SHIRT \$15.95
 SWEATSHIRTS/ONE SIZE RAGTOPS \$20
 SWEATPANTS \$16
 JACKETS \$12



HUGE CANVAS EQUIPMENT BAG
 LARGE.....\$17.95
 X-LARGE.....\$23.95

Brass Arm Keychain \$5.95
 Brass Dumbbell Keychain \$10.95
 Gold or Silver
 Dumbbell Necklace (Gold or Silver) \$8.95
 Dumbbell Pin \$4.95

Make check or money order payable to:
KUC'S FITNESS SYSTEMS
 P.O. Box 215
 Mountaintop, PA 18707
 Call in orders Toll Free **1-800-543-2497**
 Non C.O.D.s \$2.50 Shipping on all orders - Foreign Orders add 20%

3 MONTH GUARANTEE AGAINST RUNS AND BLOWOUTS ...
 SUIT - \$35.00
 CUSTOM SIZE CHARGE: \$5.00 EXTRA
 SPANDEX BENCH SUITS: \$30.00
 UPS Next Day \$15.00 UPS 2nd Day \$5.00
 Shipping/Handling \$2.50

WRITE OR CALL:
 P.O. Box 60212
 Chicago, IL 60660-0212
 312-588-4704

CHECK OR MONEY ORDERS:
 NO C.O.D. ACCEPTED

REIF MIRACLE SUIT
 C H I C A G O
 Joann Reif
 P.O. Box 60212
 Chgo., IL 60660-0212
 312-588-4704

THE FIT YOU MISS!

CUSTOM SIZING
 This suit has wide straps and is high cut for a comfortable fit.
 Include stock size or give measurements for custom size: height, weight, chest and upper thigh measurements.
 Sizes 8-54 are available in Black, Navy, Red, Cream, Royal Blue and some custom colors.
 ALSO
 Spandex Bench Suits: available in a wide range of solid colors.

Judy Gedney
 ADFFPA & WODFFP Winner

Troy List - 2nd Place 165 lb. w. class. Mens 1990 Nationals

72

“DRUGS, SEX, SPORTS...”

Plus “POWER” and “PSYCHING” \$10 each

3 New Books - TOGETHER only \$25.00

by Dr. Judd Biasiotto, Ph.D.

“You’d spend over \$30 for a lifting suit to put 20 pounds on your squat. Why not spend \$25 and watch all your lifts go up?”

Send Check or Money Order (Plus \$2.00 Postage & Handling) to:

World Class Enterprises, Inc.
3209 Jacqueline Drive, Albany, Georgia 31705

Women’s European Championships

Country	SQ	BP	DL	Total
Wolfer-CB	127.5	67.5	120	315
Verbeke-FIN	127.5	67.5	120	315
Stallone-BEL	110	57.5	147.5	315
Thibault-FRA	110	45	130	285
Colonna-ITA	140	67.5	165	372.5
Viljaasari-FIN	133	70	162.5	365.5
Thill-LUX	137.5	65	162.5	365
Decker-FRA	122.5	70	155	347.5
Dvoornik-FIN	122.5	70	145	337.5
Scherer-FRG	100	55	117.5	272.5
Monge-FRA				
52, Villavieja-SPA				

150	80	147.5	377.5	
Gajnes-NOR	167.5	82.5	170	420
Irulko-FIN	127.5	67.5	130	365
Godier-FRG	130	65	155	350
Norlander-FIN	140	65	130	335
Hollis-CB	117.5	70	137.5	325
Alonso-SPA	112.5	47.5	125	285
Storvik-NOR	90	47.5	115	252.5
Hammen-NOR	160	72.5	175	407.5
Amthor-NOR	165	70	170	405
Hietala-FIN	142.5	62.5	157.5	362.5
Palmieri-FIN	150	65	140	355
Baron-FRA	120	60	160	340
Garcia-SPA	125	60	135	340
Hamming-CB	120	70	147.5	337.5
Hamming-LUX	165	95	182.5	442.5
Bilke-NOR	167.5	82.5	170	420
Koivumaki-FIN	162.5	85	175	422.5
Ackerhals-SWE	147.5	82.5	165	400
Dieckhoff-FRG	157.5	72.5	167.5	397.5
Nyberg-SWE	137.5	80	161	382.5
Thorsen-NOR	137.5	80	161	382.5
Wiersma-NOR	142.5	65	152.5	360
Viljaasari-FRA	120	52.5	130	322.5
Gullens-SPA	110	45	145	300
Salmela-NOR				
67.5	kg			

we had 0 junior continental records, 4th attempts v.d. Metilens-HOL 160 75 180 415
Koponen-FIN 152.5 90 160 402.5
Bretz-SWE 147.5 85 165 397.5
Bretz-SWE 147.5 85 165 397.5
Britt-SWE 147.5 85 165 397.5
86.7, Spain 34.8, Fed. Rep. Germany 32.9,
Netherlands 24, 10, Luxembourg 20,
Czech Republic 18.5, Hungary 18.5, Czech Republic 18.5,
Hansen-NOR 3387, U.S. Women 385.4, Ingrid
Herchenheim-FRG 210 107.5 190 507.5
Paatalainen-FIN 177.5 92.5 180 450
Formgren-SWE 200 90 192.5 482.5
90 + kg
Gagne 346; 7, Marianne Nelis 363; 8, Judith
Oakes 372.5, Sylvie Iskin 328; 10, Ulrik Her-
mann-DEN 328; 10, Ulrik Hermann-DEN
Pepper-FRG 207.5 95 200 502.5
Munch-FRG 182.5 90 192.5 465
Nelson-FIN 182.5 90 192.5 465
P-Continental record: P-National record: I-
International record: C-Continental record: N-
National record: J-Junior record: 4-4 times bet-
tered, and also 0 junior records. 4 States records
were set additional 0 states/junior records. All
records in this table were set at the 1990 Women's
World Championships. The only European record
lifts. In total, 3 attempts were not taken, 5 lifters
were disqualified. We had 3 Continental records
and 0 junior continental records, 4th attempts

NEW TOLL FREE U.S.P.F. NUMBER 1-800-835-5826

UNITED STATES POWERLIFTING FEDERATION

Application for Registration in

LAST NAME	FIRST NAME	STATE	ZIP	AREA CODE - TELEPHONE
STREET ADDRESS		CLUB NAME		RENEWAL
CITY		STATE		Y N
OPEN NATURAL	PF CAT. I - PF CAT. II - NAT - STATE	Y N Y N Y N	Y N	Y N
LIFTER STATUS	REFeree STATUS	HIGH SCHOOL ATHLETE	COLLEGE ATHLETE	U.S. CITIZEN
DATE OF BIRTH	AGE	SEX		

Registration Fee \$20
Mail and make checks payable to:

UNITED STATES POWERLIFTING FEDERATION
P.O. BOX 389
ROY, UTAH 84067

NOTE: \$10 SPECIAL FEE APPLIES TO: Special Olympians, High Schoolers with proof of enrollment, and inmates when paid with institution check. All memberships include a personal lifter's copy of the rule book.

Identify that the above answers are correct and that I am eligible in accordance with the rules of the U.S. Powerlifting Federation.

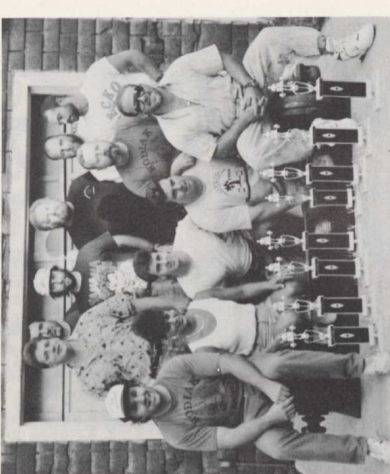
INITIAL _____ SIGNATURE

PHONE 1-800-835-5826

POWER PEOPLE

20 Oct 90 - Wisconsin Delis, WI

Wt. lb.	SQ	BP	DL	Total
Pure	117.5	85	105	307.5
E. Ulich	102.5	130*	125	357.5
Pure	162.5*	85	208*	447.5*
Masters 2	80	35	137.5	272.5
W. Coombs				
165 lb.				
Natural	227.5	147.5	265	620*
D. Heeren	192.5	127.5	245	565
Natural	182.5	80	185	447.5
181 lb.				
Pure	195	132.5	215	542.5
R. Englebretton	172.5	115	200	487.5
Natural	172.5	115	200	487.5
Pure Novice	217.5	125	220	562.5
I. Leuthe	192.5	137.5	192.5	522.5
J. Englebretton	182.5	105	227.5	510
M. Rolinger	172.5	115	200	487.5
M. Laabs	212.5	127.5	232.5	572.5
Sub-Masters	192.5	137.5	192.5	522.5
I. Grey	182.5	80	185	447.5
Natural	167.5	122.5	205*	495
M. Chamption				
198 lb.				
Pure	265	155	230	650
S. Swift	212.5	125	227.5	565
E. Betza	212.5	25	227.5	565
Pure Novice	190*	152.5*	227.5*	600*
B. How	247.5	125	227.5	572.5
K. Zane	227.5	125	225	590
Natural	227.5	125	225	590
Sub-Masters	227.5	137.5	225	590
220 lb.				
M. Platt	250	145	100	495
R. Bruch	25	125	100	245
Pure Novice	25	125	100	245
C. Klehm	255	175	277.5	707.5
Natural				
D. Green				



The Kodiak Power Team is one of New Jersey's newest teams, founded in 1989. In only their 3rd competition, they captured the USPF New Jersey Drug Free Championships. In addition, the team has received numerous certificates of appreciation from the New Jersey Department of Corrections for whom the Kodiaks have done volunteer officiating at prison competitions. The members are, from left to right, front row: John Znaczo, Denise Viscuso, John Cupo, Chuck Henriquez, Mark Methner; back row, Rick Lip-
tak, Lou Adesso, Gene Benus, Joe Novo, Jim Sullivan, Ken Toth, and Jack Deifter. Thanks to Jim Sullivan for this photograph and the information.

W. Weillbank	215	152.5	232.5	600
Pure	242	155	260	660
M. Platt	250	145	100	495
R. Bruch	25	125	100	245
Pure Novice	25	125	100	245
C. Klehm	255	175	277.5	707.5
Natural				
D. Green				

S. Luth	305	182.5	312.5	800
SHW				
Pure				
C. Brewer	# 272.5	207.5	252.5	732.5
D. Oyer	287.5	167.5	260	715
C. Brewer	287.5	207.5	252.5	732.5
D. Oyer	287.5	167.5	260	715

85	165	165	435
E. Ulich	85	165	435
J. Howell	40	198 lb.	165
P. Innebus	130	165	360
C. Feister	65	242 lb.	137.5
C. Klehm	148 lb.	165	360
S. Garcia	25	25	120
192 lb.			
142.5	137.5	198 lb.	25
J. Frick	181 lb.	125	125
K. Howell	165	145	360
L. Willison	198 lb.	242 lb.	165
S. Korfi	155	120	120
C. Klehm	230 lb.	165	360
R. Bruch	242 lb.	165	360
Masters 1	145	165 lb.	125
C. Klehm	130	165	360
T. Buck	182.5	120	125
B. Ermsion	182.5	120	125
D. Oyer	167.5	148 lb.	55
Masters	132 lb.	127.5	127.5
R. Davis	130	165	360
181 lb.	165	165	435
C. Feister	270	165	435
R. Bruch	165	165	435
220 lb.	165	165	435

Heavy Metal THUNDER

T-SHIRT — \$12
M-L-XL — White, Gold, Grey

SWEATSHIRT — \$20
M-L-XL — White, Gold, Grey

Stay Natural Don't Be A Dick

T-SHIRT — \$12
M & XL only

MUSCLE TANK — \$12
M & XL only

SWEATSHIRT — \$20
M-L-XL White, Gold, Grey

SATIN JACKET — \$60
M-L-XL White only

Power Demon The Strongest Survived

T-SHIRT — \$12
Masters 1

White — Medium only

MUSCLE TANK — \$12
M-L-XL — White, Gold

XXL — White only

SWEATSHIRT — \$20
M-L-XL White, Gold, Grey

SATIN JACKET — \$60
M-L-XL White only

FOREARM TRAINER™ is now offered by Smith & Nephew Rolyan Inc. out of Menomonee Falls, Wisconsin. The Forearm Trainer System is a portable, ergonomically designed, comprehensive elbow, forearm, wrist and hand conditioning system. Developed by orthopedic physicians, physical therapists, and occupational therapists, the Forearm Trainer assists in the rehabilitation and strengthening of the muscles of the hand and the forearm. Wrist calibrations on the forearm trainer allow an incremental continuum of resistance up to 40 lbs. This can be compared with the 8-16 lbs. accomplished through light weight lifting.

For further information or to purchase the Forearm Trainer contact: Smith & Nephew Rolyan Inc., N93 WI14475 Whitaker Way, Menomonee Falls, WI 53051, phone 1-800-558-8633 and ask for part number A452-1. The Forearm Trainer has been used by major league baseball and football teams, but was made available to the public in January.

NEW PRODUCT

Sylvie Iskin is the 1990 Women's European Women's Champion, setting France. (courtesy: Danzel)

IN DEDICATION



ED RILEY died on New Years Eve, 3 days after his 57th birthday. He was found in his garage weight training facility, and apparently suffered a heart attack. He had been involved in competitive weightlifting for 34 years and was considered one of the best in the world. He had won many prestigious titles, the latest being the 1990 WPC World Masters title. It is reported that he was buried in the souvenir shirt from that meet. Donations can be made in Ed Riley's name to the A.P.F. 60 S. Broadway, Aurora, IL 60505. This issue of POWERLIFTING USA is dedicated to him.

And that the winds of controversy, some Florida athletes were joining through some outstanding lifts. Sherman Johnson totaled almost ten times as much as his opponent in this world's record 40 and Open divisions. Mike Hansen edged Sherman by a narrow margin.



NEW A.P.F./A.M.P.F. Membership Application
AMERICAN MASTER POWERLIFTING FEDERATION
PLEASE PRINT • COMPLETE ALL ENTRIES •

Registration form for A.M.P.F. membership. Fields include: LAST NAME, FIRST NAME, INITIAL, STREET ADDRESS, CITY, STATE, ZIP CODE, DATE OF APPL, AREA CODE, TELEPHONE NO, DATE OF BIRTH (MO, DAY, YR), AGE, SEX, U.S. CITIZEN (YES/NO), MASTERS (YES/NO), CLUB MEMBER, NAME OF CLUB YOU REPRESENT, REGISTRATION FEE \$20.00, SIGNATURE.

MAKE CHECK PAYABLE TO: A.P.F./A.M.P.F.
60 SOUTH BROADWAY
AURORA, IL 60507

IF UNDER 18 HAVE PARENT INITIAL
I CERTIFY THAT THE ABOVE APPLICANT HAS BEEN APPROVED BY THE A.P.F./A.M.P.F.

SIGNATURE X

APF Florida Championship

Table with columns: Open, SQ, BP, DL, Total. Lists names and their scores for various weight classes (132 lb to 275 lb).

FCI Talladega Inside Meet

Table with columns: SQ, BP, DL, Total. Lists names and their scores for various weight classes (148 lb to 315 lb).

APF World Championship

Table with columns: Open, SQ, BP, DL, Total. Lists names and their scores for various weight classes (132 lb to 275 lb).

Southern States Bench Press

Table with columns: Name, Weight, Score. Lists names and their bench press scores for various weight classes (132 lb to 315 lb).

DEADLIFT

Table with columns: Name, Weight, Score. Lists names and their deadlift scores for various weight classes (132 lb to 315 lb).

BENCH PRESS

Table with columns: Name, Weight, Score. Lists names and their bench press scores for various weight classes (132 lb to 315 lb).

SQUAT

Table with columns: Name, Weight, Score. Lists names and their squat scores for various weight classes (132 lb to 315 lb).

TOTAL

Table with columns: Name, Weight, Total Score. Lists names and their total scores for various weight classes (132 lb to 315 lb).

Memphis PRT Power Meet

Table with columns: Name, SQ, BP, DL, Total. Lists names and their scores for various weight classes (114 lb to 275 lb).

Memphis PRT Power Meet

Table with columns: Name, SQ, BP, DL, Total. Lists names and their scores for various weight classes (114 lb to 275 lb).

DAVE'S GYM

DAVE'S GYM... a cartoon series by CASEY SEEBON. Recent drug free records. Kimberlin earned Best Lifter title with her performance in the 132 lb. class...

DAVE'S GYM... a cartoon series by CASEY SEEBON. Kimberlin earned Best Lifter title with her performance in the 132 lb. class...



4 Mile Correctional Facility Open
1 Dec 90 - Canon City, CO

123	SQ	BP	DL	Total
R. Scott	185	165	225	575
132 lb.				
J. Kelly	215	145	270	630
144 lb.				
E. Lucero	350	225	400	975
J. Keeling	295	210	360	865
181 lb.				
W. Meacock	405	265	495	1165
181 lb.				
J. Hamilton	585	355	570	1510
132 lb.				
M. McCoy	285	205	415	905
185 lb.				
V. Lomanaco	225	260	295	780
198 lb.				
K. Gray	600*	315	660*	1655*
220 lb.				
G. Williams	625	320	555	1500
F. Lottin	550	320	560	1430
220 lb.				
M. Brown	425	275	400	1100
242 lb.				
M. O'Brien	515	320	415	1250
M. Hooks				
Masters				
220 lb.				
450	385	500	1335	

* State DOC record holders. Judges: M. Williams and R. Lewis. (results courtesy John Hamilton)

'Lift for the Lord' Bench Press
20 Oct 90 - Westmoreland, TN

Women	181 lb.	130	75	145	350	
D. Nealy	100	M. Davis	130	75	130	335
180	M. Rogers	110	45	120	275	
100	R. Diaz	70	35	80	185	
70	J. Perkins	40	30	75	145	
55	L. Keen					
310	W. Thomas	100	65	142.5	307.5	
132 lb.	S. Thomas	77.5	57.5	92.5	227.5	
125	R. Biggers	170	75	180	415	
220 lb.	N. Arapio	100	75	120	295	
100	R. Paduru	180	75	120	375	
80	N. Silva	170	75	185	410	
185	T. Anderson	100	60	150	310	
170	D. Smalling	210	120	200	530	
60 kg	A. Davis	170	105	210	485	
145	A. Santos	150	75	185	410	
170	K. Saitta	100	60	150	310	
165 lb.	A. Saitta	100	60	150	310	
130	M. McDonald	275				
220 lb.	R. Chico	250	110	220	580	
R. Swygart	175	R. Ritchey	170	105	275	375
175	R. Ritchey	170	105	275	375	
175	R. Ritchey	170	105	275	375	
175	R. Ritchey	170	105	275	375	
175	R. Ritchey	170	105	275	375	

(Results by Mount Olive Methodist Church)

Brazilian National Championship
75 kg

Women	SQ	BP	DL	Total
K. Naves	44	44	44	132
48 kg				
S. Oliveira	40	25	40	105
48 kg				
P. Deolito	115	50	145	310
52 kg				
S. Oliveira	42.5	32.5	77.5	152.5
52 kg				

ATTENTION: Strength Coaches, Gym Owners and Professional Athletes
PREVENT: Serious head and neck injuries while doing max effort bench pressing, unassisted; using the proven, patented swinging "S" hooks with...

THE BENCH FROM MONOLIFT

ADVANTAGE 2000 SERIES

JUST LOOK AT THE ADVANTAGES!

- Easy, perfect lift-offs every time, all by yourself with no strain on your shoulders and no wasted energy!
- No dependence on others means you can work out at your own convenience!
- Precise positioning every time, no juggling for position after lift-off. Better concentration - *You are in complete control!* The timing is all in your hands. When you are ready to start, simply lift and go. No time delay between you and an assistant.
- Special lock-out feature allows you to do lock-outs as never before, in complete safety!... A great way to breakthrough those plateaus!
- Prevents serious injury with built in head and neck protection. If you miss a lift just let the barbell roll off your chest toward your neck and the safety stops will take the bar off you.....



Mr. Pittsburgh 1989
(Middleweight)

Great if you choose to lift alone!!

• Many people actually lift more with the **MONOLIFT ADVANTAGE 2000** because of all the previously mentioned advantages. Plus...the weight feels lighter to them because of the unique design that allows you to take the weight as it is traveling upwards versus a lift-off where someone is lowering the weight down to you and you are actually stopping the weight first to support it.

THE MONOLIFT ADVANTAGE 2000
The result of over 45 years of lifting experience by its designer, having just set a new world's record for the bench press in the 181 lb. Masters' division at age 60. It is the first fully patented and proven design of its kind. For use with Olympic-size bar (not included).

\$1245.00 (plus freight) (PA residents add 6% sales tax)

MONOLIFT CORPORATION • P.O. Box 123, Baden, PA 15005-0123 • (412) 869-7271 • FAX: (412) 869-7270

POWERLIFTING TODAY
the official newspaper of the

AMERICAN DRUG FREE POWERLIFTING ASSOCIATION

- Weight Class Rankings
- Men's Top 50
- Women's Top 20
- Master's Top 10
- Teen's Top 10
- Up To Date ADFPA Meet Results
- ADFPA Schedule of Events
- Informative Articles About the Dangers of Steroid Use
- Training Techniques
- ADFPA Organizational Information

POWERLIFTING TODAY SUBSCRIBE NOW!

1 YEAR	\$10.00
2 YEARS	\$19.00
3 YEARS	\$27.00

Name _____ Zip _____
Address _____ State _____
City _____

Six issues a year: February, April, June, August, October and December.
*ADFFPA members receive Powerlifting Today as part of their membership.

Mail Check or Money Order To:
Morrison Productions, 19 Jordan S.W., Wyoming, MI 49548

POWERLIFTING TODAY

the official newspaper of the

AMERICAN DRUG FREE POWERLIFTING ASSOCIATION

• Weight Class Rankings
- Men's Top 50
- Women's Top 20
- Master's Top 10
- Teen's Top 10
• Up To Date ADFPA Meet Results
• ADFPA Schedule of Events
• Informative Articles About the Dangers of Steroid Use
• Training Techniques
• ADFPA Organizational Information

POWERLIFTING TODAY SUBSCRIBE NOW!

1 YEAR	\$10.00
2 YEARS	\$19.00
3 YEARS	\$27.00

Name _____ Zip _____
Address _____ State _____
City _____

Six issues a year: February, April, June, August, October and December.
*ADFFPA members receive Powerlifting Today as part of their membership.

Mail Check or Money Order To:
Morrison Productions, 19 Jordan S.W., Wyoming, MI 49548

FREE SHIPPING

KUC'S FITNESS

QUALITY EXERCISE EQUIPMENT

FREE SHIPPING

- #1 SQUAT RACK will hold the heaviest weights - \$109
- #2 T-Bar Row powerful back builder - \$199
- #3 Plate Tree holds 700 lbs. \$59
- #4 Dip Station develop the chest & triceps - \$129
- #5 Preacher Curl a must for the bicep - \$139
- #6 Flat to Incline unlimited uses - \$149
- #7 Situp Board keep the abs strong - \$139
- #8 Power Bench 2" square tubing - \$159
- #9 Lat Machine a must for all gyms - \$289
- #10 Power Rack strength and safety - \$299

PENNSYLVANIA POWER BAR 1500 lb. tested (used in 1985-89 ADFPA Men's Nationals).....\$145
 Olympic Bar.....\$88
 Trap Bar.....\$149
 Olympic Cambered Bar...\$139
 Olympic Cambered Bar...\$59
 Standard Cambered Bar...\$59
 6 ft. chrome bar with fixed inside collars.....\$30

Free Shipping in 48 States - 2-4 weeks for delivery

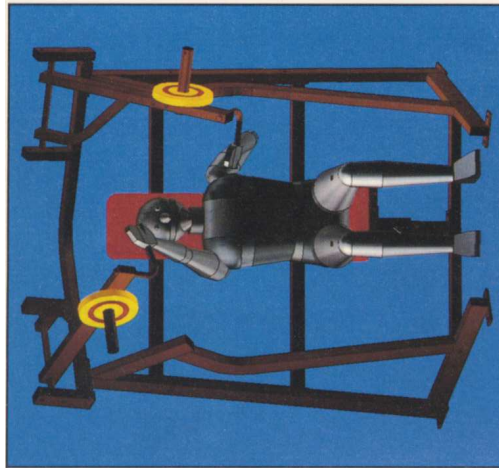
ORDERS ONLY - 1-800-543-2497

FOR INFORMATION - 1-717-823-6994

VISA - MC - CHECK - MONEY ORDER

KUC'S FITNESS, P.O. Box 215, Mountaintop, PA 18707

We also have a complete line of gym equipment, treadmills, stair climbers, cycles, rowers & much more



The ultimate training machines are here. Gary Jones wanted to design machines that felt like free weights. With the help of his Hewlett-Packard computer, he designed machines that are civilized and ergonomically perfect. Hammer is the only line of natural motion ISO-LATERAL™ equipment available.

HAMMER STRENGTH®

PACIFICO Enterprises
 2062 Republic Dr.
 Dayton, OH 45414
 1-800-392-5496

To date 10 pro football teams and hundreds of colleges, high schools and serious gyms, including Gold's Gym in Venice, CA, have purchased Hammer. For a free catalog and more information call or write Mac Richards or Larry Pacifco. In Dayton, Ohio stop by Muscle World Gym and try Hammer.



GET "HAMMER STRENGTH" ON A HEAVY COTTON T-SHIRT! \$11.95 PLUS P&H!

- COLORS:
- WHITE ON BLACK
 - WHITE ON NAVY
 - WHITE ON ROYAL BLUE
 - WHITE ON SKY BLUE
 - WHITE ON RED
 - BLACK ON WHITE
 - RED ON WHITE
 - BLUE ON WHITE
 - ORANGE ON BLACK
 - NAVY ON GRAY

SIZES S/M/L/XL/XXL

1-800-392-5496
 VISA/MASTERCARD /C.O.D.
 ORDERS ONLY!

MAKE CHECK PAYABLE TO:
PACIFICO ENTERPRISES
 2062 REPUBLIC DRIVE
 DAYTON, OH 45414

QTY.	COLOR	SIZE

TOTAL NO. OF SHIRTS _____ SUB TOTAL _____

OHIO RESIDENTS: ADD 6% SALES TAX
 ADD POSTAGE & HANDLING \$ _____

TOTAL \$ _____

* 1-3 SHIRTS \$2.50 P&H
 1 OR MORE \$4.00 P&H
 ALLOW 4-6 WEEKS DELIVERY.

SEND TO: _____
 NAME _____
 ADDRESS _____
 CITY, STATE, ZIP CODE _____

PACIFICO PRODUCTS

Specially Formulated for Weight Training Athletes

A ANABOLIC SURGE™

ANABOLIC OPTIMIZER

Anabolic Surge™ is the most complete product of its kind ever developed. These power boosting anabolic agents are blended with 100% pure granular tissue.

INGREDIENTS: Per 3 Tabletspoons
 Dibenzocazole—10 mg, 6-Keto Diastigemin—20 mg, Caprylic Acid—200 mg, Yohimbe Bark—500 mg, Smilax—2000 mg, Ferulic Acid—500 mg, Arginine Pyroglutamate—5000 mg, Creatine—1000 mg, Mexican Wild Yam—200 mg, Branch Chain Amino Acid—100 mg, CO₂—10 mg, Chromium picolinate—200 mcg, Insosine—500 mg, Ginseng—500 mg, L-Carnitine—50 mg, Boron—3 mg, Lipolic Acid—100 mg, Sterol Complex—600 mg,

B MUSCLE EXPLOSION™

Each 6-capsule dosage contains:
 Dibenzocazole (with intrinsic factor)—10 mg,
 Smilax Officialis—200 mg, Inosine Hypoxanthine Riboside—1000 mg, Orchic Tissue—100 mg, Beta-Stosterol—282 mg, Campesterol—112 mg, Slightmaster—85 mg, Fucosterol—21 mg, African Yam—500 mg, Serenoa Serrulata—500 mcg, Boron—3 mg, Chromium Picolinate—400 mcg, Amino Acids (See below)—2000 mg,
 Ferulic Acid—200 mg, Vitamin B-6—100 mg, Diostein—20 mg, Branch Chain Amino—500 mg, Smilagenin—20 mg.

Each Amino Acid complex* contains:
 L-Ornithine—121 mg, L-Arginine—141 mg,
 L-Lysine—124 mg, L-Noreucine—19 mg,
 L-Glycine—169 mg, L-Phenylalanine—63 mg,
 L-Methionine—38 mg, L-Isoleucine—238 mg,
 L-Leucine—188 mg, L-Threonine—75 mg,
 L-Carnitine—19 mg, L-Valine—38 mg,
 L-Serine—38 mg, L-Tyrosine—63 mg,
 L-Histidine—113 mg, L-Aspartic Acid—38 mg,
 L-Glutamic Acid—38 mg, L-Cystine—51 mg,
 L-Glutamine—19 mg, L-Proline—63 mg,
 L-Alanine—38 mg.

*Amino Acids are free form and peptide bond from egg albumin and hydrolyzed casein profile, in a base containing electrolytes and trace minerals.

Suggested Use

As a dietary supplement, take 1 or 2 packets (3 or 6 capsules) 45 minutes before training.

ONE BOX
30 PACKETS
\$31.00

SPECIAL OFFER!
BUY TWO BOXES
GET ONE FREE

1 POUND 2 POUNDS
 WAS \$23.90* WAS \$29.90*
NOW \$19.00 NOW \$34.00

Magnesium—200 mg, Potassium—200 mg, Protein—55 grams, Calories—240, Fat—0

Directions: Mix 3 tabletspoons of Anabolic Surge, 30 minutes before training, in water. Mix 3 more with water or juice after you train. On off days mix 3 Tabletspoons in water with last meal. This product reacts best with weight training.

PRODUCTS

C AMINO SURGE™

THE MOST POTENT SOURCE OF AMINO ACID IN THE WORLD. CONTAINS NO L-TRYPTOPHANE.

INGREDIENTS PER DRINK:
 L-Alanine—404.2 mg, L-Arginine—353.1 mg, L-Aspartic Acid—426.4 mg, L-Carnitine—8.3 mg, L-Cystine—52.4 mg, Glycine—912.2 mg, L-Glutamic Acid—688.5 mg, L-Histidine—85.6 mg, L-Isoleucine—165.5 mg, L-Leucine—310.3 mg, L-Lysine—337.4 mg, L-Methionine—68.0 mg, L-Phenylalanine—149.2 mg, L-Proline—691.8 mg, L-Serine—362.1 mg, L-Threonine—205.2 mg, L-Valine—128.4 mg, Vitamin C—1000 mg, Vitamin B-1—2.5 mg, Vitamin B-2—2.5 mg, Vitamin B-3—30 mg, Vitamin B-6—4 mg, Vitamin B-12—12 mcg, Folic Acid—100 mcg, Biotin—10 mcg, Paba—2 mg, Choline Bitartrate—100 mg, Inositol—100 mg.

ONE MONTH SUPPLY
\$32.00

BUY SECOND BOX FOR ONLY \$8.00

D BRANCH CHAIN GOLD PLUS™

Branch Chain Gold Plus is the hottest new product on the market today. It features a multi stack of branch chain amino acids, basic amino acids and complementary amino acids unlike any you've seen before. Each 5-tablet dosage contains:

Branch Chain Aminos
 Isoleucine—690 mg, Leucine—1500 mg, L-Lysine—860 mg, Basic Amino Complex
 Valine—681 mg, L-Histidine—227 mg,
 L-Arginine—274 mg, L-Threonine—379 mg,
 L-Serine—492 mg, L-Glutamic Acid—1765 mg,
 L-Proline—871 mg, Glycine—335 mg,
 L-Alanine—277 mg, L-Methionine—240 mg,
 L-Tyrosine—290 mg, L-Phenylalanine—397 mg,
 L-Ornithine—160 mg, L-Cysteine—29 mg,
Complementary Aminos L-Aspartic Acid—
 645 mg, Magnesium L-Aspartate—500 mg,
 Potassium L-Aspartate—500 mg.

Total Amino Acids—11,000 mg, Vitamin B-6—50 mg.
Suggested Use
 As a dietary supplement, take 5 to 10 tablets after twelve noon each day.

100 TABLETS
WAS \$19.95
NOW \$10.95

200 TABLETS
WAS \$34.95
NOW \$28.95

E METRABOLIN GOLD® II

THE ULTIMATE METABOLIC OPTIMIZER

Four scoops of Metrabolin Gold II provides 374 calories, 40 grams of protein, 60 grams of carbohydrates, 2 grams of fat and twice the vitamins and minerals of regular Metrabolin. This powerful formulation also includes Caprylic Acid for increased fat metabolism and overall hardness. These and other outstanding ingredients make Metrabolin Gold II the perfect drink before and after work outs. Metracaro Gold (our special carbohydrate complex), Medium Chain Triglycerides and Metabolic Optimizers in Metrabolin Gold II give you energy and endurance for grueling training sessions. Ergogenic acids such as Smilax Officialis, Ferulic Acid (FRAC), Chromium Picolinate, Boron and Dibenzocazole boost your strength and size gains. Taken after work outs, Metrabolin Gold II initiates glycogen replacement and protein synthesis and helps to alleviate muscle soreness. Metrabolin Gold II can also be taken with meals as a source of quality calories for growth or in place of a meal for maximum weight reduction without muscle loss.

2.2 LB. CAN
\$39.00

VANILLA OR CHOCOLATE

USE ORDER FORM BELOW OR CALL TOLL FREE 1-800-392-5496

Please rush me the following items:

Product Description	Qty.	Price Each	Ext.
Shipping and Handling			3.00
Ohio Residents add 6.5% Ohio Sales Tax			
Total Enclosed			

Mail your order to:
 Pacifico Enterprises, 2062 Republic Drive, Dayton, Ohio 45414 or call in your order toll-free to 1-800-392-5496

Send order to (please print):

Name

Address

City

State

Zip

MC VISA Exp. Date

C.O.D.s Available

Card No.

Phone

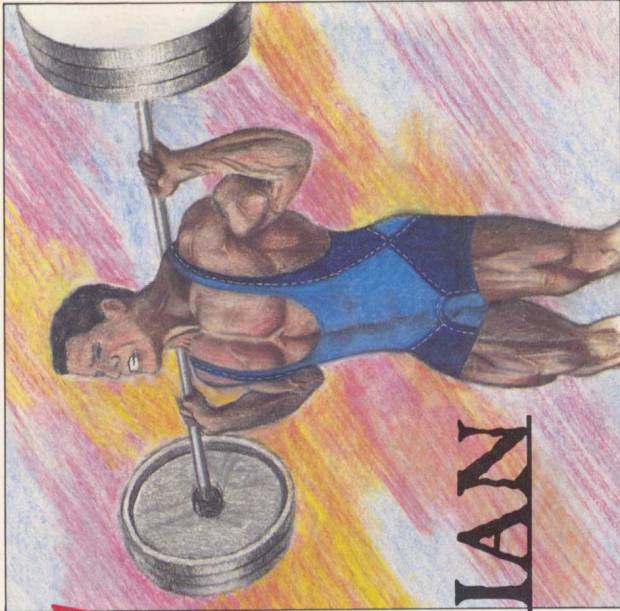
Signature
 Check, money order, VISA or MasterCard information must accompany orders. Overseas orders add 20% for surface freight, 30% for local air freight rate, whichever is greater. All orders shipped within 48 hours of order. All prices are subject to change without notice.



Announcing!

**JOHN WARE
SQUATS 1000!**

THE CENTURIAN



The most "evolutionary" suit design in the lifting world has arrived.

One and a half years in the design and testing stages THE CENTURIAN features our new patent pending DUAL QUAD design. Two sets of four seams are anatomically designed to form a unique harness support system WITHIN the suit. The result is unparalleled additional support out of the bottom position of the squat...the most critical.

Why "evolutionary"?

After introducing the pressure expansion stitch, modern crotch design, 3 cm. seams, seamless straps, double rolled strength seams, run proof fabric, actual custom fits, personal

data files and the strongest guarantees available, THE CENTURIAN "evolved" from the many design innovations you have come to expect from us here at TITAN.

THE CENTURIAN is certified competition legal in all major U.S. lifting organizations. (Multi colored suits not ADFPA legal) Call or write for details. **Guarantee:** 6 month crotch blowout guarantee: First 3 months: \$50.00 back plus a new suit. Second 3 months: A new replacement suit. One year run guarantee: \$75.00 back plus a new suit.

3 month miscellaneous tear/rip guarantee on the rest of the suit.



\$60.00 each. Available from all Titan dealers

TITAN

SIZES: Even 20-56 (if unsure of size, fill out dimension info below*)

COLORS: Solid: Navy Blue (NBL), Royal Blue (RBL), Burgandy (Burg); Combinations: (Body color listed first and trim color second) NBL/RBL, NBL/Burg, RBL/NBL, RBL/Burg, Burg/NBL, Burg/RBL

Name and Address

COLOR	SIZE	QUAN	PRICE
1st			
Shipping/Handling			
TX Res. Add 7.5% Sales Tax			
TOTAL			

DIMENSIONS

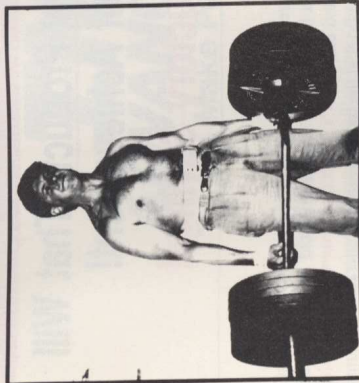
HEIGHT _____ WEIGHT _____
HIPS _____ LEGS _____

TITAN SUPPORT SYSTEMS, INC. 921 RICKY
CORPUS CHRISTI, TX 78412 USA

1-800-627-3145 or 1-512-991-6749

• VISA • MASTERCARD • C.O.D. •
• UPS DELIVERY •

Reach Your Ultimate Potential Through Overload Training And The TRAP BAR! Don't Just Dream About Higher Totals, DO IT!



Pictured: 40-yr-old Al Gerard with a 690 lb. Trap Bar Deadlift. Compare this to a best of 605 lb. convention style.

FITNESS COMPLEX, INC.
208 W. 3rd St. • P.O. Box 1945
Washington, NC 27889



ORDER NOW:
1-800-442-3690
VISA, MASTERCARD

\$149.00

Shipping Free In The Continental United States

**SPORTPHARMA
VANADYL SULFATE:
THE DIFFERENCE
BETWEEN EATING TO WIN
AND MERELY EATING.**

Eating right is important! And if you're training hard you need to eat a lot. A lot of calories from protein and carbohydrates. SportPharma Vanadyl Sulfate can help you put these nutrients where a bodybuilder needs them most...into your muscles.

In the body, insulin controls the transport of nutrients into muscle tissue. It is one of three powerful anabolic hormones responsible for muscle growth. Research indicates that Vanadyl Sulfate is an insulin-mimicer. Like insulin, Vanadyl Sulfate helps transport glucose and amino acids into muscle and liver tissue. It also helps stimulate glycogen and protein synthesis. In other words it promotes muscle growth.

You can't take insulin without serious side effects. But you can take Vanadyl Sulfate. For more information or to order call 1-800-654-GAIN or write to PO Box 9018, Suite 293, Walnut Creek, CA 94598.

SPORTPHARMA USA
PHARMACEUTICAL QUALITY SPORTS SUPPLEMENTS

