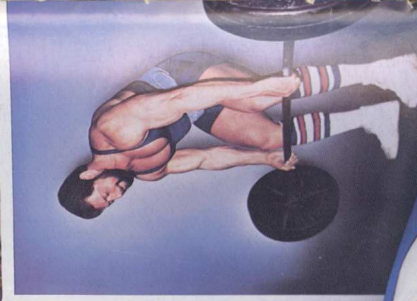


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ON THE COVER...Steve Knight missed the 1983 season due to injury. Hopefully, he'll be one of the many top lifters who make a comeback in the 1984 season.

NEXT MONTH.....National YMCA Contest Coverage



The Twin Study

Abstract
 The differences in selected measures of strength, explosive motor performances, specific blood enzyme changes, flexibility measures, resting heart rates, body composition and anthropometric measures between two identical, monozygotic male twins were compared before and after twelve weeks of intensive forms of weight training. One subject trained exclusively on Nautilus variable resistance while the other subject utilized Isotonic free weight barbells and dumbbells. Both subjects demonstrated favorable changes in strength, power, flexibility, resting heart rate, body lean mass changes and anthropometric measures. The isotonic trained twin exhibited the greatest gains overall, but none of the 'between group' differences showed any statistical significance.

Review of Relevant Literature.
 With the advent of Nautilus and isokinetic machines, the arena of weight training has taken on an entirely new outlook. Nautilus machines, theoretically, biomechanically balance the relative resistance

body part moves through its specific range of motion. This is thought of as not only due to primary changes in force-moment arms expressed through the external system of levers, but also concomitant with changes in the muscle angle of insertion. Thus, there is the concept of variable resistance, trying to biomechanically balance the resistance to match the expressed changes in the muscular-leverage system force capabilities. The search for gaining strength, power and hypertrophy has been historically an on going process that continues to this day. Delorme and Watkins were one of the first research groups to elaborate on the principles of progressive resistance. Their studies indicated that low repetition and high resistance produced greater gains in muscle power and volume and that high repetition with a lower resistance resulted in significant muscle endurance (6). Most of the studies that were subsequently performed in the 50s and 60s concerned themselves with changes accompanying isometric and/or isotonic training. Steinhilber (21) was able to document significant increases in strength follow-

(continued on next page)

Variable Resistance vs. Isotonic Weight Training in Monozygotic Male Twins

A Case Study Jeffrey M. Everson
 Dept of Physical Education & Athletics
 University of Wisconsin-Madison
 Dr. Francis Nagle - Major Professor

throughout a movement range of motion, according to the body's balanced moment arm changes and the changes in the prime mover's angle of insertion. Isokinetic machines, theoretically, balance resistance by maintaining velocity at a constant rate. By limiting acceleration, there is no ballistic phenomenon created.

The traditional strength and hypertrophy developing methods of isotonic and isometrics have been downplayed by strong advertising claims emphasizing the superiority of

ing intensive isometric training. Steinhaus, likewise, emphasized training intensity in building strength. As concerns hypertrophy and isometrics, Rose and Hislop reported that limb circumference did not change significantly, while Meyers, in another study, did report significant changes (19). This again points to the necessity of intensity of work effort and power changes following bouts of isometrics have also remained variable. Swegan found that after ten weeks of isometric training on college age males there were significant decreases in speed of movement on eight testing parameters (18). This finding suggested that isometrics were more favorable in developing static strength and perhaps detrimental to power production.

Many researchers expanded the resistance studies into the isotonic area (1,2,3,4,5,6,8). A great deal of significant research in this area was performed by Berger. Essentially, Berger concluded that strength from isometrics was best gained by working in multiple sets (usually two to five) and by working with repetitions as close as possible to maximal strength values. Berger and Hardage

reported that groups of men training at a one repetition maximum for ten reps made significantly greater gains than those training with a necessary sub-maximum weight for ten reps per set (2,3,4,5). Again, this reiterates the point of training intensity. Several investigations have revealed increases in lean mass with reductions in body fat in men and women following different bouts of isotonic conditioning (7,8,19,23). Training hypertrophy changes have likewise been reported by several researchers (9, 14, 19, 23). Additionally, Chui (9) and Berger (4) in separate studies, showed significant gains in vertical jumping ability following isotonic training. This indicates favorable power changes from isometrics.

A perusal of the available literature has indicated that not nearly as much has been recorded with the newer training modes. Isokinetic training appears to be the next in line, in terms of the amount of research done. In an early study, Modified, et al (14) found significant changes in muscle strength and hypertrophy following isokinetic training. They also reported that the changes in

strength exhibited at different velocities (power) were specific to the velocity at which the training plan was undertaken and that training under high speed conditions produced subsequent gains in strength at low speeds while training at low speeds did not necessarily produce positive strength changes at anything other than low velocities. Although some questions have been raised over the analysis of their statistics, an eight week study by Pipes and Wilmore (19), comparing isokinetics and isotonic strength training demonstrated significant gains in hypertrophy and strength for all training groups with a slightly more favorable report on the high velocity group.

A survey of the literature was unable to report on three studies in which variable resistance was assessed. Unfortunately, in one study there were no comparisons made with other training methods, although the strength gains reported were impressive (16). Pipes (18) reported on a study in which he compared thirty six men over a ten week study. The variable resistance was provided by Nautilus and the isotonic resistance was provided by Universal brand

Author Jeff Everson... is a former track & field All American, ranked Olympic lifter, a 500 lb. plus bench presser, and now with his wife Cory, he is cleaning up in couples physique competition. We hope to have more articles in future issues of PLUSA. (True photograph)



DESCRIPTION OF TRAINING ROUTINE

Dan Seminaro-Nautilus Variable Resistance

Exercise	Sets	Approx. no. of Repetitions
1. Hip and Back Machine	2	8-12
2. Leg Extension Machine	1	10-15
3. Leg Curl Machine	1	10-15
4. Pullover Machine	2	8-12
5. Double Shoulder Machine	2	8-12 ea station
6. Double Chest Machine	1	8-12 ea station
7. Row Machine	1	8-12
8. Shrug Machine	1	8-12
9. Curl Machine	1	8-12
10. Tricep Extension Machine	1	8-12
11. Situps	1	20 (raised one repetition per session)

Dan Seminaro, after six weeks of elapsed training time, was performing two sets of each exercise except in the leg curl, leg extension, shrug and row exercises. The total number of sets was therefore, seventeen. At the end of the sessions the training time was approximately thirty-five minutes.

Dave Seminaro-Isotonic Free Weight Resistance

Exercise	Sets	Approx. no. of Repetitions
1. Bench Press	1	12 warmup 2 5-6
2. Dumbbell Flye	1	8-12
3. Behind the Neck Press	2	6-9
4. Lateral Raises	1	8-10
5. EZ Bar Pullovers	2	8-12
6. Bent Rows	2	8-10
7. Barbell Shrugs	1	8-12
8. Bar Curls	2	8-10
9. Seated Tricep Extensions with EZ Curl Bar	1	8-12
10. Squat	3	8-10
11. Deadlift	2	5-8
12. Situps	1	20 (raised one repetition per session)

Dave Seminaro usually performed twenty three total sets with an elapsed training time of one hour to one hour and fifteen minutes.

machines. This was somewhat unfortunate, since the comparison then existed between two machines. It is believed by some that there exists a large proprioceptive difference between free weight isotonic training and any type of machine training (11). The prevailing thought is that one never has to truly, completely balance the resistance with guided machine training. Consequently, the inputs transferred into the central nervous system from the joint receptors are altered. Additionally, because of the lack of balancing, muscle synergism is reduced. However, muscle isolation is enhanced. At any rate, Pipes concluded that both isotonic and variable resistance increased strength significantly. Neither group exhibited any superiority, as concerned anthropometric measures or body composition changes. Pipes concluded with the challenge of further pursuing the isotonic vs variable training methods

TABLE ONE
Dan Seminaro-Nautilus Variable Resistance

	Pre-tests	Post	Tests	Change
1. Age	21 1/2	21 1/2	21 1/2	
2. Height	5'10"	5'10"	5'10"	
3. Weight	164 lbs.	172 lbs.	175 lbs.	+8
4. Right wrist circumference	16.51 cm.	16.51 cm.	16.51 cm.	
5. Right wrist diameter	5.26 cm.	5.26 cm.	5.26 cm.	
6. Waist, 1" sup to umbilicus	83.82 cm.	83.82 cm.	83.82 cm.	same
7. Right pec. skinfold, 1" sup to nipple, avg. 3 trials	4.36 mm.	3.02 mm.	1.34 mm.	
8. Average resting pulse over 5 day span.	55.2 b-m	53 b-m	2.2	-2.2
9. Percent bodyfat	9.9273	8.9225	1.0045	-1.0045
10. Normal chest measurement	39.25"	41.25"	+2.0"	+2.0"
11. Hanging mid position right arm	12.0"	13.0"	+1.0"	+1.0"
12. Relaxed right thigh, 9" sup to patella	20.25"	21.25"	+1.00"	+1.00"
13. U. extr. dislocation, elbow straight, forefinger to forefinger	36.0"	35.75"	-.25	-.25
14. L. extr. reach beyond zero knees locked, balls of feet together	2.5"	4.5"	+2"	+2"
15. Bench press with Nautilus	195 lbs.	205 lbs.	+10	+10
16. Bench press with Nautilus	15 plates	17 plates	+2 plates	+2 plates
17. Maximum no. of completed chins	12	13	+1	+1
18. Vertical jump over 5 trials	21.25"	22.25"	+1.0"	+1.0"
19. Maximum leg extensor quadricep torque on isokinetic orthotron at speed 4	230 ft./lbs			+15
20. Basic resting, representative blood enzyme levels after a typical workout: LDH (90-200 u-L) SGOT (0-35 u-L) SGPT (0-35 u-L) CPR (0-150 u-L)	102 21 110	172 25 528		+70 +5 +418

Experimental Design

Two college age, identical twin males (21 years, 3 months) volunteered to participate in a twelve week training program of intensive weight training. They were randomly assigned to one of two training modes: isotonic free weight resistance or Nautilus variable resistance. The Nautilus variable resistance was provided in the form of consent information, but were informed they were participating in a study on weight training for changes in appearance and were not told they were training in any comparison study. The subjects were trained independently every Monday, Wednesday and Friday. The experiment was careful not to favor one subject over another and to verbally encourage each of them equally. This was done to offset any possible Nautilus effect. Both subjects had sporadic trials with different forms of weight training in the past, but neither had done any training

during the prior year. The subjects were pre-tested and post-tested independently over a time span in which there was no change of communicating with each other. Tables One and Two list the pre and post test employing the proper training schedules, exercises, sets, repetitions, and training time was critical in this study. Each subject was independently familiarized with the techniques involved. For the Nautilus trainee, this included explanations of correct seat adjustments, exercising to a point of momentary muscular failure on each set, the importance of training in a slow controlled manner (2 seconds to complete the concentric phase), exercising bigger muscle groups first and never doing more than two sets of maximum intensity of each exercise. In keeping with the suggested Nautilus exercise framework, the total workout time

TABLE TWO
Dave Seminaro-Isotonic Free Weight Resistance

	Pre-tests	Post	Tests	Change
1. Age	21 1/2	21 1/2	21 1/2	
2. Height	5'10"	5'10"	5'10"	
3. Weight	167 lbs.	175 lbs.	175 lbs.	+8
4. Right wrist circumference	16.51 cm.	16.51 cm.	16.51 cm.	
5. Right wrist diameter	5.26 cm.	5.26 cm.	5.26 cm.	
6. Waist, 1" sup to umbilicus	85.72 cm.	83.50 cm.	83.50 cm.	-2.22
7. Right pec. skinfold, 1" sup to nipple, avg. 3 trials	5.66 mm.	3.80 mm.	1.86 mm.	
8. Average resting pulse over 5 day span.	59.8 b-m	57.8 b-m	2	-2
9. Percent bodyfat	11.0362	9.5438	1.4924	-1.4924
10. Normal chest measurement	39.75"	42.55"	+2.75"	+2.75"
11. Hanging mid position right arm	12.0"	14.0"	+2.0"	+2.0"
12. Relaxed right thigh, 9" sup to patella	20.25"	21.50"	+1.25"	+1.25"
13. U. extr. dislocation, elbow straight, forefinger to forefinger	39.0"	38.75"	-.25	-.25
14. L. extr. reach beyond zero knees locked, balls of feet together	even	2.5"	+2.5"	+2.5"
15. Bench press with barbell	195 lbs.	230 lbs.	+35	+35
16. Bench press with Nautilus	15 plates	17 plates	+2 plates	+2 plates
17. Maximum no. of completed chins	12	13	+1	+1
18. Vertical jump over 5 trials	21"	23"	+2.0"	+2.0"
19. Maximum leg extensor quadricep torque on isokinetic orthotron at speed 4	218 ft./lbs			+30
20. Basic resting, representative blood enzyme levels after a typical workout: LDH (90-200 u-L) SGOT (0-35 u-L) SGPT (0-35 u-L) CPR (0-150 u-L)	150 28 150	152 32 150		+2 +4 +74

Psyching Up for the New Powerlifting Season

as seen by Powerlifting USA Editor, Mike Lambert

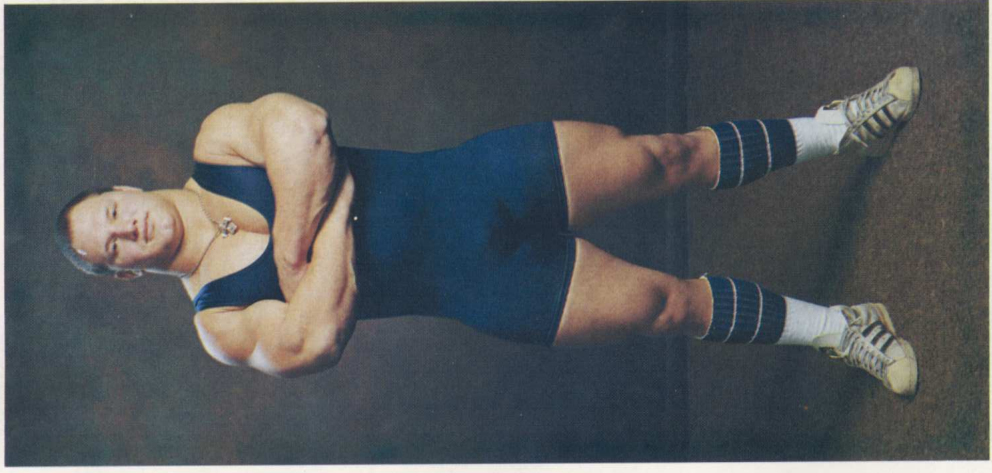
Right after a great year of Powerlifting World Championship competition, expectations for the next year seem to take off. Often, interesting possibilities present themselves as a result of the World meet alone (will Hatfield go against Ladinier again at the Seniors, or will Ladinier go 242, and open the door for his mentor Larry Pacifico to go against Fred in the 220s????, for example), but the previous year of great successes and missed opportunities, comebacks and setbacks, newcomers and resurgent veterans, builds its own momentum to fuel the natural optimism of Powerlifters and make them feel that the next Seniors, or Teenage Nationals, or the state Masters meet, etc. is going to be even better than ever before, and so is their lifting. It is just so in 1984, a year that has a lot to offer Powerlifting.

What do we have to look forward to? In 1984 both the Men's and Women's World Championships will be in the United States, with the Women's set for May in Los Angeles by Dr. Fred Hatfield, and the Men's back in Austin, Texas with Chip McCain this November. The World Masters (40-49 and 50 plus age groups) Championships and the Junior World Championships (for lifters 23 years of age and under during 1984) have been awarded to Perth, Australia in September and the U.S.P.F. has committed to at least partially finance the teams to both those events for the first time.

As far as United States Powerlifting Federation National competition, the Women's National meet is almost upon us, being hosted by Chip McCain in Austin, Texas in the latter part of January. Long in the last of the Collegiate ranks, Villanova University in Philadelphia, Pennsylvania will host the 1984 National Collegiate Championships on March 22-24 under the able direction of Joe Slabinski, and the first ever U.S.P.F. National High School Championships will be staged by World Champion Ricky Dale Crain in Oklahoma April 27th & 28th.

Texas A&M and Ken DeLong had to pass on holding the Juniors and the bid went to Rich Labbe in Portland, Maine, who put on the North Americans this past year, and his meet date is moved up to June 2nd & 3rd. The Big One, the Senior Nationals, is back in the home of Larry Pacifico in Dayton, Ohio and he promises an even greater show than the eminently successful one he put on in 1982, with even more remarkable awards and many other surprises. Make your plans to attend this contest, which many consider to be the most competitive lifting meet in the world, on the dates of July 8th and 9th. Ralph Sessa of Olympic Trophy in Chicago, will put on the Teenage Nationals on August 5th, and be sure to check the Coming Events section in future issues of Powerlifting USA Magazine for updates on these contests and others.

Joe Ladinier is just one of many exciting lifters who can be expected to show a big lifting performance in 1984, especially in the 242 lb. division. This photo shows him planning his own comeback to big time competition in the coming year.



Joe Ladinier is just one of many exciting lifters who can be expected to show a big lifting performance in 1984, especially in the 242 lb. division. This photo shows him planning his own comeback to big time competition in the coming year.

including the National Masters Championships (Washington, DC area), the Women's Teenage Nationals, and the next YMCA Nationals. We also publish the quarterly totals for these meets, as soon as that information is available to us. But, that's not all, by a long shot. The American Drug Free Powerlifting Association more than doubled their membership in 1983, and they have an expanded schedule of national events planned for 1984. Their Men's Nationals will be hosted by the same Ralph Sessa who is putting on this one will be July 21st and 22nd. The A.D.F.P.A. will also be inaugurating a Drug Free National Colleague meet, and they will also be presenting their own Women's Nationals, tentatively set for April 7th and 8th, to be directed by Pat Malone in W. Lafayette, Indiana.

Conclusions This study demonstrates that both Nautilus variable resistance and isotonic free weight training resistance increases strength, power, flexibility and anthropometric measures as well as decreasing body fatness. The claims of superiority in variable resistance machines and their training methods were not substantiated in this study. The usual factor of genetic training differences in terms of growth rates, cannot be credited for the differences in this study. Because identical twins were used. Additional factors such as diet, extraneous physical activities, psychological motivation and exerciser preference were controlled as closely as possible.

Although the training changes here were very similar, the differences might have been narrowed further if the elapsed training time, training weights, number of sets and number of repetitions were more closely equilibrated. Nautilus dogmatically insists that one or at most, two sets of maximum intensity exercise at a slow, controlled rate of between eight and fifteen repetitions is required for the greatest gains in size and strength, yet, this does not concur with the largest body of available physiological research and empirical observation. The data unfortunately suggests differences in hypertrophy and strength that are dependent upon different numbers of sets, repetitions and training weights. From this researcher's viewpoint it would seem difficult to construct biomechanical changes in machines that can vary perfectly from individual to individual. This would seem impossible, considering anatomical differences in joint segment lengths and differences in origin and insertions, not to mention the weight of the body segment as well. Certainly in this study, however, these things had a better relative control. Additionally, since Nautilus does not control velocity in biomechanical exercises when varying speeds of exercises are used, this study an ideal plan would have been to continue, using a lesser speed to continue, using a lesser speed. However, personal life style prevented this. Further testing of training differences among larger, randomly selected and allocated groups will be ultimately necessary to fully assess the training differences procured from the new variable resistance models versus the conventional form of isotonic training.

measurements can also be recognized. While the modest differences in gains for both subjects between training modes represent a practical significance, it would clearly be difficult to show any statistical significance at an accepted research alpha level of .05 or .01.

Because only two subjects participated in this study, with a "n" of one per group, it was deemed more practical to use a descriptive model rather than a statistical model in the result analysis. Actually in a case study this small and over a relatively short time span (12 weeks) it is more realistic to expect practical significance as opposed to statistical significance.


Since voluntary muscle gains are a function of training over a time period, as well as differences due to training modes, it was thought that a T test or a before-after analysis of variance would be somewhat appropriate. Additionally, since there weren't large numbers per training group, an analysis of regression that might factor out the effect of different muscular force modes as opposed to the training time factor was also rejected.

Upon assessing all before and after measured parameters, both subjects made overall improvements. For the isotonically trained individual, positive trends existed in fifteen out of fifteen subject positive trends existed in fourteen out of fifteen areas. Both individuals improved their strength, flexibility, measures of power, resting heart rates and anthropometric measures. Body fat was reduced in both cases even though each twin recorded a net gain of eight pounds of body weight. The indicated changes were of training tissue. With a clear analysis of training changes for the selected isotonically trained individual had greater relative gains in anthropometric changes, strength and power changes (for instance, this subject improved in the bench press with a total of 35 pounds as compared to the variable resistance subject of ten pounds). The significance of this is difficult to assess since there is a skill factor involved here. Other clear gains in

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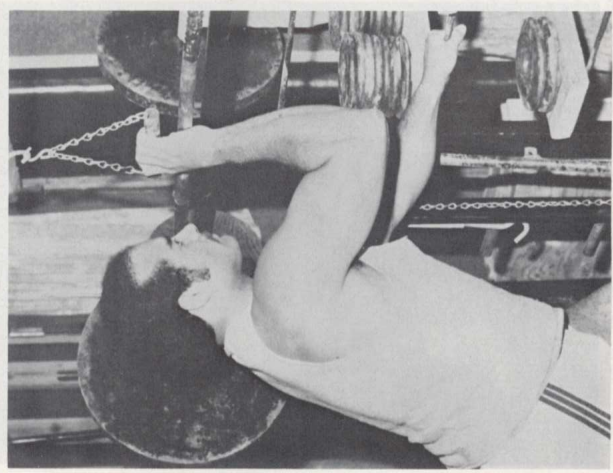
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POWER PROFILE

Jim Flora A Profile in Persistence By Patsy Flora

which had by then overlapped by 1 1/2 inches. The next 11 days were spent in traction.

On the 9th day he suffered a pulmonary embolism and was put on a lung machine as his own lungs had failed. The doctor forewarned his family that his chances of pulling through didn't look good, as his condition deteriorated. In addition, the doctors suspected a blood clot near the heart and a heart catheter was inserted through an artery in his left arm into the heart. Fortunately, the test showed the heart was clear. After spending two days on a lung machine he had regained enough strength for the operation to install a rod into the femur and repair the knee. He finally left the hospital 19 days later and 35 pounds lighter. The doctor told him that his weightlifting career was over as the leg would never be able to support the kind of weight it had before, due to the severe damage to the tissues in and around



Determination...beginning with light wrist exercises, Jim's "never give up" spirit brought him back to competition just 6 months after hospitalization. Photo courtesy Patsy Flora.

also been crushed and the doctor explained that several of the fragments would have to be removed and they would attempt to wire the remaining pieces together.

Surgery on the knee was successful, however, the first attempt to reconstruct the wrist failed, and a second operation was necessary. After the second operation the doctor explained that they had done the best they could, but the damage had been extreme and Jim would never be able to lift heavy weights again. Just to achieve normal wrist and knee movement would be quite an accomplishment.

After coming home from the hospital the full impact of his injuries became apparent and Jim became withdrawn and very depressed. "I looked back at how hard I had worked the last nine years to overcome my handicaps and injuries, the pain and discipline of the daily sacrifice of time spent training, time I could have spent with my wife and kids. Now, here I am again nine years later, and back to square one." His family tried to cheer him up with a party as it was his birthday, but it only reminded him that another year had gone by and that it was getting harder and harder to train.

Continuing to be depressed, "I thought about how I had always been so positive and willing to work hard for what I wanted to achieve. It was gone. I just didn't seem to have the drive to go through it all over again." Three days went by and he happened to be listening to some Steve Wonder music. "It started me thinking about how everyone has a purpose in life and that there is a positive side to everything that happens in our lives, we only have to search it out. I knew that I must overcome my disabilities and provide a positive inspiration for others." He then became determined to overcome this latest obstacle to his goals and started figuring out how he could lift weights with the cast still on the way up to the triceps. He began doing modified bent over rows and flys by attaching the cast to the elbow with a cable and pulley. However, after two weeks the cast had begun to rub the arm badly and he quit doing the exercises. Determined not to get discouraged he continued working on his knee.

Summary of 1982 knee rehabilitation program:
Oct. 17 - Left hospital
Oct. 22 - Flexibility work - bending the knee 3 times daily, eventually reaching a 120 degree bend
Isometrics: gradually supporting more and more bodyweight on the injured leg
Nov. 4 - Began walking
Nov. 5 - Leg extensions - 3 workouts the first week with 6 sets of 20 reps. Thereafter doing 6 sets of 10 twice a week. Leg extension lockouts - 2 sets of 20 following leg extensions, for the injured leg only. Leg curls - 5 sets 10 to 20 reps following leg extensions
Dec. 16 - Began doing 3 sets of squats getting a heavy set of 50/14 in the first workout. After 3 weeks of

ledown he received. "Having reach-

found that by wrapping his wrist tightly before each set he could eliminate some of the pain and switched his program to doing a full bench workout every three days.

In April of 1983, only six months after the accident, he lifted as a 198 pounder in the Northwestern US Championships and totaled 1470 via 560-300-610. Jim then made plans to compete in the ADFPA Nationals in July where he sought to achieve his goals of winning a National Championship and setting a National drug free meet and made a squat of 617 and a bench of 297, but he injured his wrist with his 3rd attempt in the bench, going for 308. The pain made deadlifting impossible, and thus, his first try at a comeback in a major competition went up in smoke.

Once home, he began strengthening his wrist again by doing three sets of squeeze grips and three sets on the wrist roller every other day. After two weeks had passed, he felt his wrist was healed enough to begin light benching and he began his regular 4 day workout cycle (Squat day - Bench day - Deadlift day - Day off). In October, Jim totaled 1576 (634 297 645) as a guest lifter in the 1988 at the British Columbia Open. Although he failed to surpass the 300 pound barrier in competition, he is determined to return and surpass his former bench record of 395, attained prior to the accident that crushed his wrist.

It is Jim Flora's hope that his story will inspire others to NEVER GIVE UP and to believe that VISION, PERSISTENCE, AND SACRIFICE can accomplish the impossible. PL USA feels that Jim deserves enormous respect for his courage and dedication he has shown just to get back as far as he has. Certainly, his story will inspire many lifters to overcome their own difficulties, which must seem pretty pale in comparison. In that regard, his comeback will have been a World Championship success.

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Jim Flora...at the 1982 Pacific Northwest Championships where he squatted 645 with the IM rod still in his leg. Photo courtesy Patsy Flora.

light squatting he resumed full squat workouts. Following squats he would do 3 sets of leg extension lockouts for the injured knee, working up to a heavy set of 20 reps.

After going to the doctor's office to have the cast and pins removed, "I was shocked! I couldn't believe how much my upper arm and forearm had shrunk. My hand and wrist were extremely swollen and painful to move." After experimenting with several different types of wrist and forearm exercises he began doing finger curls and wrist curls. These were the only exercises which didn't further inflame the wrist. In addition to the wrist work he wanted to exercise as much of the upper body as possible, so he made a type of wrist brace out of cardboard and molded it to fit the wrist and forearm. With the brace he was able to do flyes, chest pulls, dumbbell curls, one arm lat pull downs and side raises using twice as much weight.

Summary of wrist rehabilitation program:
Oct. 17 - Left hospital
Nov. 19 - Cast and pins removed
Nov. 26 - Finger curls - curling up a dumbbell using only the fingers
Wrist curls (both palm up and palm down) - the first 2 weeks doing 4 sets of 20 reps 3 times a week. Thereafter doing 4 sets of 20 reps weekly
Feb. 1 - Wrist roller - 5 sets of singles twice a week
June 1 - Began doing squeeze grips on a machine getting 3 sets of 20. Reduced wrist roller exercises for 2 sets of 2, doing both wrist exercises every other day
In December he decided to begin benching but wasn't prepared for the

ledown he received. "Having reach-

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Thoughts on How to Solve a Grip Problem... and Other Things

Frederick C. Hatfield, PhD

If you follow powerlifting, you know that I have had to swallow my pride at several meets over the past two or three years because I couldn't hang on to the blasted bar. The lost meets -- National Championships included -- hurt me deeply, but not so much as my inability to solve the problem.

Well, I still haven't solved the problem on any sort of universal level, but I am happy to say that I have found the answer to my own grip problem! First, I thought that the rotator cuff surgery I had undergone may have disrupted some nerves leading to my gripping muscles. The reason I felt this way was that sometimes my grip was good and other times it wasn't. There seemed to be no consistency in the way the problem manifested itself. In such a case, I reasoned that time would be the only possible cure. I waited -- and I waited -- but to no avail. There had to be some other answer! Wasn't there something I could do?

I resorted to working the grip on a daily basis with a grip spring -- sometimes several times a day. Then, when that didn't work, I tried Vince Anello's technique -- hanging onto the bar for a long while after deadlifting it. No dice. I used a fat bar. Nothing. A skinny bar, a smooth bar, a knurled bar, grip straps, a hook grip, reversed grip -- zero!

By this time, two years had passed, and the problem lingered, showing up at the most inopportune times, and disappearing only when there wasn't anything at stake. Was there some force out there who had it in for me? That seemed to be the only answer!

I tried acupuncture, self hypnosis, various concoctions designed to improve or decrease muscle tone, muscle strength, nerve impulse, and God knows what else. All that was affected was my pocketbook -- and my pride.

Then a guy walked into the gym one day -- just before the World Championships -- and brought with him a few lovely nurses and a strange looking contraption that looked like it belonged in a Star Trek episode. It was a Laser acupuncture machine. He claimed that he could cure my grip problem by using it. Eagerly, I agreed to some free treatments -- there was about three weeks to go the World's, and I would've tried anything!

Well, it didn't work. Despite this, I feel that the technique had great potential in other areas of rehab, but that's for a later article. Besides being an acupuncturist, Dr. Didrik Soplér of Santa Monica is expert in chiropractic techniques and various techniques from the fields of homeopathy and naturopathy. It didn't take him long to figure out

what my problem was.

Step one, of course, was to rule out each method of treatment on some sort of logical basis -- remembering that I was fighting the calendar (only two weeks to go!). The laser treatments were out since no immediate results were forthcoming. Homeopathy and other acupuncture or pressure techniques were tried, but to no avail -- again, only immediate results were acceptable to me.

Then he hit on something! It worked! There was, according to the good doctor, some nerve impingement in the cervical plexus (near the neck). This problem would take several treatments to rectify. Fair enough. To those I will gladly continue to go. But, the real damage was in how I squeal! Yep! How I Squal!

Having the bar as far down my back as the rules will permit, and keeping my grip as close as is possible for greater stability and shoulder girdle tightness had taken their toll on my wrist. The "tunnel" through the carpal bones of the wrist had become dislodged enough to cause two debilitating phenomena:

1. the nerves passing through the wrist and into the hand were being impinged, thereby reducing my strength.
2. the proprioceptors in the wrist that are functionally involved in sensing joint position and muscle response were being affected in a way unknown to me at this time, but the results were that the strength in my grip was severely reduced.

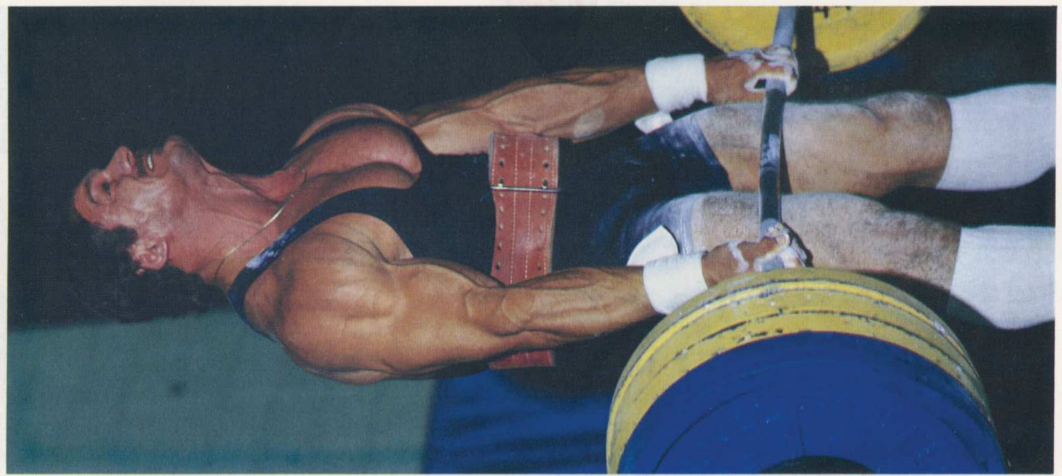
A bit of acupuncture lasting for all of five or ten seconds absolutely cured the problem. Excited to beat hell, I dragged Dr. Soplér to the gym for the last three of my workouts, and my coach and training partner, Dave Keaggy, learned how to perform the technique. He travelled with me to Sweden, and my grip held! The outcome is a matter of history.

What's the moral? I could say that if you have a grip problem, try the acupuncture cure depicted here. Or I could say that you should always go to a qualified sports physician or sports scientist when training problems arise -- oftentimes, they're well-equipped to solve the puzzle.

Or, I could say that the real secret to achieving success is to NOT GIVE UP! You know -- seek and ye shall find!

Take your pick.

A Strong Grip is vital when pulling a big deadlift, and lifters like Jim Cash (at left from the 1982 Seniors) have a grip to match the 800 plus pound attempts they make. Fred Hatfield has had his problems in the deadlift trying to beat men like Cash and Ladnier, but now seems to have his situation under control.



The Referee's Corner

The sport of powerlifting has become extremely popular during the past five years, and as a result, we have experienced a phenomenal growth rate. As the sport continues to expand throughout the country, more officials and lifters are becoming involved in controversies regarding the existing rules governing the sport. In almost any meet, the same, familiar misinterpretations are occurring and people are finding it difficult to agree on what is really meant by what is written in the rule book.

This column will serve two purposes. First, it will clarify the existing problems and standardize lifting throughout the United States, and secondly, it will offer the I.P.F. Technical Committee useful insight about areas of the rule book in need of revision. During the Olympic year of 1984, the Technical Committee has been assigned the task of revising the I.P.F. Rule Book, and it is the goal of that committee to clarify the rules so future misinterpretations will be minimal and infrequent.

We are anticipating a volume of mail on some particular issues which may require grouping similar questions for one common explanation. When this occurs, if you feel that your question has not been adequately addressed, resubmit the portion that needs additional explanation.

This column has been approved by the U.S.P.F., and will hereafter serve as the official interpretation of all U.S.P.F. rules.

Question: What type of shirt is legal for a powerlifting meet?

Answer: Shirts are optional attire; however, when a shirt is worn, it shall be a vest or t-shirt with short sleeves, and shall be made of cloth. The edge of the sleeve on a t-shirt shall be above the elbow. A vest has been interpreted as a sleeveless shirt including tank tops and "U" shirts. Pockets, collars and similar seam attachments are not permitted. Cloth includes polyester, cotton, or a combination of both materials. Ribbed vests or shirts made of any material having any tubular or similar stretch material are forbidden. The shirt or vest shall be one basic color. An insignificant contrasting edge is permissible, however, that edging is restricted to the neck opening and sleeve ends on a t-shirt, and neck opening and armpit edge on a vest or tank top. At national or local competition, only the emblem of the lifter's nation, state, club or powerlifting championship may be worn. (The word "association" no longer applies since we have separated from the AAU.) An emblem of this nation is specifically limited to a picture or wording that specifically identifies the nation including, for example, the United States flag, lettering "U.S.A.", or the words "United States of America". It does not include any picture or writing that would project a thought, other than the identification of the nation, i.e., "I Love America", etc. A state emblem is restricted to the official state seal, a territorial border map of the state, the state flag, or the name of the state. A club includes any team currently registered with the U.S.P.F. When a powerlifting championship is depicted on a shirt, use of that shirt shall be restricted to that particular championship.

When a shirt or lifting suit does not qualify as legal equipment because of designs, seam attachments, etc., it is not permissible to turn that shirt inside out to qualify it.

Please address all correspondence regarding this column to: BILL HARTMANN, 11632 Roseglan, El Monte, CA 91732 to the betterment of Powerlifting, Bill Hartmann and Don Haley

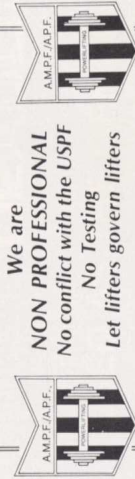
Photo Credit:...the photo of Bill Kazmaier doing his 904 exhibition deadlift that appeared in the August PL USA was reportedly taken by Jose Carrillo.

Tim Smith, a Powerlifter from Nebraska, who had a fine career as a Teenage lifter, died at the age of 21 in a car accident in late September. He was a training partner of powerlifting great Mark Schellen. Thanks to Ed Nelson for the information about this loss of a friend of Powerlifting.

TEENAGERS... set Teenage American records at meets other than the Teenage National Championship, that is. So says Teen Records Chairperson Ted Herring, 146 Baringer Dr., California, MD 20619 301-863-4204. If you do set a record, be sure that all the requirements indicated on the application are met. Ted indicates that frequently he can't process the record applications he receives because insufficient copies are provided, no U.S.P.F. card number for the athlete is indicated, the athlete did not sign the application, the record submitted does not break the existing record, the records broken are not listed, the wrong category of reference is present, no referee's signature, no official weigher's signature, missing confirmation signature, missing drug control officer signature, no bodyweight indicated, actual weights of plates not listed on back, no meet results provided, no birth certificate provided, no scale slip provided. Don't let errors like these prevent you from getting the record recognition you deserve. The instructions on the record application itself will aid you greatly...read them! The application must be filed within 30 days of the date of the contest itself, so don't dally around either. Do it right and do it on time!

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Women's Corner



Ruthi Shafer the 1983 World Champ on the winner's platform in Australia

I also promised to run a bit about prospective candidates for the job of women's champion, however, at their request, I will not be doing that. Some will wait until the day of the voting to announce their intentions. I can honestly tell you that each of these folks wants to do the best job possible. When each gives their campaign speech, you will see the innovative new ideas that can be brought into this game. I, for one, am looking forward to that.

In 1982 the women in powerlifting made a very important gain in their pursuit of equity, by convincing the National Committee that they should have some say-so in the designation of their coaches at the World Championships. Since that time, women have made those decisions amongst themselves by a majority vote. Perhaps now we can graduate to an even fairer system. Maybe in 1984 when the team is asked to make their decision, they can do so after having time to give the persons seeking the coaching position careful consideration. Listed are the folks that I know of who would like to be thought of, in alphabetical order: Nate Foster, coach of the 1981 U.S. Women's World Championship Team, member of the Women's Executive Committee, and very active in Women's Powerlifting; having helped coach and train several national caliber level lifters, Doyle Kennedy, coach of the 1983 Women's World team, coach of the 1983 Men's World team, Region 12 Chairman, and member of the U.S.P.F. Executive Committee, who has been actively coaching women lifters for the last four years and works with four World Champions. Pat Malone, coach of the Purdue Women's Powerlifting team, winners of the team trophy at the 1981 Women's National Championships, who has been very active in recruiting and training of women lifters, especially at the teenage and collegiate level, a member of the Women's Executive Committee, and the originator of the "Malone" formula. Walter Thomas, coach of the 1982 Women's World Championship team, coach of the 1983 Women's World Championship team, an active lifter for the last ten years, and a world champion himself. They are all experienced folks. This is by no means the only people seeking the job, just the ones I heard from.

Through this past month's phone calls, I have had a great time getting to know many new lifters, and had the chance to learn a lot about you. It is interesting to note the devotion and intensity of your young, new teenage lifters. A few years ago, when I began in this sport, the number of teenagers could be counted on one hand. Now we have a whole new competition, for just one segment. That is proof to me that we are growing in a big way. Till the Nationals, take care, and keep getting stronger.

Ruthi Shafer, 4067 NW 1st Gresham, OR 97030 (see Ruthi's special bulletin on page 42)

Happy 1984, Ladies and Gents. This is the time of year when we make all those New Year's Resolutions. You know, the ones we try to keep for at least a week. Some of us are stronger though, and we last a month. Each and every year I seem to make the same resolutions. Obviously, they are not working, or I would not be making the same ones again. I am sure mine are similar to yours: something like "I will write my mom about 20 grams per Kg, or about once a week, never forget her birthday, I will lose those extra 10 pounds, I will not wait until one week before the meet to make weight, I will balance my check book", the list is endless. I wonder who started this type of routine? Obviously not someone who has led a hectic life. My New Year's resolution this year is...I will not make any New Year's Resolutions. There, now that we have that settled, we can move on to other subjects.

I trust all you ladies preparing for the Nationals did not indulge in any holiday treats or parties, nor did you miss one day of training, even if it was New Year's Eve. I know I am working very hard, and from what I hear many of you out there are doing the same. I love to hear about all the hard work and effort that is going into your bid for a title or medal of some sort. The days of just walking in taking the meet are over for good. In the past some weight classes were either empty or unchallenged, leaving the returning champion the luxury of a win without the hard work. Now, we are all fighting for records, trophies, and first place. I can think of at least three weight classes that in the past have been dominated, but will offer us an all out battle this year. Although that is not too much fun for those involved, it is much more interesting to the public, and it signals the tremendous growth and popularity in our sport. Hurry for us!!

I want to stress the importance of your attending the Women's Committee meeting on the Friday before the Nationals. The time has been changed to 3:00PM instead of 10:00AM. This meeting is about you as lifters and issues that will directly affect your lifting. I have just spoken with Chip McCain about the meet, and he has informed me of a few changes. First off, there is a change in the way the weight classes will be run. The 97-105s will go Saturday morning, followed by the 114-123s that afternoon, instead of having the 132s with that last session. Sunday will feature the 132s-Supers together. Since the lighter weight classes are generally much larger, it seemed easier to the lifters to split it up this way. Chip also informs me that he has planned for Sunday night after the meet in the hotel ballroom. He will be providing free transportation to and from the airport, and the meet will be from the \$30 of last year, so hopefully we will be able to attract a bigger crowd. It appears that we will have a very professionally run meet, if maybe the men would enjoy having their Worlds with "The Bodybuilding Grand Prix". Time will tell.

In Austin, and will not only be conducive to lifting, but to spectators. We will have Texas Power Bars to use, and overhead projectors to help coaches keep track of attempts, etc. Our announcers may be Ken Leistner or Tony Campino and, of course, we will have the finest judges at our disposal. The weekend tickets for non-lifters will run \$20. That is down from the \$30 of last year, so hopefully we will be able to attract a bigger crowd. It appears that we will have a very professionally run meet, if maybe the men would enjoy having their Worlds with "The Bodybuilding Grand Prix". Time will tell.

Headache, then a glucose tolerance test is recommended. A true hypoglycemia state occurs when several of these symptoms occur in the fasting state. The diet recommendation for hypoglycemia is as follows: Protein, about 20 grams per Kg, or about double the normal recommended allowance. Carbohydrates should be kept below 40 percent of total calories or about 90-100 grams per day. The points to remember are to avoid large carbohydrate loads in any given meal and avoid concentrated sweets such as honey, syrup, candy, jellies, jams, sweetened cereals and sweetened fruits, fruits high in carbohydrates and soft drinks. Only fruits, vegetables, breads, cereals and potatoes should make up the carbohydrates in the diet. It would be best to eat five or six small meals rather than two or three larger meals per day. Also, protein should be included at each feeding. Both alcohol and caffeine should be omitted or restricted as they interfere with blood glucose levels. If you do feel that some of these symptoms occur on a temporary basis, then a slight change in your diet may help. Consider the following recommendations: PROTEIN: 8 grams Milk 1 oz 8 grams Eggs 1 oz 6 grams Cheese 1 oz 7 grams Hard 1 oz 8 grams Soft Meat Beef, Pork, poultry, fish 1 oz 8 grams

- (1) Try to select about 20 grams of protein for breakfast. Then, add a serving of fruit or juice, and cereal or bread (one serving)
- (2) A mid morning snack should include one selection of a protein food and a selection of fruit or bread
- (3) Lunch should include about 20 grams of protein with a selection from the fruit exchange, a selection of vegetable selection such as a salad
- (4) An afternoon snack may be optional depending on the time of lunch and the time of the dinner meal. If you decide to include an afternoon snack, pattern it after the mid morning meal.
- (5) Dinner should include a 20 gram portion of a combination of protein foods, a vegetable serving, a fruit serving and one serving of a complex carbohydrate such as potatoes, rice, bread, etc.
- (6) Finally, the late night snack should have a serving of protein and a serving of fruit. Or an 8 oz glass of milk would serve as an adequate snack.

If you do feel a little shaky or weak several hours after a meal, it may be due to any number of reasons. One, however, could be nutritionally based. So you may want to alter your eating patterns. If you have any questions, feel free to drop me a line. I'd be glad to help.

Nutritionally, J. P. Diganji, R. D., M. S., 116 Dopsion Place, West Monroe, Louisiana 71291

NUTRITION CORNER

by Jack Diganji

The term hypoglycemia has been used often in the lay journals and diet magazines, but true hypoglycemia is not as common as such literature suggests. Hypoglycemia is a serious disorder and is not the temporary, uncomfortable feeling referred to in the diet magazines. Functional hypoglycemia, which is common, is a state not supported by any biochemical tests (either a low blood sugar level or an abnormal glucose tolerance test). People with mild trembling, weakness, headache, etc. have tended to claim these symptoms as representing hypoglycemia. However, there may be other factors involved in the symptoms—all of which represent less than true clinical hypoglycemia. Usually these functional hypoglycemic symptoms are accompanied by an extreme emotional or physiological state. These symptoms usually occur between 4-8 hours after eating. The signs will show up more quickly with an ingestion of sugar, pouring into the bloodstream. Even though other nutrients such as protein and fats are eaten, the pancreas secretes insulin in a response to reduce the rapid rise of the blood sugar level. In the normal pancreatic reaction, there is just enough insulin secreted to pull down the blood sugar level to the normal range. However, in functional hypoglycemia, the rise in the blood sugar level is within normal limits, but the problem exists when there is an over-secretion of insulin. The extra insulin pulls out more glucose from the blood than would otherwise be normal in about 4-8 hours after eating. This occurrence on a consistent basis could be an early sign of diabetes. If you do experience any of the clinical symptoms, I would suggest a consultation with your physician. Generally, the standing order would be to initiate a 5 hour glucose tolerance test. However, if you do experience some mild uneasiness, a feeling of mild weakness, etc., the recommended guideline for diet would be as follows: It would be best to combine both protein and fat in each meal. If the symptoms persist, then gradually increase the proportion of protein and fat to the proportion of carbohydrates. In other words, continue to reduce the carbohydrate proportion to a moderate level until the signs disappear. However, do not completely eliminate all carbohydrates, as this will bring about a condition called ketosis. Ketosis is where the body utilizes fats for energy and gives off keto-acids or ketones as the waste product. This is an abnormal state and should be quickly relieved. (The popular diets, Sillman, Adkins, etc., advocate this ketogenic type of diet

for weight reduction.) hypoglycemia is calculated similarly to the exchange list of the diabetic diet. It is divided into five or six meals. Protein is provided at each meal to insure a more slowly assimilation of carbohydrates helping to maintain a normal range. Carbohydrates are distributed evenly. The total is calculated according to the tolerance range of the individual. Usually the protein range is determined at 15-20 percent of the total calories. Then arranged, about 40-45 percent. The remaining calories are distributed as follows: Due to the reduction of foods from the milk group, calcium and riboflavin (vitamin B-2) supplements are given to insure adequate nutrition. Concentrated sweets, because they are rapidly absorbed, will stimulate insulin production. These foods, sugar, sweetened cereals, jellies, honey, syrup, candy, carbonated beverages, etc., are omitted from the diet. Only fruits, vegetables, breads, cereals, grains, and starches should make up the carbohydrate portion of the diet. Also both alcohol and caffeine should be limited or eliminated from the diet as these have negative side effects on blood glucose levels.

Popular authors of diet and health magazines, have claimed that the reason for the increase in appearance of hypoglycemia is related to the increase in the amount of carbohydrates eaten. Yet according to the studies of the USDA, the total amount of refined carbohydrate food (for an individual), has remained at a constant level since 1925. This figure is about 16-17 percent of total calories. However, there is a sharp decline in the consumption of complex carbohydrates (starches, grains, cereals) from 1909 to the present. Another interesting note is that may derive as much as 80 percent of the total calorie intake from carbohydrates, yet hypoglycemia does not appear to be a problem in these populations.

In the mid 1970s both the American Dietetic Association and the American Medical Association presented a special report on hypoglycemia. The report emphasized that there are very similar symptoms occurring in both true hypoglycemia and non-hypoglycemia. Therefore many people with the symptoms, may really just have these reactions temporarily. If you do suspect these symptoms; sweating, weakness, hunger, rapid heart beat, apprehension, nervousness, anxiety, poor concentration, drowsiness, confusion, lethargy, temporary memory loss, blurred vision and

Hypoglycemia is a state in which the blood sugar level is reduced below what is considered a normal, safe range. Aside from the clinical manifestations, hypoglycemia symptoms just may creep into your workout, giving you a less than optimum energy output for your training schedule. Or, if you are unaware, these symptoms can appear at meet time, especially affecting your plans for a PR total. In this month's issue of Nutrition Corner, we'll look at the clinical signs of hypoglycemia and identify its symptoms. We'll also look at how to recognize the signs of low blood sugar, and give you the energy you need and the foods required to avoid these symptoms.

Hypoglycemia is not a disease. Hypoglycemia is a sign or symptom of carbohydrate disorder. Classically, diabetic persons suffer from low blood sugar induced either by not eating an adequate amount of food, or by taking excess insulin. Hypoglycemia is clinically defined as a blood sugar level below 50mg per 100ml of blood. The normal blood sugar level ranges from 80mg to 120mg per 100 ml of blood. Sometimes people often refer to the growling in the stomach as the state of "being hungry". Although there is no direct correlation between the growling of the stomach and being hungry, quite often the blood sugar level reaches about 80mg, or the low level of normal range, at this point. It is around 75-80 mg that the body signals the brain that it is time to eat.

Common signs of low blood sugar include sweating, general weakness, hunger and rapid heart beat. These symptoms are produced by a continuing increase in the production and output of epinephrine. This epinephrine output produces glucose from glycogen. Other symptoms include headache, blurred vision, men-bizarre behavior and, possibly, convulsions. Although these signs may seem dramatic, the next time you feel hungry or have not eaten for 8-12 hours, notice if you have any of these signs to a somewhat milder extent.

There are two types of hypoglycemia. The first is found in the fasting state, and the other is found in the "fed" state. The fasting state is generally found about a 9-hour state is not eaten for about 9 or more hours. This type is viewed as being rare and is generally caused by a malfunction in the pancreas, which produces insulin. The insulin, in turn, removes the glucose or sugar from the blood, storing it as fat tissue. The "fed" state of hypoglycemia is precipitated by the type of food eaten. Generally the problem stems from foods high in carbohydrates. This type is also referred to as the reactive state of hypoglycemia. Usually this reaction is caused by a hypersensitivity of any foods containing concentrated sugar or sweets. Conditions such as metabolic disorders or surgery to the upper intestine area may also bring about this condition.

POWER PROFILE

Ruthi Shafer

by David Krall

It's common knowledge that Mike Bridges has no equal in the sport of women's powerlifting. There is, however, a person on the women's side of the game who can be legitimately compared to the great Gresham. She is Ruthi Shafer of Gresham, Oregon.

Ruthi's ability to lift weights that are competitive with or that surpass those hoisted by other World class female lifters three and four weight classes above her is perfectly inkeeping with the example set by Mike Bridges. Comparing anyone to Mike immediately conjures images of a lifter who is in control at all times and who is capable of displays of strength bordering on the surreal. Ruthi is such a lifter, in a word - phenomenal.

This lifting prodigy got her start five years ago in a bench press contest that a friend was lifting in.

"I didn't want to sit and watch," says Ruthi. "They had a women's division and at that time I was in the superheavy division. I entered and I won. There was a coach there who thought I had some potential. He asked me if I wanted to come for a free workout at his gym and I've been at it ever since."

After a year and a half under the tutelage of Ray Hellage, during which time she exceeded 2 World Records while training only with

fortunately, staying up half the night guzzling fluids and taking salt tablets piled on more pounds than she had anticipated. 11 and a half pounds to be exact, three more than she needed.

"I called Doyle and woke him up and said, 'What?'

"What?"

"I'm overweight."

"He was in my room in about a minute."

"You're overweight; that's impossible. You pig!"

Ruthi lost the three pounds however, and the outcome was fantastic. She made a world record 380 squat, 181 bench and a 418 deadlift for a world record total, beating Diane Franz in the process.

"Doyle pretty much assumed that I would have to settle for second place and so we went into the meet with a relaxed attitude, which was not my norm. I was usually a jumpy, nervous competitor."

The relaxed attitude was the key and coming out of the squats Ruthi knew she had finally arrived.

The combination of the new, calmer approach and her phenomenal strength, signaled the beginnings of her Mike Bridges imitation as she went 385, 181.5, 423.5, 990 at the Worlds in Birm-

ingham, England. Her deadlift was higher than the one Bev Francis pulled in the 165s and her squat wasn't really off Bev's 412.5 considering the 33 pound weight difference.

The 83 Nationals were an even greater success with lifts of 457, 209, 479 and 11146 total which is enough to qualify her as a Master lifter in the men's 132s. Stop and think about that one for a minute. As if that weren't enough, she out totaled the women in the four weight classes above her. Anyone out there with doubts about comparing her to Mike Bridges?

While the 83 Worlds was a disappointment for the women's team, a whole other treat awaited at the hands of the Australians. Ruthi prevailed and lifted 440, 192, 468 for an 1102 total. She wasn't especially satisfied with her lifting but she still out totalled 198 and 424 to winner Gail Mulhall. Her squat and bench world record. 468 to 424 to 1000 entered the record books. While she only out totaled the lifters in two weight classes above her, the apparent ease of her attempts indicate that she had the ability to equal Mulhall.

As with any world class lifter, the strength to rack up impressive totals comes from honest hard work, and not my norm. I was usually a jumpy, nervous competitor."

The relaxed attitude was the key and coming out of the squats Ruthi knew she had finally arrived.

The combination of the new, calmer approach and her phenomenal strength, signaled the beginnings of her Mike Bridges imitation as she went 385, 181.5, 423.5, 990 at the Worlds in Birm-

simply avoids the issue entirely. Even with her successes, and the pleasure she gets from lifting, Ruthi is distressed at what she feels is a lack of leadership in the women's national committee.

"I'm extremely dissatisfied with the way it's been run. I believe that the lifter's priorities are zero. I am so tired of watching the big wigs of this sport dictate policies and ideas that don't need one damn thing and we're going to be in big trouble if we don't get it. I feel that if they chose to get into the administrative part know that it's costly and I don't think they have the right to put the burden of their expenses on the lifter's back."

For Ruthi, an example of this was meeting to vote on drug testing and its financing.

"They maneuvered it so we would vote first on the drug testing and second on the financing. You've got to figure out where the money is going to come from before you're going to do it. We're talking about thousands of dollars, a good portion of which will be coming from men's powerlifting because the women simply can't support themselves," says Ruthi.

"The drug testing bill is another depressing point for Ruthi. I don't think they would have so much flak about the testing if they did allow an acceptable way to do it and the women to keep their dignity," she says.

Currently, the women must supply a urine sample in a room that only contain many other people, although only two were present at the last Worlds.

"What they are doing now is extremely dehumanizing. I am waiting for someone to take it to court. I have spoken to my attorney and he said that it's a violation of constitutional rights. It's dehumanizing and humiliating, and those women who sit out there and say, 'we want testing have never been through it,' says Ruthi.

"I think we need to weigh the cost of it. I don't think it's changed the people who win or the people who lose. I think that will remain the same."

Ruthi also points out what she feels are good things about the sport, especially the media coverage.

"Television is interested in what we are doing. We are gaining a tremendous amount of media exposure."

Lifting has also done great things

for Ruthi aside from the physical strength and trophies. She has been able to defeat her past weight problem and assure continued good health. She feels her character has improved also.

"I like the idea of becoming a stronger person. I'm an avid feminist. That was another way to express my ideas about women, that we can and will do anything we want."

Ruthi would like to believe that she has contributed to the advancement of women's powerlifting and is helping make things better for the World Champions of the future. Her public image is very important. She believes she feels it is a vital to project a positive image of the sport. She urges other women lifters to do the same.

"I think every woman lifter should realize that and understand that they represent the sport whether it's a local, regional or national meet."

There are some specific people in the sport whom Ruthi admires greatly. Paul Wernick, Paul Adams, and Gail Mulhall. "Paul is always such a gentleman and a true competitor."

Doyle Kennedy is, of course, another favorite. "I admire Doyle a great deal and respect him," Diane Franz. "Truly a lady of guts and someone I've respected since I got into the sport." John Gamble, probably one of the most charismatic lifters I've seen on stage or off. Just a sweetheart. Too bad he just got married."

And finally, Mike Bridges, the lifter who, whether she will admit it or not, she greatly resembles in ability and accomplishment.

"Mike Bridges is a hard worker and he does things that people said could never be done, and I admire that in anyone. He is always a hero wherever her goes and people surround him. He can hardly get a breath of air, yet he is always considerate."

Ruthi Shafer...a women powerlifter destined to be recognized as one of the sport's leading pioneers, and one of its all time greats. Certainly the only woman who can be compared to Mike Bridges in ability and character, and one of the very few who can be compared to him regardless of sex. On the sport of women's powerlifting, Ruthi has said, "The heroes are just emerging. One hero is in plain view...she's the Rose from Oregon."

Upcoming National Meet Qualifying Totals

	114	123	132	148	165	181	198	220	242	275	SHW
Men's Contests	925	1074	1165	1405	1603	1714	1824	1912	1956	2066	2022
1984 Senior Nationals	860	1019	1120	1383	1535	1669	1736	1870	1900	1967	1906
1984 Junior Nationals	799	898	1036	1201	1366	1477	1598	1609	1631	1653	1675
1984 National Collegiate	835	935	1030	1210	1350	1460	1525	1575	1620	1640	1700
1984 ADFFA Men's	650	800	900	1075	1175	1275	1420	1430	1440	1450	
1984 ADFFA Collegiate	97	105	114	123	132	148	165	181	198	SHW	
Women's Contests	518	562	606	661	705	744	772	794	804	816	
1984 Women's Nationals	419	463	507	551	595	639	661	683	699	716	
1984 National Collegiate	463	496	535	568	601	661	716	766	821	865	
1984 ADFFA Women's											



Down at the Bottom...Ruthi Shafer with her World Record 440 squat done at the Women's Worlds in Australia. Photograph by Jim Lewis.

lbs. A realistic goal would be 720-730 for your next meet.

Another training technique I use is to only wrap for the heavy set of the workout. By doing most of the squats without wraps I get a real kick from them when I do use them. I also do not use a tight lifting suit until Week Nine. The warm ups are not meant to be taxing, and are only designed to get you ready for the heavy set.

I only squat to train my squat, but when a meet is not close you may include front squats and good mornings for a change.

Yours for strength

Paul Wrenn
402 Hawkins Rd
Clarksville, Tenn 37040.

WORKOUT of the Month

Paul Wrenn's 12 Week Squat Cycle
Multi-world record breaker in the squat, Superheavy Paul Wrenn, seen below at the 1982 Seniors, explains his squatting philosophy.

As far as I am concerned the squat is the most taxing lift in Powerlifting. If it's really worked hard, one workout a week is plenty. My lower back gets too fatigued with more than one squat or deadlift workout per week.

Another notion of mine that might be considered controversial, is that I hardly ever do singles when peaking for a meet. I feel heavy, low reps sets really build the power. For example, let's say your best squat is 700

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Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
135 x 5	155 x 5	175 x 5	195 x 5	215 x 5	135 x 5	155 x 5	175 x 5	195 x 5	215 x 5	215 x 5	135 x 5
225 x 4	245 x 4	265 x 4	285 x 4	305 x 4	285 x 4	255 x 5	275 x 5	295 x 5	315 x 5	315 x 5	225 x 3
315 x 3	335 x 3	355 x 3	375 x 3	395 x 3	325 x 4	345 x 4	365 x 4	385 x 4	405 x 4	405 x 4	315 x 3
405 x 2	425 x 2	445 x 2	465 x 2	485 x 2	415 x 3	435 x 3	455 x 3	475 x 3	495 x 3	495 x 3	405 x 2
500 x 6	520 x 5	540 x 5	560 x 4	580 x 2	505 x 2	525 x 2	545 x 2	565 x 2	585 x 2	585 x 2	505 x 1
					600 x 3	620 x 3	640 x 3	660 x 2	680 x 2	650 x 1	570 x 1

Attempt at Meet: (1) 640 (2) 680 (3) 720



Last month, we spoke a bit about the accomplishments of Ray Rigby and his background in a variety of sports. One of the nicest things I've noticed in many world class athletes is their aptitude for different sports. Ray has been successful as a short putter, olympic lifter, wrestler, and powerlifter, and I believe that he'd do a pretty good job on the tennis court too if given a chance.

He was able to improve quickly in the powerlifting arena, not because he had been a good olympic lifter, but rather, because he is an athlete of great ability. It should be more obvious, year by year, that there is a world of difference between olympic lifting and powerlifting, with the only real similarity being that weights are used to demonstrate the skills of the sport in both cases. Ray's vast quantities of coordination, strength, neurological firing ability (manifested as explosiveness) and mental tenacity have taken him to his current position, more than the fact that he used to be an olympic lifter, especially if you remember that he had a thirteen year retirement.

I have to admit that we spent a great deal of time b.s.ing once Ray arrived. In retrospect, all of the conversation, other than that related to manna's-have known, etc. was constructive and beneficial. The first order of business was training, but that need some planning, and post session evaluation, so much time was spent hunkered around the hitchen table, most often with food laden plates before us and admonishments that "the two of you are gonna get fat" ringing in our ears. Ray has been training twice per week for the last year with good results. Although we've thrown this around before, the logic behind this approach is that if one is training hard enough and with the necessary intensity, then one needs to get lots of rest if progress is to be steady, and, for most powerlifters, if one is to avoid injury. Also, we are involved in a sport, and the skill for that sport requires the lifting of a very heavy weight for one repetition, and while lives and throats will build strength, they will not, in most cases, prepare you for maximum single attempts, thus we emphasize lots of singles, although few of these are limit or maximum attempts. I once mentioned a study done in Bulgaria noting that any competitive lifts done with less than 80% of maximum weight did not resemble the lift done with close to max weight, when measuring motor patterns and other physiological variables. One may not do well with a steady diet of max singles, but singles at 80-90% max must be done on a regular basis to develop the skills necessary to powerlift competitively. Many lifters are disappointed when their 500x3 equates to only 520x1 in a meet, rather than the expected 550x1. Hey, it's a different lift at that point. Same for the suit and wraps. You need to lift in a suit, not your tightest suit but a suit none the less, a good deal of the time, not only in order to get used to it, but more importantly, to develop the skills needed to squat in a suit come meet time.

More From Ken Leistner



Dr. Ken Deadlifts 573...while training with Ray Rigby in Ken's garage gym, he hit this lift, as mentioned in his column this month. Kathy Tate photo.

Usually, it would go 220x6, 330x3, 440x2, 550x1, and then the top set of six. The Saturday, or heavy squat workout, went to a top set of three reps or five reps earlier in the yearly cycle, then to doubles, doing one or two heavy doubles for the heavy day. As the meet approached, this was cut to singles, so that his final heavy squat session went: 220x6, 330x3, 440x2, 550x1, 660x1, 770x1, 810x1, 865x1. A suit was worn on the heavy day only, and it was put on after the first three warm-up sets. On Ray's first heavy day here in New York, he went up to 837 and it was done explosively, with the slightest break in form. Ray twisted it for one heavy set of six. Warmup sets were done for six to one rep.

four of us spotting the attempt. At all times, he was in control, and this too, comes with training two times per week. If you have to get it up mentally three to five times per week, I honestly believe that you lose your edge. If you only have to go heavy once or twice per week, the disciplinarian should have no trouble controlling the weights, and controlling the tempo of his or her workout. And remember this: once you're in a meet, if your mind is right, you will be on automatic pilot. You will do what you're used to doing. If you're used to doing everything right, with confidence and concentration, you'll most likely do it. If you're a bit beat most of your training time, and you often can not fully lock in mentally, don't expect miracles on meet day.

At the Worlds the Supers were read the riot act by Head Judge Bill Jamison, who, as I am told, essentially said that they would have to squat deep and clean, no gifts for the big boys. Additionally, there were only six Supers and they lifted as one session, in my opinion a poor piece of planning by the promoters. These giants take more preparation time than smaller lifters and are not often in the cardiovascular shape that the lighter men are in. They all felt rushed and it showed in the lifting. Ray wound up timing himself, wrapping, etc., and was pretty cautious in the squat. He hit 738 and 804 for his first and third lift at 826 was, for him, a bit better. However, he twisted slightly for a two rep decision. Ray does not make excuses, never has, but I feel that with another attempt, perhaps two attempts, he would have blown the 826 away and could have done at least 837-848 based on his training.

I squat a bit differently than Ray, in that I only go once per week. Ray, too, has had knees, but his focus on pushing my legs through most of the cardiovascular work most of the time, so my knees are usually tender. Although Ray takes scheduled lengthy walks for his cardiovascular improvement, I run, row, and sprint for the subway daily, thus my chronic chondromalacia patellae and tendonitis are active 90% of the time. I squat only on the Saturday, or heavy session, and will go for 5-6 reps early in the year, and then singles or doubles as a meet approaches. I will often take a backoff set of 8-15 reps, depending on the state of my knees. If I squat two times per week, no matter how light the other day is, I'm limping, after perhaps three weeks of this. Typically, I'll take 154 for two sets, and at times, three sets of 6 reps to warm up, then go to a triple with 220-242, and go immediately to singles, finishing with my top single or double for the day. If it's early in the year, I'll do the same bunch of singles, and go to 6 if that's my top set, but I'm of the belief that you need to save it for the big one or two sets of the day, and my knees are a constant reminder to limit the work. My Squat with Ray was 154x6x2, 231x2, 315x1, 396x1, 462x1, 501x1. No

continued on next page

backoff was done for reasons soon to be discussed.

For assistance program, Ray's early season program included a light warmup set, and then one or two heavier sets of leg curls and calf work. I never do anything else for my legs/squats, primarily because experience has shown me that my knees can't take it. That's reality, baby, and I'm less happy about it than most, but I enjoy walking too. For most, a few leg curls and calf raises will be fine. I do standing calf raises on a regular basis because they involve more tissue than the seated variety, and because I'm determined to get my calves over 14 1/2 inches. All really small and/or short football players are assumed to have big thighs and calves, the belief being that they would not have made it otherwise. Being the exception to that dictum and wanting to add a little symmetry to my 25 inch thighs and 13 inch calves, the calf machine raises have served the dual purpose of filling out the leg while establishing a stable cushion for the squat.

Both Ray and I have done lots of crunches on squat days. I've barped about the importance of abdominal work for lifters, and the stability given to do these, but it makes no sense to do these prior to squatting or DLing. If you weaken or fatigue the ab area before loading on the weight in the competitive lifts, you have got to suffer for it. After the squats we do crunches or other rectus abdominus work, and after DLs it's side bends, which for me means doing them on my "other" or Tuesday training day. Ray had never before done ab work, and after a week of crunches and side bends, and an increased awareness of diet, found himself more steady under heavy weights when squatting, enjoying a drop in bodyfat percentage, and having fewer lower back problems throughout the year.

Ray DLs twice per week, one though the Tuesday session is no more than a few triples with 220. On his heavy day, again on Saturday, he follows his heavy squats and benches with his heavy DLs. His attitude explains mine in that one bar to squat and DL together on one day, so get used to it in training. Even with the rotation method DLs are run together, so that the low back, hips, and thighs can get maximum stimulation, and then maximum rest. Early in the year the reps are higher, but I never recover more than four or five per set because most lifters have technique breakdowns while doing reps. Most often bouncing the weight from the floor, failing to set up properly at the bottom, or rushing the reps and failing to come erect at the top of the lift. As the meet approaches, Ray will single. I like to do a few [2-4] singles with perhaps 30 seconds on my top "set". I believe this will give a very good conditioning effect specifically for the DL, and Jim Cash originally influenced me with this idea. For a good part of the training calendar, I will do my squats on Saturday, and do my DLs on Tues-

our last workout together, it went 220x2, 319x1, 407x1, 573x1. I stopped after the second set, and then pushed really heavy weights in a long time, and did not want to risk injury. It was going to go heavier, my jumps would have differed a bit, but the sets still would have been limited to 5-6, as I do not believe you need to be lifting too many DLs in training, especially if you squatted heavily immediately before. I follow my DL workouts with side bends. Heavy, for 2 sets of 15 reps to each side, each side being worked for the required reps before working the other side. I have found that doing heavy side bends is oblique to the point that I don't DL well if I do them

and don't plan on a big night out following the workout. Warm milk and an early bedtime are the doctor's recommendations for that one, and don't expect more than three weeks of progress before coming in. Thus, when Ray was he called it not take my usual warmup backoff set in the squat because the heavy squats were followed by heavy DLs. I don't have Ray's DL schedule in front of me but on Wed Oct. 26th, I DLed as follows: after doing some very hard backoff set for 6-12 reps in the squat after the heavy ones, and an assistance exercise or two for the back, if you need it after DLs. If you squat heavy, take a wicked backoff set, and then try to DL heavy day prior to the Worlds, and

that it was in another life that I actually was able to bench more than 330 or so. To compare and contrast one week ago, I tore the tendon of the right pec minor from the humerus, one of the more painful lifts. I've never had, and certainly one that will once again shelve my bench press for awhile, so on in no mood to get through a benching session, we can put a full year long program together, and that will satisfy the recent requests for a long term approach to that kind of training. We'll have to put off tales of some of the things that made Ray's trip enjoyable, although I will mention that when we went to a restaurant, the well known

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two or three days prior to pulling. I also follow DL workouts with calf raises, and thus wind up working this bodypart two times per week, and honestly, in an effort to make it up to the covered 14 1/2 inch mark, I occasionally wander into the garage for an extra session during the week. Actually, I'm exaggerating, my calves are almost up to the 14 1/2 mark. At the Worlds, I felt that Ray would do over 800. Unlike most of the very massive men, he enjoys DLing, and is good at it, one can't say that. Ray has a good amount of previous experience, and he took an easy 694 opener. Ray likes big jumps and was planning on 760

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By Bob Morris

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Metropolitan Cafe on First Avenue, Ray's wit and charm brought most of the waitress over to the table. His ability to eat more than the average person, and his size, are always attention grabbers. The Australian government might consider an ambassador's post for big Ray, he's that likeable.

I'm also glad that Fred Hatfield finally won the World title. That's not to say that I'm glad Joe Ladnier lost. Joe is a fine lifter, and I also would have been pleased if he had won. Joe is a fine young Turk, with many years of fine lifting ahead of him, and Fred wanted to admit it. Whether Fred gains plenty of titles. Whether like him and me are getting a bit long in the tooth, and don't have the ten or fifteen years left that we used to talk about, and Fred has been close on so many occasions, that it was a joy to see him get what he's wanted for so long. Did all of you take the time to thank the members of the World team, and all of those who helped out (especially Doyle who did such a great coaching job) for representing our country and our sport in such a fine manner? Until next month, an enjoyable holiday season to all of our valued PL USA readers, and lifters everywhere.

P.S. Injury Update: on December 3rd, I tore the tendon of insertion of the right pectoral minor muscle. I was distracted during the workout by problems related to my son, and never really warmed up to the extent that my body felt ready for heavy work. A 308 bench press was sluggish, so rather than jump to 325, I decided to pass the final set or two, then, almost as an afterthought, I decided to take 308 again. I committed to 314, which seemed in the groove, but felt a great stab of pain, and heard that familiar sound like a tearing piece of cloth, indicating that I had ripped something. Just before the bar hit my chest, the pec tendon tore, and the weight came crashing down on me. "Another fine mess".

Cold packs were applied immediately for 20 minute periods, 20-40 minutes between applications. This continued for 48 hours, at which point, cold application was alternated with 8 minutes of ultrasonic therapy (oh, the advantages of having all the equipment you need laying around the house). This continued for another 48 hours. Slow, passive range of motion exercise was instituted as soon as movement was possible (approximately 72 hours post injury) until active range of motion could be instituted. Ultrasonic therapy was continued two times per day for another 48 hours, and moist heat was applied prior to all movement sessions. Five days after the injury, 20 repetitions were performed in the bench press with a 44 pound bar. Butazolidin was ingested orally for four days. Ray Rigby suggested that Depo Medrol be injected into the injury site, but, as of this writing, it was not yet available to me.

As with all injuries, conservative but prompt and attentive care should reduce the long term limitations caused by lifting mishaps.

and don't plan on a big night out following the workout. Warm milk and an early bedtime are the doctor's recommendations for that one, and don't expect more than three weeks of progress before coming in. Thus, when Ray was he called it not take my usual warmup backoff set in the squat because the heavy squats were followed by heavy DLs. I don't have Ray's DL schedule in front of me but on Wed Oct. 26th, I DLed as follows: after doing some very hard backoff set for 6-12 reps in the squat after the heavy ones, and an assistance exercise or two for the back, if you need it after DLs. If you squat heavy, take a wicked backoff set, and then try to DL heavy day prior to the Worlds, and

that it was in another life that I actually was able to bench more than 330 or so. To compare and contrast one week ago, I tore the tendon of the right pec minor from the humerus, one of the more painful lifts. I've never had, and certainly one that will once again shelve my bench press for awhile, so on in no mood to get through a benching session, we can put a full year long program together, and that will satisfy the recent requests for a long term approach to that kind of training. We'll have to put off tales of some of the things that made Ray's trip enjoyable, although I will mention that when we went to a restaurant, the well known

As with all injuries, conservative but prompt and attentive care should reduce the long term limitations caused by lifting mishaps.

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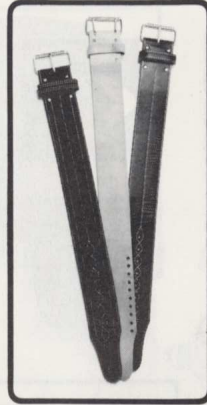
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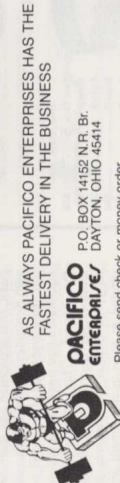
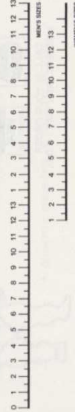
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STARTIN' OUT

A special section dedicated to the beginning lifter

Overtraining & Powerlifting

by Mike Boyle

Two questions consistently plague both advanced and novice lifters. The first question usually deals with how much training is enough. This inquiry as to how much training is too much. Unfortunately, research has not delivered into these questions sufficiently. Research on optimal training loads and optimal recovery periods has not been performed to the best of the author's knowledge. What does appear to be empirically evident is that more powerlifters are overtraining than undertraining.

In order to understand overtraining a definition must be supplied. Overtraining in the simplest terms is the repeated application of an overload before complete recovery has occurred. These repeated overload applications eventually lead to staleness, injury and decreases in strength. Al Stark in "Abuse of the Overload Principle: A Physiological Basis for Cycling" states "proper strength training involves the proper application of overload and rest periods and, the timely blending of various training systems but without overtraining." I feel they do not make good use of recovery time. This lack of attention to recovery starts the powerlifter on the road to overtraining.

Overtraining has simple and complex causes. An oversimplified cause of overtraining is a high volume of lifting (multiple sets) combined with a short recovery period. This is often seen in novices working on a three workout per week schedule. Another cause of overtraining found in the more advanced lifter is poor distribution of body part work in the four day per week schedule. Leisner has made reference to this in his column but the information merits repeating. Attempting to deadlift and squat on Monday and then perform upper back and lat work on Tuesday only invites fatigue.

The more complex causes of overtraining relate to the research done in the area of strength development. Weight training research has been performed on predominantly untrained subjects and, resulting, has yielded conclusions which are not applicable to the middle level or high level competitive lifter. Stark explains untrained persons invariably experience rapid and nearly linear increases in strength no matter what system they are using... attempting to apply training techniques tested on beginners to experienced athletes and inviting overtraining, staleness and

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Know the rules...understand your sport!!

learned through empiricism that the advanced trainee needs quality and not quantity. However, the same questions still arise. How much is enough? How much is too much? Although the answers to these questions are highly individual, athletes can monitor some basic signs and symptoms to help determine if they are overtraining, including:

- 1) Elevation of morning pulse rate 6-10 beats per minute. [Note: The lifter should determine the morning resting pulse rate during a non-competitive period and not during a heavy cycle. The lifter should also take the morning pulse rate at the same time and in the same anatomical position. (i.e. sitting, lying)]
- 2) Loss of skin color, paleness
- 3) Frequent small aches or pains
- 4) Loss of strength
- 5) Loss of desire to train (Chu, 1983)

Regardless of the causes or symptoms, most athletes are searching for solutions to the problems caused by overtraining. Cycle training and the heavy-light system are often utilized to avoid overtraining but overtraining is possible even while using these systems. The simplest suggestion to lessen the likelihood of overtraining is to exercise good judgment and use common sense. Don't be afraid to skip a workout or to go light on a projected heavy training day. Also don't try to maintain competitive condition a year round. Incorporate periods of active rest and rebuilding into the yearly schedule.

The bottom line on overtraining is best expressed by Volkov, who contends that application of proper load before complete recovery has taken place only aggravates an already bad situation and will eventually lead to overtraining. The only way the powerlifter can avoid overtraining is by paying as much attention to recovery as he or she would to lifting.

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POWER-RESEARCH

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The only thing constant in the universe is change!

This statement, made years ago by a wise man, profoundly sums up our very existence. We do, in fact, live in a world significantly characterized by change. Thinking back briefly to what almost any aspect of your life was, even a few years ago, will readily convince you of this fact. Indeed, change is one of the most crucial elements in our lives.

The essential point here is that change is also one of the most important factors to consider in the design of any weight training or powerlifting program. Perhaps the most effective method for avoiding overtraining (which is so prevalent among weight trainers and powerlifters) is to properly utilize change in the training program. The purpose of this article this month is to present the ways in which change can be used in your training to both maximize your progress and to minimize any overtraining or injury problems you might have.

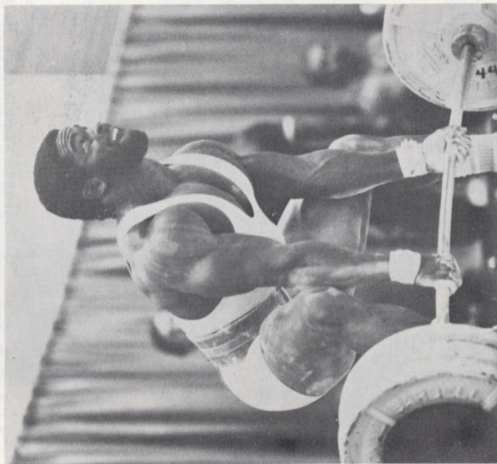
I. CHANGE IN TRAINING VOLUME AND INTENSITY.

Based on my experiences over the years it has become evident to me that most lifters believe that somewhere out there is an 81/2x11 sheet of paper listing the sets, reps, exercises, etc. of the 'perfect' training program (for example, do X' every Monday, Wednesday and Friday, etc.). They are convinced that someone (whether it is a top name powerlifter, 'bodybuilder', or whatever) knows this top secret program and their job is to try, by any means possible, to discover it. They are certain that this program, if they can find it, would be the answer to their prayers. Indeed, they often get so caught up in this quest that they spend an inordinate amount of time, money, etc. trying to uncover this 'perfect' workout.

Well, the joke is unfortunately on them! No fixed workout, no matter how perfect, will work for very long. In fact, any training program that does not effectively and systematically utilize change will eventually lead to overtraining, lack of progress, injury, etc. Overtraining is all too common to weight trainers everywhere. Some of the symptoms of overtraining are loss of body weight in the body mass; lack of progress, reduced strength/power levels, fatigue, loss of appetite, increased susceptibility to injury and illness, etc. Most people have been overtrained at least once in their lifting careers, so let's look at what's advised in preventing overtraining.

In the 1930s Selye developed the

the Biomechanics of Powerlifting by Tom McLaughlin, PhD, Auburn University, AL



Top Lifters...like 220 pounder Tony Phair, instinctively know that changing their routine is one way to avoid plateaus and keep gains coming.

General Adaptation Syndrome' that described the way an individual adapts to stress during his lifetime. Expanding on this, Garhammer (see ref 1) has presented the basic concepts of the 'General Adaptation Syndrome' in terms of what happens during training to the powerlifter, weight trainer, or athlete. To quickly summarize, there are 3 distinct phases of adaptation that a lifter goes through during the course of a weight training cycle: (1) the first phase (alarm stage) is the initial response to the new weight program. During this first phase there is typically a drop in strength/power levels due to the typical associated soreness and stiffness that accompany the first few days of any weight program. (2) the second phase (resistance stage) is where the lifter positively adapts to the weight program and increases his strength/power levels. This is when the program seems to work quite well and progress continues uninterrupted. (3) The third phase (exhaustion or 'overtraining' stage) is where the total stress of the weight training

program becomes too much to handle and the lifter's progress stalls or diminishes. It's also important to note that other stresses besides the physical stress of the training program itself can sum to push one into overtraining (like the stresses involved in work, school, personal life, environment, etc.). Obviously, what we are looking for is a way to avoid the third phase of the 'General Adaptation Syndrome' (the overtraining or exhaustion stage) and keep improving our strength and power levels. Well, in general, the way to do this involves properly incorporating change into the training program. To do this one must somehow change some of the characteristics of any training program, such as volume; the total amount of work done (approximately estimated by the total reps done); intensity; the weight program and increases his strength/power levels. This is when the program seems to work quite well and progress continues uninterrupted. (3) The third phase (exhaustion or 'overtraining' stage) is where the total stress of the weight training

Parts of this month's article are adapted from Dr. McLaughlin's comprehensive new book 'BENCH PRESS MORE NOW: Breakthroughs in Biomechanics and Training Methods', based on his years of research on the bench press. To reserve your copy of the first printing of this book, to be shipped out in March, order now by sending \$12.00 plus \$2.00 postage and handling to Dr. Tom McLaughlin, Post Office Box 507, Auburn, Alabama 36830.

Biomechanical studies that I have conducted on free weight exercises, like the bench press for example, indicate that luckily it doesn't take much of a change to quite dramatically alter muscle involvement in an exercise. You can prove this to yourself on your own in a more practical way by noting the change in grip width makes in a bench press. It is fortunate that we can vary our bench press grip, squat stance, etc. relatively minimally and change the muscle load sharing quite significantly. We all need to do this periodically or else completely substitute an exercise with a suitably related but different one.

Obviously, much more biomechanical research needs to be done here in defining how much change is needed and how often it is needed in the exercises used in a training cycle. However, there is no question in my mind of how important it is to dramatically change the biomechanics of the exercises you use. Particularly in complex areas of the body like the shoulder joint, variety is indeed the spice of life. Whether you change the way you do an exercise by altering the stance, grip, bar placement, the movement itself, speed of the motion, etc. or periodically use a different exercise altogether, the key is to change. To me, one of the reasons that the bench press is the lift that most people have the greatest trouble improving in, is that there is usually so little change in the way

they bench press. Usually, when I teach, beginning weight training classes, there are many who actively resist even trying one of the many different styles of bench pressing available (mainly because they are so worried they won't be able to lift as much). The best way to improve a stale bench press is to invoke the many possible changes available in this exercise. To do so, as most successful bench pressers have learned, is to improve your bench press significantly. Don't forget that the exercises you use for developing the key muscles involved in the bench press (triceps, deltoids, pectoral major, etc.) need to be similarly changed periodically as well. More on this topic in future issues.

ANNOUNCEMENT...all candidates for the 1984 election to the U.S.P.F. office of President and Treasurer (a person may run for either office but not both) must declare their candidacy in writing via letter to Powerlifting USA Magazine, Box 467, Camarillo, California 93011 with a postmark no later than 31 January, 1984 in order to be eligible for the election which will take place during the USPF National Committee meeting held prior to the 1984 Senior Nationals in Dayton, Ohio. Eligible candidates will be announced in a subsequent issue of Powerlifting USA.

Sex Discrimination?...Louie Simmons brought up a point...he wonders if the fact that the Women's Nationals have mandatory drug testing in 1984 and the Men's only have drug testing on a voluntary basis amounts to sex discrimination. He has talked to legal sources about it, who feel this may be the case. The men and women testing issues were voted on separately by the U.S.P.F. National Committee in last year's meeting.

Bob Edmanson, gets a vote of confidence from Bruce Cahill and Don Ackerman, who (speaking on behalf of many East Coast lifters) express their appreciation for Bob's efforts in sponsoring quality contests in the Virginia, Delaware, and Washington D.C. area, enduring the stress of directing a meet, and promoting powerlifting across the country.

Well, time for a change myself... from writing this article, that is. Until next month, good lifting.

Reference 1: Garhammer, J. 'Periodization of Strength Training for Athletes', Track Technique, 73: 2398-2399, 1979.

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Reference 3: Hakkinen, K., and Komi, P.B., 'Effect of Different Combined Concentric Muscle Work Regimens on Maximal Strength Development', Journal of Human Movement Studies, 7:33-44, 1981.



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Next:

5. General warmup. Some short vigorous movement, ie: short sprint; (2-3 minutes of short sprint, 1/2 effort); jogging, stationary bike, etc. Then:
6. Stretching. Please note I prefer to stretch after a short vigorous motion. Some may prefer to switch steps 5 and 6 then.
7. An easy isometric in the movement to be done. Isometrics great-ly raise muscle temperature.

Now we are ready to proceed. Let's follow an assumed session in which you are doing singles in the following lifts: overhead press, curls, row, benches, deadlifts and squats.

This is the order I prefer, however the sequence may vary to meet your own preferences.

Overhead Press: 5x40%, 3x60%, 1x80% of previously best; go right to new limit.

Each attempt should be power cleaned, if possible, so as to further warmup other large muscle groups.

Then:

Curl - Singles only 50%, 70%, 90%, then max.

Row - same as curl.

Bench - single only but 40%, 60%, 80%, 90%, then max.

Deadlifts - singles only 25%, 50%, 75%, 90%, then max.

Squat - same as deadlift.

Almost no rest should be taken except between max, then about 1 1/2 minutes. Each exercise should serve as a continual warmup for the next one if done in this manner.

If you are a competitive power lifter, once a month you should do your singles under meet conditions. Warmups, then 3 singles, squat, bench, deadlift only. Choose starting weights, use wraps, suit, take time between lifts etc., exactly as you would in competition.

Do this and you'll have much more endurance for the deadlift and will have far fewer surprises in competition.

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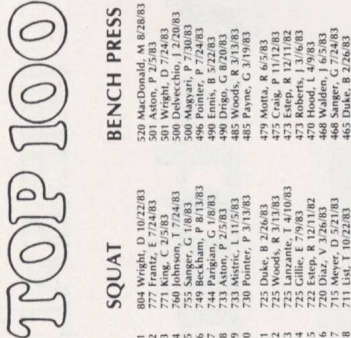
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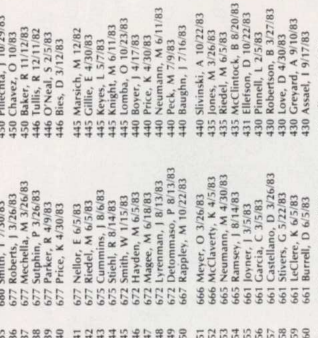
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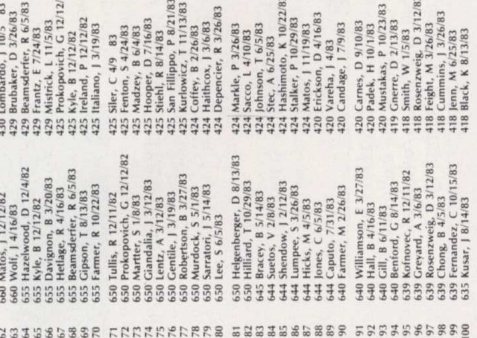
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4	755 Sanger, G 1/8/83	500 Magyar, P 7/30/83	744 Feght, M 10/1/83	1934 Frantz, E 7/24/83
5	749 Beckham, P 8/13/83	496 Pontier, G 3/13/83	738 Bush, B 3/12/83	1930 Pontier, P 3/13/83
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8	733 Adams, P 2/5/83	485 Woods, G 7/24/83	725 Hilliard, T 10/29/83	1873 Shepard, R 3/26/83
9	733 Adams, P 2/5/83	485 Woods, G 7/24/83	722 Tullis, R 12/11/82	1873 Adams, L 11/30/83
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13	725 Duke, B 2/26/83	473 Eskop, R 12/11/82	705 Borer, S 4/17/83	1830 Borer, S 4/17/83
14	725 Duke, B 2/26/83	473 Eskop, R 12/11/82	705 Borer, S 4/17/83	1830 Borer, S 4/17/83
15	725 Duke, B 2/26/83	473 Eskop, R 12/11/82	705 Borer, S 4/17/83	1830 Borer, S 4/17/83
16	715 Meyer, D 5/21/83	468 Sanger, G 1/8/83	705 Barry, S 3/12/83	1829 Fargan, G 1/8/83
17	711 Liu, T 10/22/83	465 Duke, B 2/26/83	705 McClaverty, K 4/5/83	1818 Tullis, R 12/11/82
18	711 Liu, T 10/22/83	465 Duke, B 2/26/83	705 McClaverty, K 4/5/83	1818 Tullis, R 12/11/82
19	711 Liu, T 10/22/83	465 Duke, B 2/26/83	705 McClaverty, K 4/5/83	1818 Tullis, R 12/11/82
20	711 Liu, T 10/22/83	465 Duke, B 2/26/83	705 McClaverty, K 4/5/83	1818 Tullis, R 12/11/82
21	710 Borer, S 4/17/83	465 Collins, M 7/31/83	700 Ginn, S 6/19/83	1802 Naylor, E 2/19/83
22	710 Borer, S 4/17/83	465 Collins, M 7/31/83	700 Ginn, S 6/19/83	1802 Naylor, E 2/19/83
23	700 Takala, B 7/16/83	463 Silver, R 4/2/83	700 Ginn, S 6/19/83	1802 Naylor, E 2/19/83
24	700 Takala, B 7/16/83	463 Silver, R 4/2/83	700 Ginn, S 6/19/83	1802 Naylor, E 2/19/83
25	700 Takala, B 7/16/83	463 Silver, R 4/2/83	700 Ginn, S 6/19/83	1802 Naylor, E 2/19/83
26	694 Dyer, R 2/5/83	462 Dyer, R 2/5/83	699 Helgenberger, D 8/13/83	1790 Gillie, E 3/27/83
27	694 Dyer, R 2/5/83	462 Dyer, R 2/5/83	699 Helgenberger, D 8/13/83	1790 Gillie, E 3/27/83
28	694 Dyer, R 2/5/83	462 Dyer, R 2/5/83	699 Helgenberger, D 8/13/83	1790 Gillie, E 3/27/83
29	694 Dyer, R 2/5/83	462 Dyer, R 2/5/83	699 Helgenberger, D 8/13/83	1790 Gillie, E 3/27/83
30	688 Walden, E 6/5/83	451 Shepard, R 3/26/83	683 Hernandez, L 6/29/83	1769 Walden, E 6/5/83
31	683 Barnes, L 6/83	451 Shepard, R 3/26/83	683 Sanger, G 1/8/83	1765 Jones, M 3/26/83
32	683 Barnes, L 6/83	451 Shepard, R 3/26/83	683 Sanger, G 1/8/83	1765 Jones, M 3/26/83
33	683 Barnes, L 6/83	451 Shepard, R 3/26/83	683 Sanger, G 1/8/83	1765 Jones, M 3/26/83
34	683 Barnes, L 6/83	451 Shepard, R 3/26/83	683 Sanger, G 1/8/83	1765 Jones, M 3/26/83
35	680 Smith, W 7/30/83	450 Pillechia, J 10/29/83	680 Robinson, L 6/4/84	1760 Lanzetta, L 4/10/83
36	677 Roberts, J 3/26/83	450 Chavez, O 10/83	680 Lombardo, O 10/23/83	1758 Helgenberger, D 8/13/83
37	677 Roberts, J 3/26/83	450 Chavez, O 10/83	680 Lombardo, O 10/23/83	1758 Helgenberger, D 8/13/83
38	677 Roberts, J 3/26/83	450 Chavez, O 10/83	680 Lombardo, O 10/23/83	1758 Helgenberger, D 8/13/83
39	677 Roberts, J 3/26/83	450 Chavez, O 10/83	680 Lombardo, O 10/23/83	1758 Helgenberger, D 8/13/83
40	677 Roberts, J 3/26/83	450 Chavez, O 10/83	680 Lombardo, O 10/23/83	1758 Helgenberger, D 8/13/83
41	677 Roberts, J 3/26/83	450 Chavez, O 10/83	680 Lombardo, O 10/23/83	1758 Helgenberger, D 8/13/83
42	677 Ruedel, M 6/5/83	445 Masich, M 12/82	677 Downs, M 6/8/83	1736 Takala, B 7/16/83
43	677 Ruedel, M 6/5/83	445 Masich, M 12/82	677 Downs, M 6/8/83	1736 Takala, B 7/16/83
44	677 Ruedel, M 6/5/83	445 Masich, M 12/82	677 Downs, M 6/8/83	1736 Takala, B 7/16/83
45	672 Smith, W 7/15/83	445 Knight, M 6/11/83	672 Leclere, K 4/2/83	1735 Bass, J 9/4/83
46	672 Smith, W 7/15/83	445 Knight, M 6/11/83	672 Leclere, K 4/2/83	1735 Bass, J 9/4/83
47	672 Smith, W 7/15/83	445 Knight, M 6/11/83	672 Leclere, K 4/2/83	1735 Bass, J 9/4/83
48	672 Smith, W 7/15/83	445 Knight, M 6/11/83	672 Leclere, K 4/2/83	1735 Bass, J 9/4/83
49	672 Smith, W 7/15/83	445 Knight, M 6/11/83	672 Leclere, K 4/2/83	1735 Bass, J 9/4/83
50	672 Smith, W 7/15/83	445 Knight, M 6/11/83	672 Leclere, K 4/2/83	1735 Bass, J 9/4/83
51	666 Meyer, O 3/26/83	440 Baurhaug, J 7/16/83	670 Neumann, M 6/11/83	1725 Cain, T 7/30/83
52	666 Meyer, O 3/26/83	440 Baurhaug, J 7/16/83	670 Neumann, M 6/11/83	1725 Cain, T 7/30/83
53	666 Meyer, O 3/26/83	440 Baurhaug, J 7/16/83	670 Neumann, M 6/11/83	1725 Cain, T 7/30/83
54	666 Meyer, O 3/26/83	440 Baurhaug, J 7/16/83	670 Neumann, M 6/11/83	1725 Cain, T 7/30/83
55	666 Meyer, O 3/26/83	440 Baurhaug, J 7/16/83	670 Neumann, M 6/11/83	1725 Cain, T 7/30/83
56	666 Meyer, O 3/26/83	440 Baurhaug, J 7/16/83	670 Neumann, M 6/11/83	1725 Cain, T 7/30/83
57	666 Meyer, O 3/26/83	440 Baurhaug, J 7/16/83	670 Neumann, M 6/11/83	1725 Cain, T 7/30/83
58	666 Meyer, O 3/26/83	440 Baurhaug, J 7/16/83	670 Neumann, M 6/11/83	1725 Cain, T 7/30/83
59	666 Meyer, O 3/26/83	440 Baurhaug, J 7/16/83	670 Neumann, M 6/11/83	1725 Cain, T 7/30/83
60	666 Meyer, O 3/26/83	440 Baurhaug, J 7/16/83	670 Neumann, M 6/11/83	1725 Cain, T 7/30/83
61	666 Meyer, O 3/26/83	440 Baurhaug, J 7/16/83	670 Neumann, M 6/11/83	1725 Cain, T 7/30/83
62	666 Meyer, O 3/26/83	440 Baurhaug, J 7/16/83	670 Neumann, M 6/11/83	1725 Cain, T 7/30/83
63	666 Meyer, O 3/26/83	440 Baurhaug, J 7/16/83	670 Neumann, M 6/11/83	1725 Cain, T 7/30/83
64	666 Meyer, O 3/26/83	440 Baurhaug, J 7/16/83	670 Neumann, M 6/11/83	1725 Cain, T 7/30/83
65	666 Meyer, O 3/26/83	440 Baurhaug, J 7/16/83	670 Neumann, M 6/11/83	1725 Cain, T 7/30/83
66	666 Meyer, O 3/26/83	440 Baurhaug, J 7/16/83	670 Neumann, M 6/11/83	1725 Cain, T 7/30/83
67	666 Meyer, O 3/26/83	440 Baurhaug, J 7/16/83	670 Neumann, M 6/11/83	1725 Cain, T 7/30/83
68	666 Meyer, O 3/26/83	440 Baurhaug, J 7/16/83	670 Neumann, M 6/11/83	1725 Cain, T 7/30/83
69	666 Meyer, O 3/26/83	440 Baurhaug, J 7/16/83	670 Neumann, M 6/11/83	1725 Cain, T 7/30/83
70	666 Meyer, O 3/26/83	440 Baurhaug, J 7/16/83	670 Neumann, M 6/11/83	1725 Cain, T 7/30/83
71	650 Ullrich, R 12/11/82	425 Siler, C 4/9 83	655 Janner, J 3/5/83	1692 Castellano, D 3/26/83
72	650 Ullrich, R 12/11/82	425 Siler, C 4/9 83	655 Janner, J 3/5/83	1692 Castellano, D 3/26/83
73	650 Ullrich, R 12/11/82	425 Siler, C 4/9 83	655 Janner, J 3/5/83	1692 Castellano, D 3/26/83
74	650 Ullrich, R 12/11/82	425 Siler, C 4/9 83	655 Janner, J 3/5/83	1692 Castellano, D 3/26/83
75	650 Ullrich, R 12/11/82	425 Siler, C 4/9 83	655 Janner, J 3/5/83	1692 Castellano, D 3/26/83
76	650 Ullrich, R 12/11/82	425 Siler, C 4/9 83	655 Janner, J 3/5/83	1692 Castellano, D 3/26/83
77	650 Ullrich, R 12/11/82	425 Siler, C 4/9 83	655 Janner, J 3/5/83	1692 Castellano, D 3/26/83
78	650 Ullrich, R 12/11/82	425 Siler, C 4/9 83	655 Janner, J 3/5/83	1692 Castellano, D 3/26/83
79	650 Ullrich, R 12/11/82	425 Siler, C 4/9 83	655 Janner, J 3/5/83	1692 Castellano, D 3/26/83
80	650 Ullrich, R 12/11/82	425 Siler, C 4/9 83	655 Janner, J 3/5/83	1692 Castellano, D 3/26/83
81	650 Ullrich, R 12/11/82	425 Siler, C 4/9 83	655 Janner, J 3/5/83	1692 Castellano, D 3/26/83
82	650 Ullrich, R 12/11/82	425 Siler, C 4/9 83	655 Janner, J 3/5/83	1692 Castellano, D 3/26/83
83	650 Ullrich, R 12/11/82	425 Siler, C 4/9 83	655 Janner, J 3/5/83	1692 Castellano, D 3/26/83
84	650 Ullrich, R 12/11/82	425 Siler, C 4/9 83	655 Janner, J 3/5/83	1692 Castellano, D 3/26/83
85	650 Ullrich, R 12/11/82	425 Siler, C 4/9 83	655 Janner, J 3/5/83	1692 Castellano, D 3/26/83
86	650 Ullrich, R 12/11/82	425 Siler, C 4/9 83	655 Janner, J 3/5/83	1692 Castellano, D 3/26/83
87	650 Ullrich, R 12/11/82	425 Siler, C 4/9 83	655 Janner, J 3/5/83	1692 Castellano, D 3/26/83
88	650 Ullrich, R 12/11/82	425 Siler, C 4/9 83	655 Janner, J 3/5/83	1692 Castellano, D 3/26/83
89	650 Ullrich, R 12/11/82	425 Siler, C 4/9 83	655 Janner, J 3/5/83	1692 Castellano, D 3/26/83
90	650 Ullrich, R 12/11/82	425 Siler, C 4/9 83	655 Janner, J 3/5/83	1692 Castellano, D 3/26/83
91	640 Williams, F 3/27/83	424 Markle, K 3/26/83	650 Roberts, J 3/26/83	1685 Bracey, B 5/14/83
92	640 Williams, F 3/27/83	424 Markle, K 3/26/83	650 Roberts, J 3/26/83	1685 Bracey, B 5/14/83
93	640 Williams, F 3/27/83	424 Markle, K 3/26/83	650 Roberts, J 3/26/83	1685 Bracey, B 5/14/83
94	640 Williams, F 3/27/83	424 Markle, K 3/26/83	650 Roberts, J 3/26/83	1685 Bracey, B 5/14/83
95	640 Williams, F 3/27/83	424 Markle, K 3/26/83	650 Roberts, J 3/26/83	1685 Bracey, B 5/14/83
96	640 Williams, F 3/27/83	424 Markle, K 3/26/83	650 Roberts, J 3/26/83	1685 Bracey, B 5/14/83
97	640 Williams, F 3/27/83	424 Markle, K 3/26/83	650 Roberts, J 3/26/83	1685 Bracey, B 5/14/83
98	640 Williams, F 3/27/83	424 Markle, K 3/26/83	650 Roberts, J 3/26/83	1685 Bracey, B 5/14/83
99	640 Williams, F 3/27/83	424 Markle, K 3/26/83	650 Roberts, J 3/26/83	1685 Bracey, B 5/14/83
100	640 Williams, F 3/27/83	424 Markle, K 3/26/83	650 Roberts, J 3/26/83	1685 Bracey, B 5/14/83



Above: Buddy Duke...leads the list in both deadlift and total, while Mike MacDonald (below) dominated the bench on this month's TOP 100, even though he's still coming back from serious injury and 42 pounds behind his World Record of 562 in this division. In the bottom photo, we see TOP 100 squat leader Dennis Wright who will be shooting for the American record for the squat in 1984.



Next month...TOP 220s



Stan Lampert...lifts a pair of 100 lb. dumbbells in the overhead press.

Vacationland Open 12/4/83 - Brewer, Maine. Table with columns for Name, Weight, and Score.

Indiana State Collegiate 10/22/83 - W. Lafayette, Ind. Table with columns for Name, Weight, and Score.

ADPFA Indiana State Bench Press 10/29/83 - W. Lafayette, Ind. Table with columns for Name, Weight, and Score.

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Dubuque YMCA Bench Meet 8/28/83 - Dubuque, Ia. Table with columns for Name, Weight, and Score.

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Dubuque YMCA Bench Meet 8/28/83 - Dubuque, Ia. Table with columns for Name, Weight, and Score.

Novice Bench-Deadlift Meet 9/11/83 - Allentown, Pa. Table with columns for Name, Weight, and Score.

Novice Bench-Deadlift Meet 9/11/83 - Allentown, Pa. Table with columns for Name, Weight, and Score.

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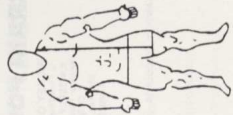
Height _____

Weight _____

Hips (largest part of buttocks) _____

Leg (largest part) _____

Overall (top of trap to 6" below crutch) _____



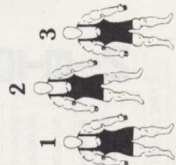
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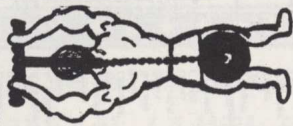
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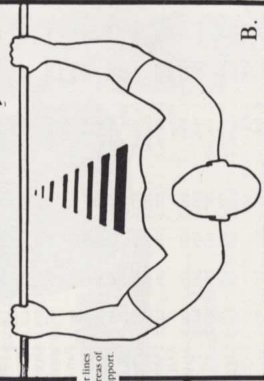
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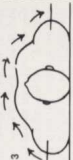
Please Complete Form Including All Measurements In Both Columns

Description	Measurements
NECK	(1) TOP OF TRAP TO BELTLINE (9)
ARM relaxed	(2) BASE OF NECK TO (10)
CHEST relaxed with normal air capacity	(5) SHOULDER BONE TO SHOULDER BONE TO (11)
ABDOMEN	(4) DELTOID CIRCUMFERENCE (12)
2" below pec	(8) (round from underarm)
arrest level	(6) (to top of Deloid)
bellyline	(7) SHOULDER WIDTH (13)
TOP OF TRAP TO 2" BELOW PEC	(3) See illustration
TOP OF TRAP TO NAVEL	(9) HEIGHT

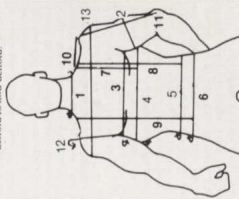
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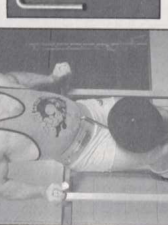
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SOME PREVIOUS EDITIONS OF POWERLIFTING USA ARE STILL AVAILABLE. TO ORDER SEND \$3 FOR EACH BACK ISSUE YOU WANT AND BE SURE TO SPECIFY ALTERNATE CHOICES IN CASE OUR SUPPLY RUNS OUT BEFORE YOUR ORDER CAN BE PROCESSED.

Dec/1981...1981 World Championship report, Clyde Wright Profile, World Master Championship report, Top 100 Lightweights (148 lbs.), Apr/1982...Women's National Championships, Drugs in Powerlifting, The All Time 2000 Club, Larry Pacifico Reminiscs, Top 100 220s Sep/1982...National Cup coverage, Teenage National Championships, Walter Thomas Profile, Heavy Training by Hatfield, Top 100 123s Nov/1982...Ted Hammer, George Hummel Profile, Natural Powerlifting, Power Gym Directory, Football and Powerlifting, Top 100 148ers list. Feb/1983...just back in stock...very limited supply! YMCA Nationals, To Single or not to Single, Inaba profile, Timing Warmups, the 3 Lift Max, Heavy Hands, Rich Sandlin profile, Top 100 198s list. Mar/1983... (short supply!) Women's Nationals, Janice Johnson Profile, Bob Dempsey Profile, Doug Borden Profile, John Kuc's Deadlift Workout of the Month, Beginning Women's routine, Isometrics, Blood Test Analysis, Chuck Ahrens, Mini Cycles, All Military Meet, Top 100 220s. Apr/1983...Eddie Pengelly Profile, Mike Bridges Squat Routine, Off Season Training, Making Weight, Women's World Team Salute, Don Blue, Power Rack Training, Pioneers of Power - Pat Casey, Top 100 242s, May/1983...Hawaii International, National Collegiate, Mike MacDonald Bench Routine, Kevin Fisher, Isokinetics, Referee Directory, Top 275s. Jun/1983...Women's Worlds, Judd Bussiotto Comeback, Vince Anello deadlift routine, Dan Austin, Hatfield on Cycle Training, All Time 800 squat list, Bill West - Pioneer of Powerlifting, TOP 100 Supers. Jul/1983...Junior Nationals, Women's Natural Nationals, Overtraining by Fred Hatfield, Making Weight, Chip McCain Squat Routine, 550 Bench Press Club, Don Cundy - Pioneer of Powerlifting, TOP 100 114s. Aug/1983...World's Greatest Deadlift, Deadlifting Secrets, 800 lb. Deadlift Club, Quad tears, Jim Rouse Bench routine, Top 100 123ers, Sep/1983...Senior National Championships, American Drug Free National Championships, Rickey Dale Crain Deadlift Cycle, Hatfield on the abbreviated Training Cycle, Ruthi Straker's Women's Corner, TOP 100 132s. Oct/1983...World Masters Meet, Men's and Women's Teenage Championships, Championship Benching Routines, All Time 2,000 total lifting, Pan Am Test Impact, Injuries by Dr. Tom McLaughlin, Top 100 148s. Jan/84...the debut issue of the NEW Powerlifting USA, 1983 World Powerlifting Championships, National Masters meet, I.O.C. Banned Drug List, Injury Proofing, Police/Firefighters Nationals, TOP 100 181s. MAKE A LIST OF THE ISSUES YOU WANT (AND ALTERNATE CHOICES), MAKE OUT A CHECK TO POWERLIFTING USA FOR THE PROPER POWERLIFTING USA, BI DEPT., BOX 3238, CAMARILLO, CA 93011.



Clark Air Base Powerlifting Team...The strongest military team in Southeast Asia. Clark AB has hosted several Powerlifting Championships, and if everything works right they will produce 4 contenders for the 1984 Air Force Powerlifting Team. Team members are: front row, left to right, Dave Pattaway, Kenneth Westbrook, Larry Manuel, Back Row, Ray Long, Earl Griffin, Kevin Anderson, Harold Covans, Frank Nelson, Halle Gault, M. Tudor. Photo: Not pictured are Oliver Davis and Danny Calendar. Thanks to Ray Long for photo.

PACAF Open PL Invitational
Clark AFB, Philippines, 19 Nov 83

	SQ	BP	DL	T
WOMEN				
N Carlson	100	200	490	980
L Rhodes	170	215	500	1005
L48	140	185	430	895
MEN				
123	365**	200	405**	970**
K Westbrock	350	235**	375	960
D Peggio	345*	205*	435*	985*
D Pattaway	340	270	330	780
G Sagarin	300	270	330	780
I0	475**	300*	500*	1305**
F Hernandez	450	280	460	1290
O Davis	470	270	460	1200
R Cox	375	215	470	1060
R Long	550	335	500	1385
E North	500	330	525	1375
R Griffin	500	310	535	1345
F Stewart	535	370*	620	1525
E Nelson	500	330	570	1400
G Cantello	505	365	500	1370
R 220	490	330	485	1265
220	490	330	485	1265
J Vertullo	500*	315*	535*	1350*
C Doucet	440	290	500	1190
H Cowan	405	280	505	1190
J Deshields	675*	405*	585*	1665*
P Linn	550	440	550	1540
275	570*	350*	500*	1420
J Meyer	475	330*	540*	1365

* indicates New PACAF record; ** indicates New AF record; CLARK AB won the team title with record B Kozak thanks to Clark AB WRX Dept and T Sgt Gene Martinez. We had only 3 strength lifters in the 125 lb class it was a battle between the 2 lifters, neither of the 2 lifters need be ashamed; it was a good contest. 148 lb class saw two lifters; neither of the 2 lifters need be ashamed; it was a good contest. 148 lb class saw two lifters; neither of the 2 lifters need be ashamed; it was a good contest. 148 lb class saw two lifters; neither of the 2 lifters need be ashamed; it was a good contest.

Lehigh Valley Open Bench Press
10/22/83 - Allentown, Pa

114	198	125	220	543	1168
F Garvey	225	140	250	615	1320
F Pelligono	185	115	205	505	1105
D Dentone	122	75	145	342	542
M Diamond	175	110	190	475	1060
L Palmieri	135	95	155	385	565
M Kubo	145	105	175	425	625
L Sabino	135	95	155	385	565
K Kenney	225	140	250	615	1320
T Brown	205	135	235	575	1115
S Schiarb	205	135	235	575	1115
R Dermo	305	195	315	815	1515
C Confessore	300	190	300	790	1490
C Confessore	305	195	315	815	1515
PACAF winner Rich Stewart was impressive. 220 lb class saw J. Vertullo victorious. For his 148 lb class saw J. Vertullo victorious. For his 148 lb class saw J. Vertullo victorious. For his 148 lb class saw J. Vertullo victorious. For his 148 lb class saw J. Vertullo victorious.					

Purdue Open Natural Meet
ADFFA Sanctioned
19, 20 Nov 83 - W. Lafayette, IN

	SQ	BP	DL	T
57.5kg	102.5	72.5	140	315
M. Pyclik	180	115	195	490
R. Hill	172.5	102.5	197.5	472.5
T. Veir	172.5	130	217.5	575
81kg	120	95	160	375
D. Brettbacher	120	95	160	375
86.5kg	102.5	72.5	140	315
95kg	187.5	110	220	517.5
R. Cart	225	165	265	655
T. Manetta	225	165	265	655
B. Kruick	285	147.5	245	677.5
T. Hauert	205	145.5	250	597.5
C. Perrine	277.5	172.5	295	745
B. Krick	277.5	165	290	727.5
S. Brodie	280	152.5	277.5	710
R. Falcion	277.5	162.5	272.5	697.5
D. Bailey	240	137.5	232.5	610
E. Toth	195	150	220	565
M. Muma	187.5	110	217.5	515
M. Dronowider	277.5	160	277.5	715
SHW	295	185	312.5	792.5
L. D'Amico	295	182.5	325	725
P. Dimaggio	295	182.5	325	725
R. Grieflich	275	132.5	260	667.5
S. Hathway	170	100	182.5	542.5
D. Silas	245	145	247.5	637.5
D. G. Torres	245	145	247.5	637.5
ADFFA's Best lifted from champions. Back's	212.5	140	230	587.5
(424.5); D. Lane (419.62); R. Sessa (414.84); L. Greese (412.972). Thanks to Pat Malone for results.	195	142.5	227.5	565
J. Hunt	205	120	227.5	532.5

Thanks to Gary Bisell for results.

Thanks to Fred Glass for results.

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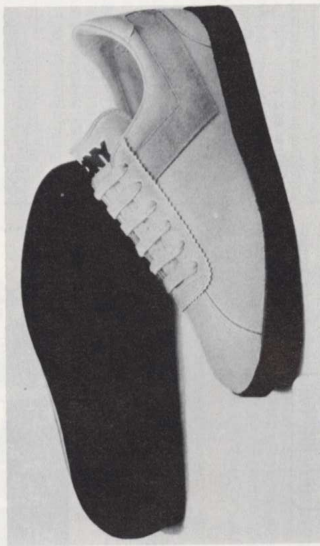
DESIGN Give the lifter a suit designed solely for his needs as a powerlifter through such unique and innovative characteristics such as proportionate cut panels that allow for maximum support and comfortable wear plus quick removal of the straps.

MATERIAL Use only the strongest material available, one yielded from modern petrochemical technology; a material that is double knit for maximum strength, does not rot, is lightweight and is extremely durable.

CONSTRUCTION Cut the lifter's suit out only after he orders. Then measure, hand assemble and sew his suit with a special supportive stitch, requiring 450 yds. (avg.) of thread, found exclusively on Titan Suits.

SIZING Design and tailor each suit on an individual and personal basis to assure the ultimate in fit and to cater to the lifter's needs and wants. Do not design a suit that waits for a lifter to fit it. (This is a reason why Titan asks for a full 55% more information, avg., on its order blank than its competitors and offers 3 individual sizes.)

GUARANTEE Back the suit up with the most valuable guarantee on the market. Do not attach stipulations to it and honor it regardless of how tight the lifter orders his suit. If he blows the crotch out during its 3 mo. guarantee period not only replace his suit but refund his money as well. 1 mo. replacement guarantee on the rest of the suit!



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Allegheny Mountain Association Championships 13 Nov 83

	SL	BP	DL	T
T. Sano	265	185	315	765
L. Headwink	255	130	285	670
C. Ruff	240	100	270	610
G. Ditt	175	90	240	505
R. Ribson				
123				
T. Smith	115	100	155	360
C. Robinson	324	165	350	725
D. Hulman	280	145	300	725
132				
A. Metzger	315	165	325	805
A. Waite	185	145	320	650
148				
V. Poteste	465	330	455	1250
A. Zucker	420	285	455	1160
M. S. Jones	410	310	420	1140
C. Griffin	340	235	420	995
R. Embaugh	365	235	380	980
M. Axmin	340	210	400	950
C. Sorey	335	240	375	905
D. Bertoni	325	210	360	895
C. Carbonaro	365	145	385	895
M. Malinconico	165	130	245	540
150				
J. Paner**	560	380	470	1515
P. Seybert	480	300	350	1275
J. Shaw	435	355	460	1250
D. Johnson	415	345	470	1230
D. Reed	470	260	485	1220
R. Scabi	285	250	425	960
T. Hofmeister	320	215	390	925
161				
M. Novelly	275	125	305	705
181				
B. Purvis	465	340	365	1370
M. Finlayson	520	310	530	1360
S. Schafran	440	380	520	1340
M. S. Johnson	420	320	500	1340
M. S. Johnson	330	270	435	1035
198				
M. Baird*	690	390	690	1770
T. Miller	600	390	585	1575
B. Frye	590	350	630	1570
B. Lang	530	375	575	1480
R. Hurdick	500	340	540	1380
R. Hurdick	500	335	520	1345
N. Chimienti	435	285	520	1240
M. Vasalini				



Slippery Rock Powerlifting Team... hosts of the Allegheny Mountain Association Championships. From left to right: Back row (standing): Meet Director - Chris Carbonaro, Mike Hardy, Scott Schafran, Nick Chimienti, Glen Lazo, Gary Raikie. Front row (kneeling): Gary Waite, Andy Zucker, Jim Gish. Not pictured: Tony Sano, Dan Bertoni, Mary Malinconico, Bennet Basilia and Mike Vasalini. Photo courtesy of Chris Carbonaro.

R. Larr	630	365	625	1620
B. Newman	745	440	675	1860
B. Rebecky	630	385	630	1645
C. Ascraft	600	345	555	1500
R. Hurdick	580	340	520	1440
Lone Headwink	520	320	520	1210
Standings: Presque Isle Power Men, Fox Hill, Slippery Rock, Fitness Hut, Power House, Grove Hill, Washington, Westport, Eastport, Wabash, Barabell Club, Catastrophic Lifter, Slippery Rock, Weightlifting Club				
Team trophy went to All American Gym of Lakeland, FL. Special thanks went to Mr and Mrs John Perez, coaches of Powerlifters of Tampa, FL. Homeowner, Rick Poston, Mr. Fortina, for results.				

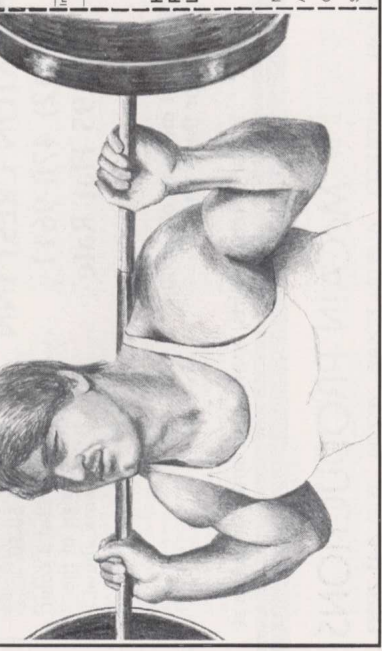
lifting Club was a great success. As Meet Director, I would like to thank everyone who helped make this year's Championships a success. I would like to thank the Organizers for the use of his equipment and his assistance in helping to meet run smoothly. Best lifter awards went to 165 lb. Jim Parent, who missed his second attempt at the 100 lb. bench press and to 177 lb. Jim Parent, who missed his second attempt at the 177 lb. total which gave him the Elite classification. Superheavy bill Newman captured the Master classification with his 180 lb total. Thanks to Chris Carbonaro for results & report.

Tampa Bench Press Open 11/5/83 - Tampa, FL

	WOMEN	MEN
L. Smith	245	M. Sanchez 350
L. Vallancourt	165	W. Conoly 335
T. Baltz	170	R. Spratt 320
S. Drum	130	M. Wolfson 470
S. Milton	105	S. Connors 385
123		D. Stevens 370
E. Perez	180	S. Salemi 350
123		190 198
J. Allen	259	A. Acobo 260
M. Vargas	215	D. Comarido 415
R. Scheutz	405	S. Righman 440
B. White	180	J. Dugan 425
S. Perez	160	W. Brennan 415
123		W. Ball 410
J. Cohen	270	G. Grots 265
R. White	270	A. Pascarello 260
K. Robertson	260	T. Paulson 480
K. Williams	225	C. Blison 425
K. Cogan	225	S. Righman 440
148		
T. Domovon	375	D. Berry 365
R. Perez	375	W. Heimback 380
T. Domovon	375	
G. Grots	265	
A. Pascarello	260	
T. Paulson	480	
C. Blison	425	
D. Berry	365	
W. Heimback	380	
Team trophy went to All American Gym of Lakeland, FL. Special thanks went to Mr and Mrs John Perez, coaches of Powerlifters of Tampa, FL. Homeowner, Rick Poston, Mr. Fortina, for results.		

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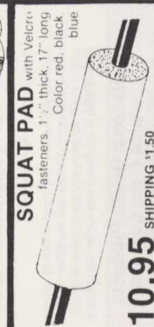
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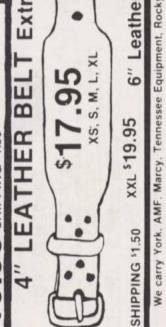
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Unsaturated	190 mg	Phosphorus	100 mg	Kidney	200 mg	Proprietary	100 mg
Essential	190 mg	Calcium	100 mg	Heart	200 mg	Proprietary	100 mg
Unsaturated	190 mg	Iron	100 mg	Liver	200 mg	Proprietary	100 mg
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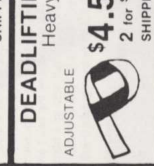
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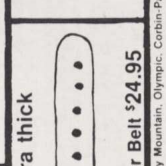
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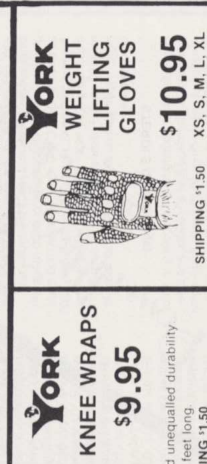
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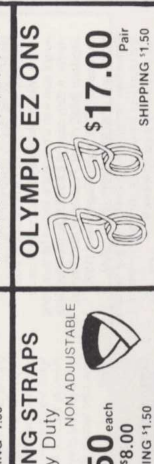
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NON ADJUSTABLE
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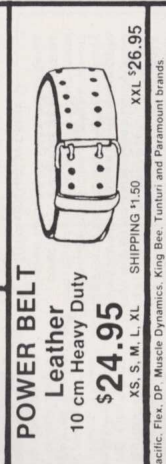
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Arizona Valley Classic 11/13/83 - Phoenix, AZ				
	SQ	BP	DL	T
WOMEN				
P. Shepler (121)	303	137	413	854
M. Dalton (122)	259	117	366	677
S. Charles (121)	259	137	286	644
T. Wood (113)	253	176	325	771
L. Wall (164)	176	176	325	771
R. MacIzb	148	83	121	352
S. McKinley	308	124	386	859
M. Barrett	259	132	366	677
B. Wong	473*	270	457	1201*
C. Bullitt	424	270	462*	1157
P. Ross	424	275	462	1165
D. Coplin	413	297	424	1113
S. Smith	429	231	451	1113
F. Aguilar	372	254	396	1036
S. Holigan	341	220	374	936
165				
J. Laurenti	523	326	578	1438
J. Smith	545	341	611	1534
J. Charles	446	248	479	1113
G. Charlemis	517	307	529	1383
C. Tomatoli (OL)	633	369	606	1609
D. Myers	562	374	573	1510
J. Jato	518	363	545	1427
L. Speyer	451	225	391	1179
198				
T. Hopper	551	391	611	1554
G. Soto	628	359	684	1871
M. Darow	516	312	606	1534
M. Darow	516	312	606	1534
P. Palazolo	500	385	540	1394
J. Ramirez	628	413	719	1860
J. Isack	650	413	655	1719
H. Handridge (OL)	837*	518	705	2081
M. White	832	549	611	1984
SHW	716	446	628	1791
D. Barber	705	512	518	1736
J. Buchanan	854	611	719	2100

Shawnee Closed Meet 11/3/83 - Shawnee, OK				
	SQ	BP	DL	T
R. Gibson	198*	93	225	518*
M. Cook	176	83	203	462
P. Downs	137			
K. Crain	55	55	733*	844
L. Carpenter				
141.15 teenage record				
1500 MEN				
B. Haddad	182	83	242	518
L. Erban	182	83	242	518
R. Crain	355	164	529	1247
B. Haddad	270	125	386	981

Thunder Bay Open 12/3/83 - Ontario, Canada				
	SQ	BP	DL	T
N. Wood	760	181	1030	2071
D. Smith	826	218	1100	2344
J. Nolin	1206	265	1550	3021
D. Smith	1206	265	1550	3021
W. Lui	148	76	198	392
J. Petrick	1580	315	1975	3870
J. DeMuth	1316	358	1685	3359
P. O'Brien	1264	270	1685	3219
R. Roy	1091	181	1295	2567
R. Dobransky	952	181	1100	2233
J. Caccamo	870	220	1000	2090
K. Huil	1653	324	1985	3962
R. Whelan	1437	285	1736	3458
D. Stark	1449	312	1815	3576
K. Masengill	1123	212	1300	2635
D. Henderson	1029	270	1200	2500
L. LeBrun	975	212	1100	2287
L. Milani	853	150	1000	2003
C. LaPrade	853	150	1000	2003
B. Peterson (Thunder Bay)	479	120	550	1149
D. Stark	1449	312	1815	3576

Japan Junior Championships (under 25 yrs old) - 11/27/83				
	SQ	BP	DL	T
WOMEN'S-OPEN				
N. Wood	760	181	1030	2071
D. Smith	826	218	1100	2344
J. Nolin	1206	265	1550	3021
D. Smith	1206	265	1550	3021
W. Lui	148	76	198	392
J. Petrick	1580	315	1975	3870
J. DeMuth	1316	358	1685	3359
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L. Milani	853	150	1000	2003
C. LaPrade	853	150	1000	2003
B. Peterson (Thunder Bay)	479	120	550	1149
D. Stark	1449	312	1815	3576

Hamburg Bench Press 12/4/83 - Hamburg, Pa				
	SQ	BP	DL	T
B. Haddad	182	83	242	518
L. Erban	182	83	242	518
R. Crain	355	164	529	1247
B. Haddad	270	125	386	981

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United States Powerlifting Federation Classification Awards Application											
MEN'S POWERLIFTING CLASSIFICATION STANDARDS											
CLASS	114	123	132	148	165	181	198	220	242	275	SHW
Elite	1064	1157	1246	1394	1527	1642	1731	1824	1980	2146	2033
Master	981	1064	1146	1279	1400	1505	1593	1736	1876	1985	
Class I	882	953	1025	1152	1257	1350	1422	1505	1558	1598	1670
Class II	777	838	904	1009	1102	1190	1257	1323	1367	1411	1472
Class III	672	733	788	887	965	1036	1097	1157	1196	1229	1279
Class IV	590	639	689	772	838	904	953	1003	1047	1075	1119

TEENAGE MEN'S CLASSIFICATION STANDARDS											
CLASS	114	123	132	148	165	181	198	220	242	275	SHW
Elite	1014	1097	1180	1323	1450	1549	1637	1731	1786	1841	1918
Master	917	986	1064	1191	1301	1395	1477	1554	1610	1654	1725
Class I	799	866	932	1042	1127	1224	1295	1367	1411	1455	1510
Class II	678	733	794	882	970	1036	1097	1158	1196	1235	1284
Class III	546	595	640	711	783	838	882	932	965	992	1036
Class IV	408	441	474	529	579	618	656	689	717	733	766

WOMEN'S POWERLIFTING CLASSIFICATION STANDARDS										
CLASS	97	105	114	123	132	148	165	181	198	198+
Elite	639	683	733	782	827	909	981	1053	1130	1190
Master	579	623	667	711	749	827	893	959	1025	1080
Class I	518	562	601	639	672	744	805	865	920	970
Class II	463	506	535	568	601	661	716	766	821	865
Class III	402	435	468	496	524	579	623	672	716	755
Class IV	347	375	402	424	452	486	535	573	617	650

AWARD: Classification patch and/or certificate (Elite only) to athletes who equal or exceed the totals listed in the tables above for the respective body weight classes.

All totals must be made in a U.S.P.F.-Sanctioned Powerlifting Contest. Application must be signed by the State Chairman or the Regional Chairman or the Chief Official of the meet. The Meet Director's signature will not be accepted.

Master and Elite award applications require the signature of at least one certified national or international referee present for the judging.

TO APPLY: Enclose with your completed application five dollars for each patch desired, and a stamped, self-addressed envelope (4 1/2 x 9 1/2). Make checks and money orders payable to: U.S.P.F., Send to United States Powerlifting Federation, P.O. Box 18485, Pensacola, Florida 32523. Patches will be sent directly to the athlete unless otherwise requested.

Name of Athlete	Street Address	City	State	U.S.P.F. #	Zip
	<input type="checkbox"/> Men <input type="checkbox"/> Teenage <input type="checkbox"/> Women <input type="checkbox"/> Class #4 <input type="checkbox"/> Class #3 <input type="checkbox"/> Class #2 <input type="checkbox"/> Class #1 <input type="checkbox"/> Master <input type="checkbox"/> Elite		Total number of patches		
Date of Meet					
Name and Location of Meet					
Lifts:	Squat	Bench Press	Dead Lift		Total
Signature of qualified official	(specify whether National or International referee)				

This form may be reproduced. Effective date of this application - August 1, 1983

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Coming Events

MEET DIRECTORS: This list is published as a free service to publicize your contest to as many people as possible. Send details to: Coming Events, Box 467, P.O. Box 1000, Lakewood, CO 80401. For a complete listing of events, see our 1987-88 event notice for your event. You'll reach many more potential entrants.

- 14 JAN** Arkansas State Championships, Fayetteville, AR. Call: 479-428-4711.
- 20 JAN** Willow, N. Little Rock, AR 72114, 501-758-2132.
- 14 JAN** Kimberly High School Open, 2700 Willow, N. Little Rock, AR 72114, 501-758-2132.
- 14 JAN** Georgia Championships, Rocky Hill, CT 06067, 203-582-4531.
- 5 FEB** J. Georgia Championships, Rocky Hill, CT 06067, 203-582-4531.
- 5 FEB** J. Georgia Championships, Rocky Hill, CT 06067, 203-582-4531.
- 5 FEB** J. Georgia Championships, Rocky Hill, CT 06067, 203-582-4531.
- 17 FEB** Tennessee State Championships (President's only), E. J. Kretz, Jr., 12015L, Nashville, TN 37212, 615-322-4118.
- 21 JAN** All Ohio BP championships (President's only), Contact: Stan Goss, 519-673-0936.
- 18 FEB** California State Senior Championships, sponsored by Magnific, Sacramento, CA 95866, 916-446-7048.
- 18 FEB** Utah State Championships (USF), Utah State, P.O. Box 2411, Logan, UT 84302, 437-312-3100.
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- 18 FEB** Utah State Championships (USF), Utah State, P.O. Box 2411, Logan, UT 84302, 437-312-3100.

- 3 MAR** 2nd annual Stockton Police Meet, 209-478-5412 or 466-1991, Stockton, CA 95210.
- 10 MAR** American Women's (President's), 304-342-5131, Raleigh, NC 27601.
- 20 MAR** American Women's (President's), 304-342-5131, Raleigh, NC 27601.
- 20 MAR** American Women's (President's), 304-342-5131, Raleigh, NC 27601.
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- 20 MAR** American Women's (President's), 304-342-5131, Raleigh, NC 27601.

- 19 MAR** N. Carolina Women's Open, Greenville, NC 27609, 919-852-3223.
- 19-26 MAR** LIFT/AMERICA, National Strength and Conditioning Association, NSCA/USA, Littleton, CO 80140, 303-781-6851.
- 23-25 MAR** National Collegiate, 436 E. Thompson, Philadelphia, PA 19137, 215-744-2700.
- 24 MAR** Powers Classic under Class II and III, 1515 E. 15th St., Phoenix, AZ 85001, 602-301-8641.
- 24 MAR** Wisconsin State school meet, Wilkes-Barre, WI 53402, 414-639-7416.
- 24 MAR** East Coast Strongest man competition, 13559 N. Florida Ave., Tampa, FL 33612, 813-961-0595.
- 24 MAR** Nevada State Championships, Hal Sparks, Reno, NV 89515, 702-853-2129.
- 24-25 MAR** Call State Meet (Class 3 and below), Bob Packer, 136 W. Saginaw, St. Ignace, MI 49781, 519-305-2300.
- 25 MAR** American Open Cup, Rick Musley, 1223 Clearmont SE, N. Canton, OH 44720, 216-494-3473.
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- 31 MAR** J. APR York Open, Vincent White, 1008 Granite Ave., Canton, OH 44705, 716-341-5131.
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- 23 JUNE** New Location 6 & 8, Shantel, Louisiana, Rich Lake, 62 E. 10th St., Metairie, LA 70002, 504-885-1040.
- 23 JUNE** US Armed Forces of the Pacific Open, Ray Long, FSC 1, Bx 4177, APO SF 96386.
- 9 JUNE** International Schedule meeting, Main St., Caswellville, MO 64527, 517-856-2140.
- 16 JUNE** Metro open Power meet, Fabian R. Long, 11218 W. 12th St., Tulsa, OK 74116, 918-438-4411.
- 23 JUNE** Pennsylvania W. Women's championships, Al R. Fink, 6 E. Berkeley St., Pottsville, PA 17884, 717-326-3111.
- 23-24 JUNE** Pennsylvania W. Women's championships, Al R. Fink, 6 E. Berkeley St., Pottsville, PA 17884, 717-326-3111.
- 23 JUNE** Toledo City Open (Toledo residents), Harry Cummins, Carr's Body Shop, 1919 Sylvania Ave., Toledo, OH 43604, 419-246-7375.
- 30 JUNE** Grandfather Powerhouse men's open, Pete Suro, c/o Athletic Dept., or Thomas Hillard, PO BX 244, SCG 17478, 717-662-4452.
- JUNE** Maple City Class 1 and below, Dave Light, Newark, NJ 07102, 201-646-2155.
- JUNE** N. Carolina Open, Ron Passalunghi, 237 Camden St., Oradell, NJ 07649.
- 17 JUNE** JULY International Games, 10080 S. 26th St., Mesa, AZ 85205, 602-941-3333.
- Nassau County, NY, Michael P. Eisenhower Pk., East Meadow, NY 11549, 516-476-2222.**
- 11 AUG** U.S. Army Europe, Ft. Belvoir, Ill. 62204, 312-297-2222.
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In May of 1981 the heavyweight squat record was broken with a lift of 863. This was a monumental lift because it broke George Frenn's immortal 853 American record of 12 years standing. Another long standing record which has yet to be broken is the 675 American bench press record set by Jim Williams as a superheavyweight in 1972. Powerlifting fans are anxiously awaiting to see who will break this record which has already stood for 10 years.

Although these two milestones records are great and the eclipsing of them exciting, they are anti-climatic compared to the 181 lb. deadlift record broken in 1972 with 730. This record of Vince Anello's had erased a record which stood for almost 25 years. This was the amazing 725 3/4 deadlift of Bob Peoples, who is truly one of powerlifting's greatest pioneers.

Bob Peoples was born in Johnson City, Tennessee in 1919. Bob's father was interested in gaining strength and it was he who started Bob training at the age of 9 years. During his teenage years, Bob followed a weight training routine written by the pro wrestler Farmer Burns. He later followed routines published in Physical Culture Magazine.

When Bob was 18 years old he became interested in the deadlift. He made 350 very shortly after starting deadlift training and 450 after only one year of training. Bob weighed only 165 and the year was 1937. He entered his first contest in 1937 and totaled 515 in the 3 olympic lifts. Bob trained for 2 more years and entered the Tennessee State Powerlifting Championships in 1939. There he deadlifted 600 lbs.

Bob continued to train and in planning for his routines he fashioned different apparatus and training devices

which became the prototypes and forerunners of today's power rack. Bob was among the first to use the power rack itself and heavy partial deadlifts off of it. Bob performed heavy partials from just below the knees, from knee height and from just above the knees.

Peoples was also among the first to employ heavy negative training in his routine. Bob would take a bar loaded with more weight than he could normally deadlift and slowly lower it to the floor, resisting all the way.

PIONEERS of POWER

by Pete Vuono

Bob was also the first man on record to use the training method of "extended deadlifts." Bob constructed a very heavy duty table which he stood on. He then constructed a huge iron hoop which was large enough to engulf and fit around the table. Weight was attached to the iron circle with Bob holding each side of the table. He would then lower the ring over the table below the foot level to develop power in the low pull.

Another first for Bob was the use of a type of gripping device made from gun hooks. This, of course, would later be replaced by straps.

The "crotch" or

Bob created another

first. He had become the first to utilize training wraps of any kind.

Bob's technique was never overlooked as he experimented with alternating, pronated and supinated grips. He also experimented with inflated and deflated lungs and the position of the back. Bob decided to use deflated lungs and was the first man to use the now famous "hump-back" method of deadlifting.

Bob was well aware of flat feet promoting better leverage long before the ballet shoes and gymnastics slippers came into vogue. He always deadlifted in stocking feet. This newly discovered knowledge in technique enabled Bob to deadlift 699 pounds in the 1947 Mr. South Power Meet.

Bob also was the first to create some now popular innovations in the squat. Bob was the first to utilize the "power squat" which is now used by virtually every powerlifter. Upon ascending out of a deep squat, Bob would bend forward to utilize legs, hips and back in the squat. To further enhance this movement, Bob created a harness with a bar inserted through it. The harness encircled the shoulder and allowed the attached bar to "ride" almost halfway down the back. This provided a better center of gravity and thus provided a very helpful overload method.

In 1947 in Nashville, Bob deadlifted 710 pounds and had a near miss with 719 in 1948 in Detroit. Bob's finest hour of deadlifting occurred in 1949 in his home town of Johnson City. Bob, while weighing 181, deadlifted 725 3/4. This was 4 times his bodyweight and certainly one of the greatest deadlifts of all time especially when one considers the fact that Bob was a "drugless" champion.

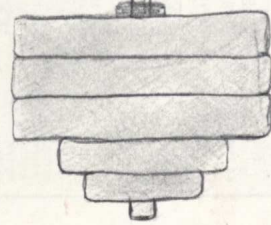
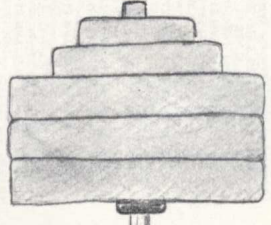
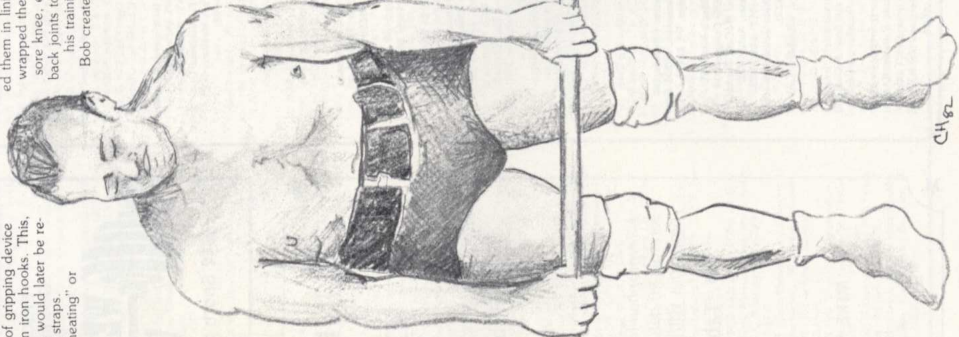
Even now this lift would rank third among light-heavyweights according to the Feb. 1982 issue of Powerlifting U.S.A. In fact, the 1981 World Powerlifting Championships

only 5 deadlifts in the 181,220 classes surpassed Bob's record made 32 years ago!

Through his records, his great strength and his ingenious power inventions, Bob Peoples will live forever in the power gyms of the world.

Reference: "Bob Peoples, History's Greatest Deadlifter". Iron Man 23, 18-21 (Jan-Feb 1964)

Any questions? If so, direct them to PETE VUONO, 342 Forest Avenue, Brockton, Massachusetts 02401.



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