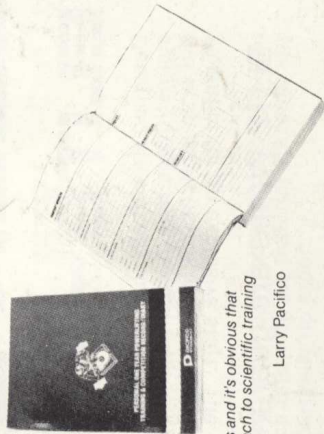


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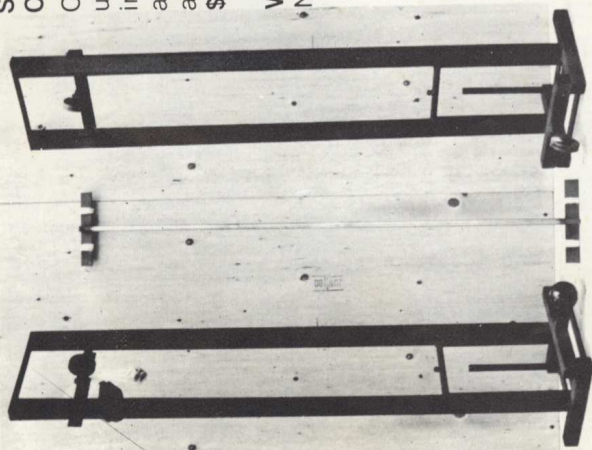
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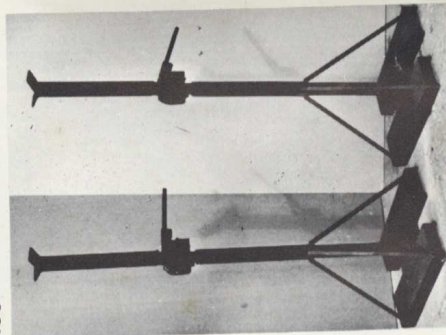
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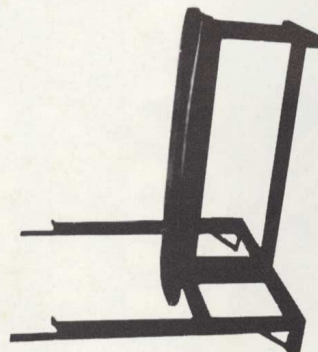
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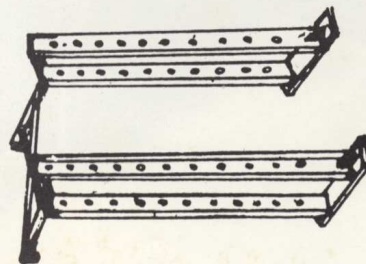
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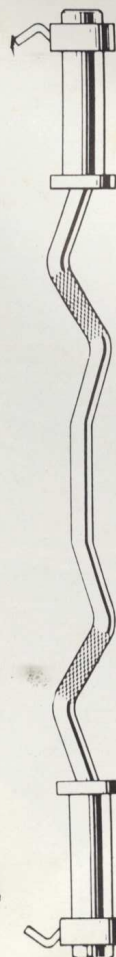


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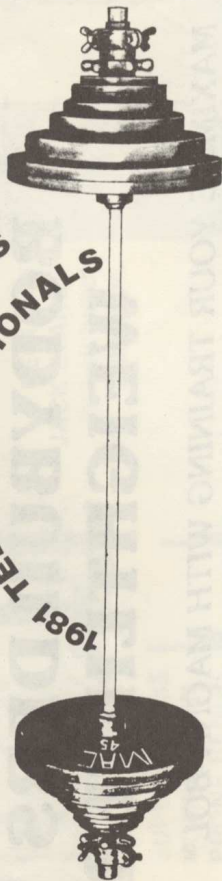
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INTERNATIONAL EDITOR Tony Fitton
FEATURE EDITOR Dr. Ken Leistner
TRAINING EDITOR Ron Fernando
RESEARCH EDITOR Dr. Tom McLaughlin
SUBSCRIPTION SERVICES Jean Lambert
STATISTICIAN Herb Glossbrenner
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CONTENTS

VOLUME 5, NUMBER 3

SEPTEMBER/1981

LATE BREAKING NEWS...Denis Reno/Mike Lambert.....	6
TEENAGE NATIONALS...Steve Sparr/Manuel Burrue.....	7
TRAINING WITHOUT SUITS AND WRAPS...Rick Branch.....	11
THOUGHTS ON POWER TRAINING...Andy Kerr.....	11
NUTRITIONAL SUPPLEMENTATION FOR POWERLIFTERS Dr. Mauro DiPasquale.....	12
THE FRED GLASS PEAKING ROUTINE...Tim McEllan.....	13
MAKING WEIGHT BY FLUID DEPRIVATION Dave Robertson.....	14
JIMMY MOIR...Dave Robertson.....	16
MORE FROM KEN LEISTNER...Dr. Ken Leistner.....	19
DYNAMICS OF THE DEADLIFT...Pete Vuono.....	22
PSYCHOLOGICAL ASPECTS OF POWERLIFTING Dr. Jud Biasotto and Dr. Ed Ritter.....	24
NUTRITION CORNER...Jack Digangi.....	26
BIOMECHANICS OF POWERLIFTING Dr. Tom McLaughlin.....	27
STARTIN' OUT...Fred Glass.....	28
TOP 100 FLYWEIGHTS...Jean Lambert.....	29
WHO'S WHO IN POWERLIFTING.....	32
FOR THE RECORD.....	48
1982 NATIONAL MEET QUALIFYING TOTALS.....	50
THE BENT OVER ROW...Ron Fernando.....	55
CLASSIFIED ADS.....	56
CALENDAR.....	57

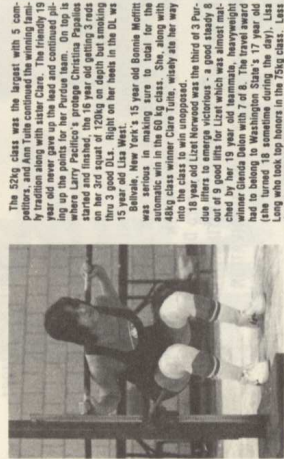
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NEXT MONTH...Kaz is back from the Green Bay Packers and back into Powerlifting, look for an exclusive interview next issue and a profile of Superheavyweight Chuck Braxton.

ON THE COVER...Mike MacDonald with his 608 lb. attempt at the BODY EXPO II meet, see page 6 for further details.

LATE BREAKING NEWS!!



Power Eater Chris Papadopolis didn't hit PRs but won and got Best Lifter.

Reno Photo

USA Teenage Women's National Championships

15 Aug 81 Nashua, NH

	SQ	BP	DL	T
44kg/97	154	104	237	485
.. Jager			242	476
	143	88	198	425
.. Scanton				398
44kg/105	143	66	187	398
.. Tuite			188	414
22kg/114	214	110	275	500
.. Tuite				478
.. Landy	203	110	284	570
.. Romere	195	77	248	490
.. Sawyer	159	93	209	462
.. Edmonds	137	77	242	457

TRAINING EXPO!!

A Special Lineup of Articles on all Aspects of Training!!

Gary after the meet and watched him consume 2 cheeseburgers, a 1/2 lb. Texan hamburger with cheese, a pastrami sandwich, and a roast beef sandwich, all with french fries, plus a side order of onion rings and a coke. Whew!!



Gary Arahamian's 804 opener Burnel photo

Hawaii came in with a great team and won the team title with 82 points, and the Pit of Flint, Michigan, took the 2nd place award off the backboard. The 3rd place team, came up with 64 points. These teams were followed by the Omaha Athletic Club, The Pit of Evansville, Indiana, Rhodes Fitness Center, B&W of Chicago, Louisiana Tech, El Dorado, Barbella Club, and Turlock, California. Outstanding lifters were Tavita Sagapulu (14-15), Joe Ladner (16-17), and Mark Schellen (18-19).

Manuel Burnel liked the way the meet was started with a prayer, and Steve Sparr was impressed with the rules. Joe Zarella conducted the rules clinic, weighed in, announced, judged and even spotted. Some of the guys helping out worked until they nearly dropped. Ken Brown among them, and several only got to eat once per day, and that was while they were on the job. The effects of drug use by some lifters seemed apparent to some observers, but all the lifters showed great potential and promise for the future.

No NCAA Powerlifting? Dr. Billy Jack Talton showed me a letter from the NCAA indicating that they do not recognize Powerlifting as one of their intercollegiate sports, which apparently put the kibosh on what was hoped to be the 1st NCAA meet between Louisiana Tech and the University of Texas back in April.

Ron Collins... will reportedly not be lifting in this year's Worlds as he is moving to South Africa. He may compete in club meets down there, but not internationally until South Africa gains IPF membership.

Just Married... Toni and Roger Estep on August 29th. They plan to move to California after Roger graduates from school in January.

K. Lyon	74.1	200	210	217.5	120	125	130	335	227.5	242.5	257.5	577.5
S. Nouacki	74.8	192.5	210	217.5	110	110	120	330	237.5	255	265	567.5
D. Sliom	74.5	200	215	217.5	117.5	122.5	130	330	212.5	230	242.5	557.5
R. McMoran	70.3	187.5	200	207.5	110	115	115	310	217.5	230	235	540
S. Rigby	73.9	187.5	192.5	192.5	95	110	105	287.5	212.5	222.5	222.5	510
B. Jacobs	73.4	170	177.5	180	105	110	110	280	205	220	220	500
J. Tipton	74.3	185	190	200	105	115	110	315	185	200	200	500
T. Pita	70.3	185	197.5	202.5	115	115	115	290	210	210	210	500
D. Collins	74.3	147.5	160	160	100	100	100	342.5	...	...	...	...
S. Black	73.4	160	160	160	100	100	100	...	...	...	...	...
A. Villars	73.9	235	242.5	242.5	107.5	115	115	...	...	...	...	...
R. Stuf	73.4	212.5	212.5	212.5	...	...	...	...	...	...	...	...
M. Cooper	74.1	210	210	210	...	...	...	...	...	...	...	...
G. Applegate	74.3	205	205	205	...	...	...	...	...	...	...	...
82.5kg/181lb												
BWT	81.0	265	277.5	282.5	175	187.5	192.5	470	237.5	247.5	255	717.5
H. Aton	81.75	245	262.5	267.5	155	165	170	432.5	250	270	280	702.5
N. Nairs	82.0	260	280	287.5	132.5	140	145	420	242.5	262.5	272.5	692.5
K. Krzyzniak	81.25	240	247.5	252.5	145	155	160	357.5	240	257.5	272.5	615
F. Cooper	79.5	177.5	187.5	195	137.5	145	150	337.5	202.5	215	225	562.5
C. Stancil	80.5	187.5	190	190	130	135	140	317.5	195	212.5	212.5	530
J. Trussler	82.7	187.5	195	195	130	135	140	290	205	222.5	222.5	495
R. Saull	81.0	207.5	217.5	222.5	145	155	160	357.5	...	...	...	...
T. Longo	81.4	207.5	217.5	222.5	...	...	...	...	...	...	...	...
J. Adams	82.2	245	245	245	...	...	...	...	...	...	...	...
90kg/198lb												
BWT	89.9	277.5	277.5	287.5	180	187.5	192.5	450	255	265	275	715
D. Beter	89.0	267.5	277.5	287.5	157.5	162.5	167.5	450	255	265	275	715
R. Marinello	89.0	240	260	267.5	152.5	162.5	167.5	442.5	240	267.5	275	710
A. Pouell	88.4	240	260	267.5	152.5	162.5	167.5	442.5	240	267.5	275	710
S. Lunapee	88.4	240	260	267.5	152.5	162.5	167.5	442.5	240	267.5	275	710
T. Payne	89.0	250	270	280	137.5	147.5	155	435	245	265	275	700
A. Sanchez	89.0	250	270	280	137.5	147.5	155	435	245	265	275	700
R. Kawamoto	84.2	222.5	245	260	137.5	147.5	155	407.5	230	250	267.5	607.5
D. Georges	83.0	210	215	220	132.5	140	142.5	380	227.5	235	245	582.5
M. Turner	90.0	215	215	220	132.5	140	142.5	380	227.5	235	245	582.5
J. Callahan	90.0	215	215	220	132.5	140	142.5	380	227.5	235	245	582.5
E. Kaphowski	89.5	207.5	232.5	240	107.5	125	130	360	212.5	232.5	240	600
P. Kilbourne	86.8	197.5	232.5	240	107.5	125	130	360	212.5	232.5	240	600
P. Morris	90.0	205	205	210	107.5	112.5	117.5	317.5	210	227.5	235	545
E. Berry	86.25	205	205	210	107.5	112.5	117.5	317.5	210	227.5	235	545
100kg/220lb												
BWT	99.0	272.5	282.5	287.5	182.5	190	192.5	475	272.5	285	295	760
S. Edmonson	99.0	260	272.5	287.5	177.5	187.5	192.5	450	260	280	290	700
J. Fusaro	99.4	222.5	245	260	142.5	152.5	165	375	255	287.5	295	670
E. McGough	93.0	205	217.5	217.5	137.5	147.5	152.5	370	222.5	237.5	247.5	617.5
P. Fletcher	97.7	215	222.5	227.5	132.5	142.5	147.5	355	205	227.5	236.5	582.5
D. Person	90.4	200	207.5	210	105	110	115	340	215	235	245	575
R. Monjure	90.4	200	207.5	210	105	110	115	340	215	235	245	575
B. Clattenburg	91.0	200	207.5	210	105	110	115	340	215	235	245	575
C. Wallen	97.75	210	210	210	...	...	...	...	...	...	...	...
110kg/242lb												
BWT	108.8	332.5	365	365	217.5	225	232.5	590	327.5	340	350	917.5
M. Schellen	108.8	332.5	365	365	217.5	225	232.5	590	327.5	340	350	917.5
D. Paganella	109	327.5	360	365	205	217.5	227.5	545	305	320	330	885
T. Phil	107.4	282.5	295	305	185	197.5	205	505	272.5	282.5	295	797.5
J. Kieler	108.4	272.5	295	305	207.5	215	220	480	250	272.5	287.5	767.5
S. Sanders	108.8	265	280	290	150	165	172.5	450	237.5	250	260	757.5
S. Helton	102.6	240	250	257.5	182.5	190	195	445	237.5	250	260	757.5
J. Hoover	107.0	227.5	232.5	237.5	152.5	160	165	465	387.5	400	410	615
125kg/275lb												
BWT	101.6	307.5	327.5	332.5	160	172.5	182.5	490	285	300	310	800
S. Dear	119.8	285	307.5	312.5	160	172.5	182.5	490	285	300	310	800
D. Kirsch	118.2	287.5	312.5	317.5	160	172.5	182.5	490	285	300	310	800
V. Cosenza	117.8	287.5	312.5	317.5	160	172.5	182.5	490	285	300	310	800
T. Maricic	119.6	287.5	312.5	317.5	160	172.5	182.5	490	285	300	310	800
J. Sejkic	121.8	287.5	312.5	317.5	160	172.5	182.5	490	285	300	310	800
S. Katsch	117.0	287.5	312.5	317.5	160	172.5	182.5	490	285	300	310	800
M. Redman	117.9	287.5	312.5	317.5	160	172.5	182.5	490	285	300	310	800
SHW												
BWT	130.6	310	327.5	345	205	220	220	575	300	320	330	895
G. Heigher	125.6	280	280	280	167.5	180	187.5	467.5	265	280	290	752.5
T. Drake	134.7	190	217.5	227.5	127.5	145	152.5	472.5	217.5	227.5	242.5	615
B. Lohman	188.5	205	227.5	257.5	117.5	125	130	400	205	227.5	242.5	580
J. Plambeck	166.2	365	440	440	...	...	...	...	...	...	...	...
G. Arahamian	138.8	280	280	280	...	...	...	...	...	...	...	...
C. Craue	131.1	287.5	312.5	320	...	...	...	...	...	...	...	...

TRAINING WITHOUT WRAPS AND SUITS

as told by RICK KERR

Rick is a lifter from New Jersey, who hurt his back not too long ago, but with some help from his chiropractor, some advice from PL USA Feature Editor, Dr. Ken Leistner, and a special training regimen, he has gotten progressively better after 4 months of treatment, while still squatting and deadlifting around the injury, and is now better than ever.

Rick feels a key part of his recovery is training WITHOUT wraps and suits, except until immediately before a contest. After hurting his back, Rick wasn't able to train with heavy poundages and as a result, felt that he didn't need to use any wraps or supports. As he came back from the injury, progress seemed steady so he continued to train without wraps or a suit. This proved to be more beneficial than he ever dreamed of, and Rick feels that this may be due to gradual strengthening of the ligaments and associated tissue without the support of outside aids. He got back up to 87% of his best max squat without the wraps, and began to set his sights on a meet. After he knew what meet he wanted to lift in, he put on the wraps and lifting suit, just to estimate his potential, and the results were fantastic! In training, he had made a 460 squat without the supportive gear, with a suit and wraps he made an easy 510 in training, and one week later he lifted in the New Jersey Open and went 501, 534, and gutted out a solid 551, a great squat for a 181 pounder, and a super improvement over his previous efforts. Hopefully, this training technique will provide similar benefits for other PL USA readers, and we thank Rick for passing it along to us. Rick would also like to thank Dr. Ken Leistner very much for his personal help as well as the lifters at the New Jersey Open who were great sportsmen.

THOUGHTS ON POWER TRAINING

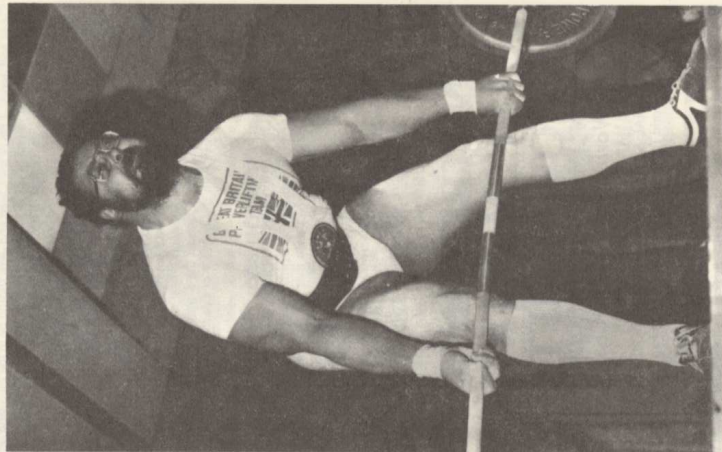
by ANDY KERR

European SHW Powerlifting Champion

ON THE SQUAT

It is my experience that those individuals physically suited to squatting adopt good body positions almost from the first rep. Those not quite so suited gradually obtain better positions through remedial training on mobility and/or weak muscle groups plus experimentation on stance and heel height. Those physically unsuited to squatting never attain the ideal technique. They make the best of a bad job by becoming very strong in their own movement pattern, even if it resembles a good morning. As a result of unfavorable leverages the squat is usually the worst lift for these chaps and they make up for it on the other lifts to a greater or lesser extent. These individuals will have one or more of the following handicaps to their squatting efficiency: Disproportionately long thigh, limited dorsiflexion of the ankles, chronically damaged knees, or hip joints that will not stand the strain of squatting with a wide stance.

I have seen an excellent squatter slip into bad form as a result of lax coaching. However, I am sure that most bad form in top lifters is caused by anatomical considerations rather than a lack of skill. Considering the subject of "short thighs", what counts is the relationship of the length of the femur to that of the tibia and spine, not it's absolute length. Thus, it is possible for a 6 ft. 2 in. Superheavyweight to have short legs for his height and a 4 ft. 10 in. Flyweight to have long legs for his height. There is no doubt that the squat and bench press are exercises where the man with the relatively short femur and humerus has an advantage. However, if this tendency is carried too far he becomes hopelessly disadvantaged on the deadlift. The best totals are put up by those individuals of normal to slightly short limb lengths. Lifters with either very short or very long limbs may set a record on one or two lifts, but seldom take the titles, Lamar Gant being the obvious exception. Precious McKenzie and Vasily Alexeev are of vastly different size but both are of perfectly normal proportion skeletally. Alexeev's gut is another matter.



Andy Kerr... is a great deadlifter, but his bench is coming up also.

POWER OUTPUT AS A FUNCTION OF LOAD VARIATION

When referring to work and power it is easy to fall into semantic pitfalls. These words have precise scientific meanings. However, as with many words, these have several common meanings. For instance, it will be very hard 'work' even for a powerful man to hold 300 kilograms in a half squat position for 10 seconds. But, since the weight did not move, he did no work and had zero power output.

With zero load, we have no power, and with super maximal load, we have no power. In between these points will be a power curve. I don't know the shape of the curve or where its maximum will occur, but I suspect that it will not be too far away from 50% of 1RM. Success in Powerlifting does not depend on power output. It depends on being able to exert the greatest force throughout the movement. At most, the lift must bar moves very slowly, therefore there is little ballistic effect. The lift must get the weight moving by exerting a force greater than its weight. Then it can be kept moving by a force equal to its weight. If the force exerted on the weight becomes less than the weight, the bar will come to a stop and start moving downward again. This does not mean that the lifter need not worry about generating speed with the bar. The faster he can get it moving in the strong ranges, the better chance he has of keeping it moving through the sticking points.

(Mr. Kerr's article continues on following page)

INTENSITY OF TRAINING

It appears from what I have read of the Bulgarians and Russians that under 50% should be considered warming up, conditioning, etc. Actual training is considered to be over 50%. The intensity will vary from session to session within the 'week', from 'week' to 'week' within the 'month', and from 'month' to 'month' within the training period for the major contest being aimed at. 'Week' and 'month' are in quotes because these periods may be 5-10 days and 28-40 days in length respectively as the training of these lifters is not constrained by having to earn a living in accordance with the normal calendar.

Kridyukov, one of Russia's leading coaches, recommends the following for his best Olympic lifters: 15,000 lifts per year. Of these 25% should be Clean and Jerks. Lifts of the Clean and Jerk should be in the following proportions: 50-60% intensity (21% of lifts), 61-70% intensity (29% of lifts), 71-80% intensity (33% of lifts), 81-90% intensity (14% of lifts), 91% plus intensity (3% of lifts). Thus, in the course of the year, the lifter should perform 250-300 lifts with 90% plus in the snatch and clean and jerk.

Keep in mind, that the individuals in question are full time 'occupational' weightlifters. Spare time lifts will not have the time or energy available for so much work. Also, Olympic lifting involves high speed complex movements. To attain and retain technical efficiency in the movements requires many lifts to be performed every week. The Power movements are much slower and simpler and once learned, the lifter can concentrate on strength building. He does not need a vast number of movements to practice his groove in the lifts. Contrast the number of times a golfer will swing his club in a week with the number of deadlifts a power lifter gets through.

RECRUITMENT OF FAST TWITCH FIBERS

I have read an article in SWIMMING WORLD entitled 'Muscle Strength Contribution Sport Swimming' by Costill, Shook, and Troup of Ball State University. These gentlemen state that it is the amount of force recruited by the muscle that determines the type and number of muscle fibers recruited. NOT the speed of the contraction. Against low resistances the slow twitch fibers are used. As high resistances the fast twitch fibers, Types A and B, are used to help the slow twitch fibers. It seems the terms fast and slow twitch can be misleading to the layman, and physiologists seem to be learning a lot more about muscles every day.

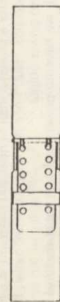
NUTRITIONAL SUPPLEMENTATION for POWERLIFTERS

by DR. MAURO DIPASQUALE
1976 World Powerlifting Champion

NUTRITIONAL SUPPLEMENTATION FOR POWERLIFTERS
by 1976 World Powerlifting Champion, Dr. Mauro DiPasquale

Death, Taxes, and Injuries are all inevitable in a Powerlifter's life. I can't help you with the first two (not yet) but perhaps I can point out a few nutritional remedies for the last. These remedies can be (and often should be) used in conjunction with other modalities such as drugs, chiropractic, physiotherapy, and surgery. I'll spare you the scientific and anecdotal evidence and just give you some facts and hints. I have personally found these regimens useful, but there are, of course, no guarantees.

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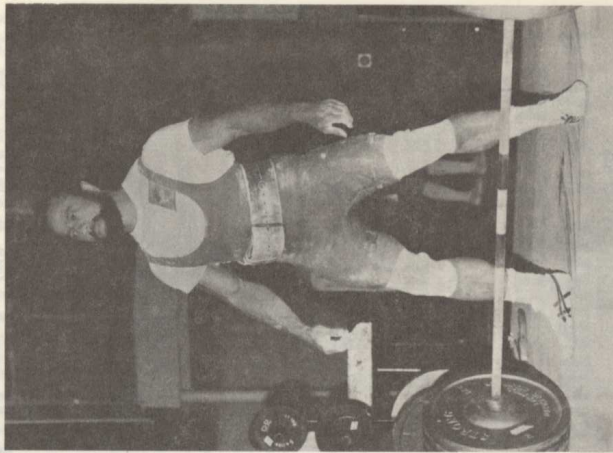
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- 2) Folic Acid - 10 milligrams/day.
- 3) Biotin - 1000 micrograms/day.
- 4) Niacinamide - 1 gram/day.
- 5) D-Pantothenic Acid - 1 gram/day.
- 6) Zinc - 50 milligrams/day.
- 7) Calcium - 1000 milligram (elemental).
- 8) Vitamin D - 1000 I.U./day.
- 9) Mega B Vitamins - 3 times per day.
- 10) A mega-multiple vitamin/mineral supplement should also be taken.



Mental Preparation...Mauro prepares for a deadlift at the World Games.

FOR CHRONIC INJURIES and for arthritic problems.

- 1) Vitamin C - 4 to 10 grams per day with aspirin as in acute injuries.
- 2) B12 plus intrinsic factors - 250 micrograms/day or B12 injectable - 2000 micrograms/week.
- 3) Vitamin A - 25,000 I.U./day.
- 4) Mega B vitamins with at least 100 units of all B vitamins - taken 3 times per day.

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- 2) B12 and intrinsic factors, 250 micrograms/day or B12 injectable - 1000 micrograms/week.
- 4) Mega B Vitamin - 3 times per day.
- 5) Vitamin E - 800 I.U./day.

FOR LEG CRAMPS

- 1) Calcium - 1000 milligram elemental.
- 2) Vitamin D - 800 I.U./day.
- 3) Vitamin E - 800 I.U./day.

FOR RELAXING BETWEEN WORKOUTS OR BETWEEN INJURIES

- 1) B6 (pyridoxine) - 500 milligrams/day.
- 2) L-tryptophane - 2 grams/day in one dose or in divided doses depending on when you want to relax.
- 3) D-Pantothenic Acid - 1000 milligrams/day.
- 4) Mega B Vitamins - 3 times per day.

FOR B.O. and/or JUNGLE MOUTH - so other lifters don't get injured!

- 1) Zinc - 50 milligrams/day.
- 2) Magnesium - 30 to 50 milligrams/day.
- 3) Mega B Vitamins - 3 times per day.

THE FRED GLASS PEAKING ROUTINE

by TIM MCCLELLAN

Assistant Coach, Surfbreakers PL Club

I'm sure many readers are familiar with some of the achievements of Fred Glass in the deadlift. For those of you not familiar with East Coast powerlifting, I'd like to cite a few of his accomplishments. Throughout the late 1960's and early 1970's, Fred broke his own deadlift record. He once pulled 455 lbs and the Jr. National record in the 123 lb class. In 1969 he barely missed a World record 485, which was turned down because his shoulders weren't set back. While training for the 1976 World championships he pulled 450-3 and 410-10 in his gym. Remember - all of this was achieved before the great influx of drugs and when most 123 lifters were pulling around 350.

Severe back troubles due to unequal leg lengths forced him into retirement for 2 years. Last year he came out of retirement and finished second in the World Masters competition. In that meet he set a 44-year old world record of 385. Despite his creeping age and harsh work schedule (60+ hours per week), Glass feels he is capable of pulling 410 plus in this year's Masters.

Through many hours of discussion he has helped me write the program he's been cycling his deadlift in this cycle there are two major parts of training the background and the peak.

Fred feels that the background routine is optional. Note that as it has been said in 'Powerlifting USA' many times, 'there ain't no such thing as a free lunch.' If you want a strong deadlift you're going to have to get in the gym and train hard. In the deadlift you cannot get something for nothing. It will take a lot of hard work. This background training is done to develop

down version of the heavy night, and emphasizes concentration on form. This also allows the body to rest for the next week's heavy triple. As an example, I'll show Fred's cycle before last year's World Masters meet.

On Tuesday of week 1, Fred would take 135-10, 225-8, 275-5 and 305-3 to insure a proper warm up. He then would pull 330-1, 350-1 and finally 360-3 which is the previously mentioned high triple.

On Friday night he would look down everything so it would look like 135-10, 225-8, 275-5, 305-3 and 330-3. We concentrated heavily on his form on Friday nights.

On week 2, his goal is to go up 5 lbs in his heavy triple, thus he pulls 135-10, 225-8, 275-5, 305-3, 330-1, 350-1 and 365-3. This Friday's workout is comparable to last Friday's lifting.

This principle is based on taking one step at a time. It may seem slow to some, but you've got to realize that after only two months you move a stale deadlift up 40 lbs. On this routine you give the body just the right amount of work and so they can live up to their potential.

The peaking routine that Glass uses calls for two sessions a week; one heavy and one medium. In the heavy session the goal is to work up to a heavy triple, which could and should move up 5 lbs every week for the 1-2 months before the contest. The medium night is a scaled

musculature. It also serves to condition the body to the punishment one takes when going out, as in a meet. As in all sports, you need a base to build from and this sets up that base. As long as a lifter gives 110%, any program will do.

What Fred does recommend for everyone is his peaking routine. He has a sincere belief in this cycle, and says it can increase a deadlift by 15-50 lbs.

Unfortunately, too many times less knowledgeable lifters never peak for a contest, thus they never attain what they are physically capable of. Many times this comes from a lifter burning out before the meet, as opposed to peaking properly, as the meet was to be an expected lifter.

Since the background routine is essentially a blasting cycle, one cannot stay on it forever. The maximum lifts will eventually level off, or possibly start to decline. If the lifter continues this program, he will arrive at the meet with stale lifts.

Saying on the blasting cycle too long can only harm the body. Hopefully, many lifters will realize this and switch to a peaking routine, so they can live up to their potential.

In Fred's case he went on it for one month and got up to a 380 triple. This peaked him, and only a suit that cut into his hamstring kept him from a 407 deadlift. He intends to use the routine again this year where he'll probably break his own record.

ATTENTION!

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Above...Fred Glass with a heavy DL attempt. photo courtesy McClellan.

MAKING WEIGHT by Fluid Deprivation

by DAVE ROBERTSON
Canadian Champion

Every lifter, unless he's a superheavy, is faced with the problem of making weight. Some of the standard methods are dieting, use of the sauna or diuretics. Both lack of food and the sauna affect strength. Diuretics, which cause fluid release in the body are often too effective, for they cause the release of fluids even after the lifter has made weight. These effects can last as long as 24 hours in some individuals. They can also cause cramps and alter the mineral levels in the body, and this will show up in the lifter's performance.

The system I have had success with is water deprivation. Firstly, you should try this system ahead of time at least twice to see just what it will do for you. You will have good idea of how much you can drop (I've gone down 4.5 kilo this way and got back after 4 kilo of the weight in approximately one hour). You must also be able to work out how long this system takes to work for you (up to 48 hours, very low or no fluid).

Once you have established what you can do, and how long it takes then train within a kilo of your 'sinking weight', the point from which you can make weight from with the fluid deprivation method.

Let's assume the weight in is Saturday 8 a.m. The system I use is as follows:

Wednesday: Everyone drinks an average of 12-14 drinks daily (juices, coffee, milk, etc.). After I have added up these figures for an average day, I will cut the number of drinks in half. (My half daily intake is seven drinks). I continue to eat wholesome carbohydrates (preferably apples and meat, eggs, and fish for protein. The caloric intake overall must be reasonable!

Thursday: Drink the same number of drinks as Wednesday, only half a glass, cup, etc. of each. This spreads the drinks out over the day. (If you drink 7 drinks Wednesday, drink 7 x 1/2 drinks Thursday). Eat bacon (well done) and eggs (2) for breakfast and an apple. For lunch have a portion of fish, some fresh vegetables, an orange and 1/2 fluids. The balance of your daily fluids in 1/2 portions constitutes your dinner!

Friday: Your breakfast consists of 1-6 oz glass of orange juice. No more food or liquid is allowed from this point. At this time I put on a garbage bag and warm clothes (sweat suit, towel around neck, etc.). The bag stays on until lunch time. The bag will allow your body heat to rise and you will lose further fluid. The timing on the bag may vary from person to person (longer, shorter). Throughout the 3 day exercise you must check your weight and monitor your progress frequently. You want to be at the required weight when the weight in begins.

What you have done in this exercise is naturally dropped your body fluids and consequently your weight, through fluid deprivation. The difference between this and diuretics is you will be able to regain this weight and keep it without adverse effects such as cramping and continued urination.

Saturday: After the weight in, do the following:

1. Drink 2 bottles of Gatorade at room temperature. This will give back about 2 kilos.
2. Drink one quart of orange juice at room temperature. This will give you additional carbohydrates and about one kilo. Room temperature is recommended to prevent cramping in the stomach.
3. Slowly eat some food including sandwiches and fruit. Continue the juices and eat throughout the meet.

This eating and drinking should provide enough materials to restore most, if not all your lost body weight. These foods will be readily assimilated by your body. Sometimes during the deprivation process you may feel tired and weak - simply take it easy and 'believe' you can make weight.

Now, before everybody goes off the deep end about how this system didn't work for them, or they didn't lose as much weight, remember, this is only the way I personally used the system. It also is not an answer to not having watched your food intake until 4 or 5 days before the meet. This is a fluid system only! Try it, adjust it as required and after you've refined it, for your purposes, add it to your meet preparation program.

Think light! Be light!

CHANGES. Larry Eggleston is no longer Region 2 PL Chairman. That position is now held by Tony Carpio. Larry has also resigned his chairmanship of the Classification Awards program. Joe Zarella has assigned that task to Dick Fisher, Box 242, Brookline, NH 03033. The Classification Award program experienced considerable growth under Larry's supervision, particularly among women lifters.

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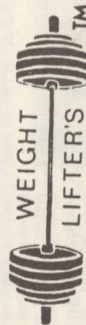
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AAU Master Olympic Lifter
1979 Asst. Coach USA Jr. World Team
Former YMCA National Champion

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JIMMY MOIR

by DAVE ROBERTSON

There are some places you just like to go to and some people you are glad to know. I've known Jim Moir since 1972 and I can't take this opportunity to give you some insight into his development as a powerlifter and all around encyclopedia of weight training knowledge.

Jim Moir was born in Glasgow, Scotland in 1936. Unfortunately for his competitors, this gives him 28 years of weight work in power building, olympic lifting and power lifting. Not only is this much experience helpful in running a health club (which he does, presently), but he can also handle the most common objection of prospective members - 'I'm too old to start'.

The foundation of Jim's work was the 3 olympic lifts in which he was proficient enough to be rated highest in the British Commonwealth Games. Journeying to Perth, Australia, he lifted on an inveterate knee, was tied for the silver and was left with the bronze being the heavier man. This meant, Jim felt, was the highlight of his olympic lifting career.

At the same time, Jim also went in some regional bodybuilding contests where he fared quite well.

He also participated in the odd lift British records. (Lifts such as the two hands, anyway lift, where a ringed weight and a barbell had to be raised over the head of the participant 'anyway' to arms length).

Since Jim is almost as old as Ron Collins (another one who'll last forever), Jim was also around when the strength set was contested (SQUAT, BENCH PRESS, CURL) and this was the beginning of a powerlifting career for him.

When Jim came to Canada, where he followed a journeyman trade as an electrician, he was involved with olympic lifting, at first. He actually spent some of his time coaching Russ Prior who was a Commonwealth champion, probably, in his basic instruction.

In 1972 Jim finished his powerlifting at the Ontario Provincial championships. The then prominent lightweight was a builder named Woody McCullough. He had a reputation of never having lost a powerlifting bout. Not 'til that day anyway. McCullough benched 305 to Jim's 300 but the cruncher came in the squat. McCullough opened with 385, which was OK, and called for a second of 405. Jim opened with 390 and also called for a 405 second. McCullough missed and Jim made the weight. Then the clincher - the bar was loaded wrong to 415. In an effort to save face and not repeat a weight, which at that point would not be the

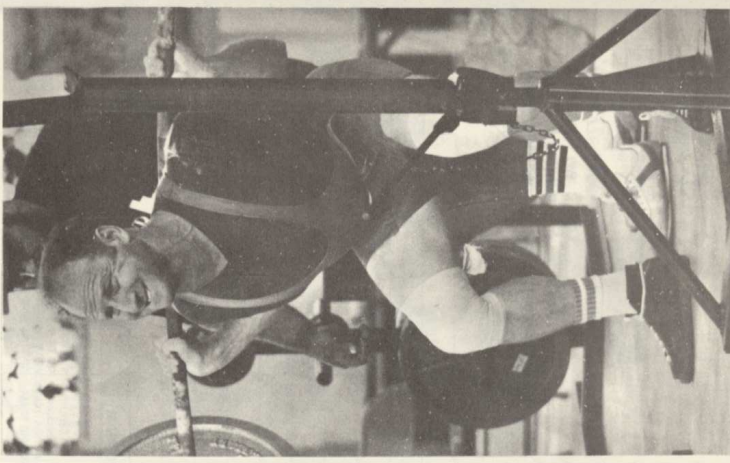
Great Britain.

In 1980, in a classic confrontation with Rick Crain of the USA, Jim was again a bridesmaid as Ricky yanked up a 661 deadlift, and won 1989 to 1993, and although some say the DL appeared to slip from Rick's hands before the down signal, Jim doesn't begrudge Rick of it in any way. Jim feels he lost the show when he cut his 622 squat high (one white) and had he made that one (it came up dead easy) he possibly could have had Rick beyond his ability in the DL.

Jim's attitude toward a contest is that if a lifter is successful with what he planned to do and if another life does more, then what could be done to change the outcome? Nothing. He only gets upset when he falls short of his own planned attempts and then loses. As time goes on Jim has more and more open minded when approached with new training ideas, and if someone has sound reasoning with his theories, Jim will listen to what he has to say. This is how Jimmy came to employ the 1 inch above parallel/half squat in his training. Once he began to realize that 'familiarity breeds contempt' he saw that few, if any, lifters made much more than they had ever had on their back, chest or in

their hands on psyche alone. When Jim is not training for a meet, he employs the basic 3 in training (3-5 reps) approximately 8-10 body building exercises and some running (2 times per week). The bodybuilding exercises are done for two sets for 15 reps. Eight weeks before a major meet the assistance work is shelved and each lift is allocated to a day where it is concentrated on as the 'lift of the day'.

Monday is a deadlift day and the heavy singles come every second week. The week in between is spent deadlifting off blocks or while standing on blocks. It is important to emphasize exactly what is meant to happen in Jim's singles. Jim believes that reps with 80 or 90 per cent of one's limits can do bad habits. For example, a lifter tends to round his back when he loses his position in the DL, then three out of a set of five, say, may be with back rounded. Five angles, perhaps, seem to form, at this point, a package to Jim's progress. Jim will caution here also, too, that he has had time over 28 years to build a conditioned foundation with moderate weights and five to eight reps. This also helps prevent tendon - ligament problems. To summarize, Jim



BIG SQUAT...Jimmy moved the weights very easily at the World Games.

..Jimmy was the winner, and McCullough never powerlifted again...

We knew Jim had the edge, having beaten Mauro in the quad, On his first attempt squat with 490, he stepped back from the rack, set up and waited...and waited and waited. Nothing. Assuming he had missed hearing the squat signal, he went down and up like nothing. At the top, he got the rack signal, and put the weight back. Two reds. Why? One judge said, 'You didn't wait for the signal'; the other judge said, 'The bar's too far down your back'. On his next attempt he put the bar up, went through the procedure - two reds. He asked the refs - 'NRA (no reason available)'. Next came one of the two times that Jim blew his cool since I've known him (the other was when he bought an unbecomingly 'harpiece' and I was killing myself laughing while he called me every name he could think of). He took 507, and out of control, got stopped in the bottom as he tried to rise from some 3 inches below parallel. Mauro went on to be World Champion.

In 1977, Jim lifted against Rick Gauger and Rick was able to win, with Jim a close second. During the course of the deadlift, big Doug Young said to Rick, 'You better get one in'. 'Good thing too, for Rick, as his 589 pounder opened and his 611 planned opener could have been big trouble.

In 1978, Jim did not go to Finland for family and financial reasons. And in 1979, Jim and together 584-374-573 for 1532 and a World championship at Dayton against Salih and Garner of

selected as a goal. By the second week of the 8 week program, Jim has already had the weight on his back for a 'sissy squat'. This simply involves untracking the weight, setting up in a squatting position until panic sets in. In this same workout Jim tries to break parallel with his projected contest opener (or darn close to it) and go as close as possible to the parallel position with his second attempt. Jim notes that you often hear of lifters handling poundages, in training, up to 100 lbs more than they get near to in contests. He attributes this to two reasons. 1. Many lifters are unsure of how to judge the legal depth of the squat (no matter what is in PL USA) and 2. training partners often let the guys who are going to suffer last get away with murder in training. It seems that if the guys get up from any depth at all with a heavy weight, their attitudes will tell them 'good lift'. Kill this problem in training and you'll make training weights in contests for sure.

To sum up - singles for sure. Half squats no more than 30-40 lbs over your limit, no more than 1 inch above parallel for the heaviest single. As far as supplements go, Jim feels that drugs are used to give the 'competitive edge' to a lifter. He feels the quantities should be moderate and medically regulated. He also feels they are often a

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To sum up - singles for sure. Half squats no more than 30-40 lbs over your limit, no more than 1 inch above parallel for the heaviest single. As far as supplements go, Jim feels that drugs are used to give the 'competitive edge' to a lifter. He feels the quantities should be moderate and medically regulated. He also feels they are often a

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Texas Hill Country Meet

October 3rd, 1981

for further information contact:

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(mistakenly listed in last month's calendar on Oct. 3, 1982)

ERRORS... If you see a mistake in the material in POWERLIFTING USA, please bring it to our attention. When appropriate, we'll make a correction in a following issue and credit the source. For example, we thank Tony Carpio for pointing out that under new policy established at the Senior Nationals, State records may be set at new meets within the state, at regional meets, and at national contests, rather than just at the State championship meet as we mistakenly reported in the August issue.

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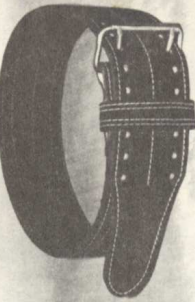
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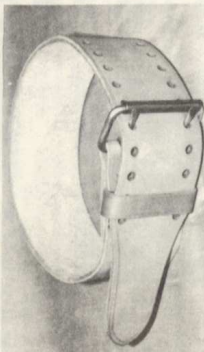
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More from Ken Leistner

I've had lots of comments re: the little 'rotation' method of PL as first put forth to me by Warren Salade and I just want to fill that out with some details. First, let's consider assistance work. I am not a great believer in many different exercises. One must choose those that he knows work for him, those that have been proven effective through the years or those that theoretically should work. If this sounds inexact, welcome to the machine. There are those exercises that we all 'just know' aren't worth a damn, impossible and/or uncomfortable to do and won't help your lifts anyway. Yet, there will be someone out there who swears by them and no doubt, it works for that one dude. There are others that everyone has used with good results but which may or may not work for out boy in question. Then, there are those that according to the 'books', will add pounds to the lift and meat to the frame, but which may not work for you, and may not be the work of anyone in the last 12 years. The following is opinion, my opinion, and is only as valid as anyone else's. Generally speaking, and that's all we can do in this situation, the following is a good assistance exercise, good enough that they will in some way help the average guy out there at one time or another. Inclines, barbell or dumbbell presses, dips, cleans, stiff legged DL, more squats. Yes, I know, I forgot at least 3 movements per lift that have helped the entire state of Texas, but what can I say? Any program must be built around the major lifts, and then add the assistance work to it.

Let's lay out a program using the principles mentioned in our previous article. We'll do it like this: Mon - Bench, Wed-Squat and DL, Fri - Bench, Mon - Squat, Wed - Bench, Fri - Squat and DL etc. First MONDAY: We'll be benching twice this week so there's no need to kill it each day. Arbitrarily, we'll do a heavy set of 5 reps. For assistance work, perhaps 3 sets of 6 reps in the incline, some lat pulldowns for 10-8-6 reps, increasing weight each set, triceps extension - 10-8-6 and curls, 8-6-4. That should be plenty. WEDNESDAY is a heavy day. We'll only be doing the two big lifts once this week, so a heavy triple in both, back to back heavy triple in both, back to back will do you in pretty well I would think. If you did this every week, you'd get stale, injured, or look for early retirement, but the beauty of this set up is that you will not have to do this on a weekly basis and there's plenty of time for rest. For assistance work, strugs, 10-8-6. Leg curls, 3x10-12, ab work (I'm very much in favor of heavy side bends to develop the obliques. These should be done once per

week and will help to provide stability to the upper torso during squats and DL), two sets of 15-20 reps, and if available, one set on the Nautilus pullover machine for 10 reps, all out. I think this is a neglected piece of apparatus with many advantages for the lifter, but we'll save that for another time. Now to FRIDAY of week one.

..there are those exercises we all just know aren't worth a damn!...

Bench again, but lighter, you have a choice here, of doing moderate benches for varying reps, or going heavy in the overhead press or incline (30 degree angle). Going heavy in the press, in terms of workload, is similar to doing the bench moderately as one can't handle the same kind of weight in the overhead movement. Let's use the press, working to a good triple. Although some in the game don't care for it, I feel that the press gives good work to the muscles directly involved in the bench, but this too is a discussion best saved for a future article. Follow the presses with DB row, 3x6-8 reps, then to dips, 10-8-6 or 10-6-4 using lots of weight. Make sure that you go through a full range of motion, coming all the way up and going as far down as is comfortable and safe. Most guys interpret the last two statements to mean that they can stand behind the press and shoot to the top with 300 lbs on their wrist. Go down as low as you can without tearing, in a controlled manner, and come all the way up. A lot of guys don't like to lock out on top because it's a bone on bone lockout with little muscular contraction needed to hold the position. This may be true, but again, human nature being what it is, the tendency is to bob up and down and get little out of this great exercise. If you have to come all the way up, there's a much higher probability that you'll do the thing correctly. After dips, you can do curls of some sort, or upright rows, 3x6-8 or progression for 8-6-4. This is primarily for protecting the long head tendon (of the biceps brachii).

As should be obvious, the bulk of the work and energy and concentration have to go into the majors. If that's done, these are not easy workouts. Let's continue:

To recap week one:

MONDAY
BP to x5
Inclines-3x6
Lat pulldown-10-8-6
Tri Ext-10-8-6
Curls-8-6-4

WEDNESDAY
Squat to x3, heavy
Curls-8-6-4

Week 4
MONDAY
Squats to x5 moderate
leg press-12-8-6
Strugs-10-8-6
Abs-2x10-15
Pullover-10

FRIDAY
Press to x3
DB row-3x6
Dips-10-6-4
Uprights-8-6-4
Tri pressdown-3x10

WEDNESDAY
BP to x1 or 2, max
DB row-3x6
Press behind neck-8-6-4
Upright row-10-8-6
Tri Ext-3x6

MONDAY
SQUAT to x6, moderate
leg press-12-8-4
leg curl-3x12
Cleans or rows-3-4x4-5
Cable row-10-8-6
Abs-2x12

WEDNESDAY
BP - to heavyx2
Lats-10-8-6
DB press-3x6
Chins-3x6-8
Tri Ext-3x6

FRIDAY
Squats to x4
DL to x4, moderately hvy
Strug-12-8-6
Squat-1x20, backoff set

Week 3
MONDAY
BP to x6, moderate
Flies-2x12 (injury prevention)
DB row-3x6
Tri Pressdown-3x8-10
Curls-8-6-4

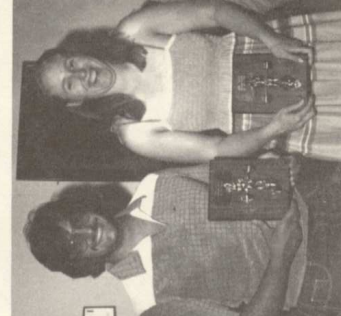
WEDNESDAY
Squats-max x2
leg curl-3x10
hypers-2x12
Abs-2x10-15
Pullover-10

FRIDAY
Inclines-6x3, heavy
Laterals-2x12-injury prevent.
Lats-10-8-6

Compliments to Ken..Dave Abrahamson has been a successful patient of Dr. Ken, but has been even more impressed with Ken as a friend. Dave mentioned to Ken that he wanted to try a new brand of lifting suit, and next time he came in for a treatment, Ken laid one on him..free of charge. He had only known Ken for about a month and here he was bending over backwards to help Dave's lifting. Dave is now lifting for Ken's team and feels that the enthusiasm of the young lifters combined with Ken's knowledge and dedication will make them a group to watch.

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WINNERS..from left to right, the 1981 Connecticut High School Pler of the Year, VIN CUPO, followed by the 1981 Connecticut Woman Pler of the Year, JULI GOULD, and the 1981 Connecticut Pler of the Year, JOHN VARRONE. Thanks to Joe Steele for photograph.



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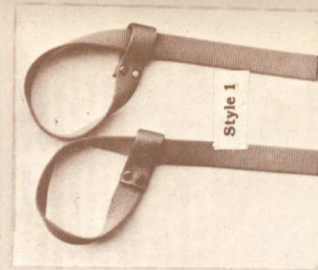
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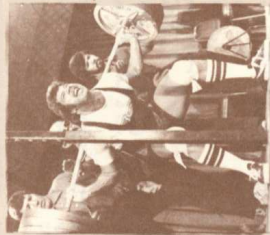
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DYNAMICS of the DEADLIFT

another in a fine series
by PETE VUONO

The advent of various articles of lifting attire has caused the maximum squat of most powerlifters to increase markedly. However, these pieces of clothing generally increase the squat more than the deadlift due to the fact that the deadlift is not as deep as that of the squat. In spite of all this added armor, the deadlift still produces the most weight of any other lift in the triathlon for most powerlifters. It is for this reason that the good deadlifter is both feared and respected by all. There are several individuals in powerlifting who are not as proficient in the squat and bench press as they are in the deadlift but because of their extraordinary skill in the latter lift, the contest is never decided until the final attempt, and I am sure that the reader knows of many a powerlifter who can easily set up a squat or bench press record, yet lose victory because of a poor deadlift. It is my desire to help the reader develop his or her deadlift to the fullest so that he or she may make the deadlift their King of Lifts.

1. TECHNIQUE.
The reader may have heard it said by many that the deadlift is not a technique lift and therefore technique needn't be practiced. I

ing, try using a hook grip with knuckles forward and backward. If either method serves to give better comfort and leverage, it could be a key to greatly increased poundages.

The next phase in deadlift technique is proper positioning of the back. Some powerlifters flatten the back by looking up and slightly conceiving the back going flat, but also upright, appearing as if this is all to the Olympic lifter's style of pulling. However, the Olympic lifter's forward on the ascent using both legs and back. What would be the result if they squatted completely upright? Indubitably, a lower poundage would result. For this reason, the flat back style may decrease one's deadlift poundage. In training, using lighter weights, experiment with the so called "humpback" style.

Take a normal grip and foot spacing. Now, instead of looking up or straight ahead, look slightly downwards. This head position will automatically round the upper back slightly. The rounded back lowers the shoulder down toward the bar, "lengthening" the arm effectively and enhancing leverage. This lengthening of the arm helps the powerlifter's lower body arise slightly before the stress is thrown upon the lower back. The humpback deadlift is the reverse of sticking one's chest forward while squatting. In the squat, the chest is jutted forward to shorten the back and produce more better leverage. In the deadlift, because the bar is now in front, the back is rounded to pro-

more better leverage. It is advisable that the reader give this method a try.

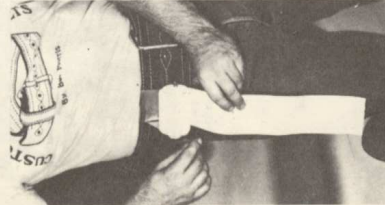
The final element of deadlift technique is the foot spacing. Most powerlifters prefer the conventional close or shoulder-width foot spacing. This type of foot spacing demands that the legs be bent and lift, along with the lower back. It also allows the lifter to locate the humpback style deadlifting. Some lifters, however, have had excellent results using the so called "Sumo" style stance.

This style is one in which the lifter takes an extraordinarily wide stance and places the hands between the legs. This style has several advantages and disadvantages. Some advantages are that the wide foot spacing of the Sumo style brings the hips into play which are the largest muscles in the body. Also, a wide foot spacing brings the body down towards the bar, decreasing the distance to pull the bar. This can greatly help people with short arms to gain better leverage.

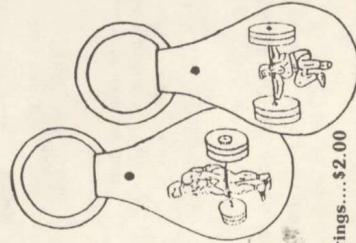
Although the wide foot spacing brings the hips into play, it decreases emphasis on leg action. Therefore, the legs cannot be used as extensively as in the conventional style. Also, this wide stance points the toes more outward, which can adversely affect a lifter's balance.

It is the opinion of this writer that each lifter, in training, should try the Sumo style, otherwise, one may never know what style has the most positive effect on his deadlift.

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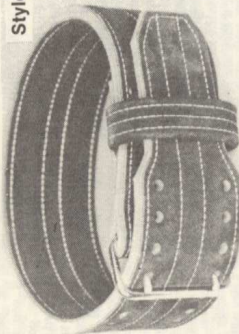
ALL PRICES INCLUDE SHIPPING

Dip Belt...\$25.00

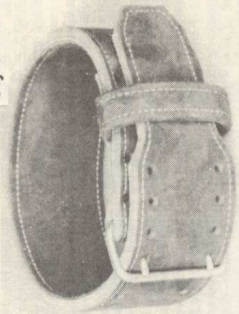
Pat's Power Products

124 East State Street, West Lafayette, IN 47906
Ph. Office: 812-753-4639; Shop: 317-743-3481

Style 2 Stitching



Style 1 Stitching



4S3C

4S3C

MODEL NUMBER	NO. OF LAYERS	TYPE COVERING	APPROXIMATE THICKNESS	BUCKLE PLATING	BUCKLE WIDTH	STYLE STITCHING	BELT PRICES
2N1	1	Nat.	7-mm	chrome	2"	none	24.00
3N1	1	Nat.	7-mm	chrome	3"	none	28.00
3S1	1	Suede	9-mm	chrome	3"	1	42.00
4N1	1	Nat.	7-mm	zinc	4"	none	31.00
4N2	2	Nat.	11-mm	zinc	4"	1	51.00
4N3	3	Nat.	13-mm	zinc	4"	1	61.00
4N2C	2	Nat.	11-mm	zinc	4"	2	55.00
4N3C	3	Nat.	13-mm	zinc	4"	2	65.00
4N2CD	2	Nat. Dyed	11-mm	chrome	4"	2	61.00
4N3CD	3	Nat. Dyed	13-mm	chrome	4"	2	71.00
4S1	1	Suede	10-mm	zinc	4"	1	54.00
4S2	2	Suede	12-mm	zinc	4"	1	64.00
4S3	3	Suede	13-mm	zinc	4"	1	74.00
4S1C	1	Suede	10-mm	chrome	4"	2	60.00
4S2C	2	Suede	12-mm	chrome	4"	2	70.00
4S3C	3	Suede	13-mm	chrome	4"	2	80.00
4S1CD	1	Suede with insert	10-mm	chrome	4"	2	69.00
4S2CD	2	Suede with insert	12-mm	chrome	4"	2	79.00
4S3CD	3	Suede with insert	13-mm	chrome	4"	2	89.00

1. All belts except Model No. 2N1 have double prong buckles.

2. Fifteen colors of Suede offered: Black, Navy blue, Royal Blue, Brown, Rust, Light blue, Light green, Gold, Red, Gray, Purple, Maroon, Light brown, Dark Green and Sand.

3. All belts are 100-mm wide and IPF and USPF legal.

4. Stitching Style 1 is one time around belt; Style 2 is two extra rows.

5. All sales out of United States add 10% for postage.

6. Postage included on sales in United States.

7. No COD orders please.

NAME _____

PHONE _____

ADDRESS _____

CITY _____

STATE _____

ZIP _____

WAIST SIZE _____

MODEL NO. _____

MAIN COLOR _____

COLOR INSERT _____

On SCD models only - 23

POWER-RESEARCH

— dedicated to bringing Science to the sport of Powerlifting

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effect future performance, keep in mind that exceeding one's performance expectations is especially rewarding, whereas falling below one's expectations is very unrewarding. For example, two lifters each bench 310. One lifter is right; there is no room for error, and the task may cease to be fun anymore. The other guy is depressed because he's used to doing 300 before. The other guy is rewarded because he's used to doing 300 before. The other guy is rewarded because he's used to doing 300 before. The other guy is rewarded because he's used to doing 300 before.

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THE VIRGINIA OPEN

November 7th, 1981

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will pay off (self-justification of effort). We believe we'll get what we pay for, and it may take an unusually long time before we realize that something we've invested so heavily in just isn't going to work.

Increased effort and expenditures increase commitment, and under such circumstances it is very difficult for us to cut our losses. There is an interesting term for this when it comes to gambling. It's called the 'Gambler's Fallacy.' It is a widely believed fallacy that just because one has lost so much, he is bound to start winning pretty soon. In a game based on pure chance, such as the outcome of a flip of a fair coin, the fact that the coin happens to come up, say, tails four times in a row, does not change the fact that the probability of a head on the next toss is still 1 out of 2, or 0.5. A run of 'bad luck' does not change the probability of the two events (heads, tails). However, you may begin to question

Nutrition

Corner
BY JACK DIGANGI

SALT

Salt is composed of primarily sodium and chloride, with a very minor mixture of other inorganic chemicals. One of these is the element iodine, which is found to be nutritionally vital.

Salt is widely used in industry. About 95 percent of all the salt produced is used for other than food purposes. Even the word "salary" comes from the word salt as it was used as a reward or payment for services rendered. Or, how about seasoned lifters being worth their salt.

Not only is salt recognized as a necessary nutritional component but also salt adds much flavor and taste to our food. It is then a learned taste and a matter of custom - one which most people abuse. Do you sell your food before even tasting? It's just a habit, but one, like smoking high in the gym, that can lead to a problem.

The sodium (Na) in salt is vital to the maintenance of osmotic pressure of the body fluids, water, acid-base balance and the ability of

either! Another problem with excess salt consumption is that sodium will hold water. (Diuretics to the rescue!) Do you frequently salt your foods before tasting? Must you salt everything you eat? If so you are asking for 2.7 lbs of excess water along with a rise in your systolic/diastolic figure!

When salt intake is limited, nausea, vomiting, apathy, dizziness, exhaustion and cramps will occur. This is usually because of the combination of extremely heat and physical exhaustion. These symptoms can be relieved by a water and salt mixture. However, it is not advisable to swallow salt tablets before the end of the competition!

SKINNY MAN'S OPEN. Tim (No Muscle) Kelly suggests a contest with minimum height classes to go along with the weight classes, like...114, must be 5 ft. 5 in. or over, 123.5 ft. 6 1/2 in., 132.5 ft. 8 in., 148.5 ft. 9 1/2 in., 165.5 ft. 11 in., 181.6 ft. 1 1/2 in., 198.6 ft. 2 in., 220.6 ft. 3 1/2 in., 242.6 ft. 5 in., 275.6 ft. 6 1/2 in., SHW/6 ft 8 in. That's one way to get rid of the competition!

The Colorado Situation. Phil Brady informs me that after sending in some 70 odd registrations 5 months ago, he asked Joe Z when he could expect the monies that were to be returned to the associations (\$50 per registration, so much per meet sanction, so much per team registration, etc.). He did not receive an answer and wrote again, pointing out that no one seemed to be receiving THE POWERLIFTER in his area. He did not receive an answer to that letter either. Joe Wing attempted to get an answer at the Senior Nationals about when lifters in his area (Colorado) would receive THE POWERLIFTER and did not receive a satisfactory response, and pointed this out to Phil, who asked that I mention the matter in PL USA.

FINNISH DL UPDATE. William G. Ryan DDS reports that elbow problems may be aggravated by the continuous tension of the sets of tens in the first phase of the training program. He recommends that when elbow activities preclude use of the normal stiff-leg deadlifts, good mornings may be substituted with good effect.



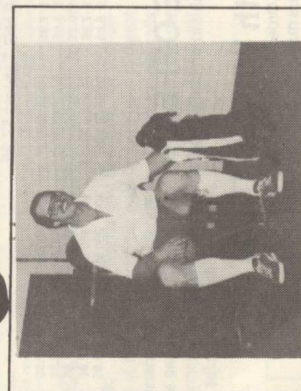
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The Biomechanics of Powerlifting

by Tom McLaughlin, Ph.D.

Director, Biomechanics Laboratory
Dept. HPR, Auburn University
Auburn, Alabama 36830

Dr. Tom McLaughlin's credentials as a researcher in the field of Powerlifting are impressive. He has had articles published in MEDICINE AND SCIENCE IN SPORTS, RESEARCH QUARTERLY, JOURNAL OF BIOMECHANICS, and THE ENCYCLOPEDIA OF PHYSICAL EDUCATION, FITNESS, AND SPORTS and he has made presentations to such groups as the AMERICAN COLLEGE OF SPORTS MEDICINE, the AMERICAN SOCIETY OF BIOMECHANICS, and the INTERNATIONAL CONGRESS OF SPORTS SCIENCES. Following graduate studies at the University of Illinois at Urbana-Champaign, he became an Assistant Professor at Auburn University, Director of the Interdisciplinary Biomechanics Laboratory, and was a co-founder of the National Strength Research Center. He was also an invited Research Professor of Biomechanics at UCLA in 1979.

ASSISTANCE EXERCISES ABDOMINAL TRAINING PART ONE

Whenever the average person thinks about weightlifters, one common (and embarrassing) image most often comes to their minds, the infamous pot bellied physique of the Great Russian Lifter, Alexeev. Personally, I can recall dozens of times when I got the inevitable question from one of these unformed souls, which was usually phrased like... "will you get, or do most powerlifters have a big gut like that fat Russian guy?" I would then laboriously try to explain that most powerlifters (especially all of us non-superheavyweights) were indeed reasonably fit, non-pot, and (usually) not too embarrassing in appearance. If only that mental image of Alexeev as a "classic" weightlifter could somehow be replaced by a non-pot bellied lifter like a Kazmaier, etc.

Questions abound when it comes to abdominal training, especially where the powerlifter is concerned. "Should a powerlifter train his abs? Will ab training hurt or help the powerlifter's performance afterwards in a workout? Which exercises should one do, and how many? Why do the abs do dangerous? Why do the abs do dangerous the powerlift anyway?," etc., etc.

All the above are fair questions to ask and Biomechanics research has a lot to offer in this area of assistance exercises. So, for a while, we'll look at what Biomechanics tells us about abdominal and other assistance exercises (returning later, of course, to the powerlifters).

A reasonable amount of Biomechanics research has been compiled to date in the general area of abdominal training. For example, a good review of this area by the President's Council on Physical Fitness and Sports (see Ref 1) looks at 44 research studies on exercise

reported studies (yet) that have monitored abdominal activity during powerlifting (especially during squats and deadlifts) but my hunch is that even the rectus abdominus is involved at least somewhat along with the other 3 during heavy powerlifting. In Biomechanics work in our lab at Auburn I have noted a number of times while analyzing high speed film of squats or deadlifts that Superheavyweights have visible contraction and shaking of the abdomen during max lifts, especially near difficult sticking points. Also, in some pilot work analyzing one subject doing stiff legged versus regular deadlifts, I monitored the rectus abdominus and found some activity. So, until more work is done, it is probably safe to say that most, if not all, of the abdominals contract during heavy powerlifting with greater intensity as the weight gets heavier.

What do these abdominal contractions do? Certainly, every powerlifter has felt his abs tighten during heavy efforts, squats, good mornings, bent rows, deadlifts, etc. To briefly summarize, it is clear that the abdominals and weightlifting belts properly used help increase intra/abdominal pressure, which results in reducing low back stress and permitting more weight to be lifted safely. Obviously then, one should want to develop stronger abdominals for powerlifting as well as using a good belt.

But, how does one begin to exercise the abdominals to better train them and create intra/abdominal pressure? We'll explore this next month and critique various exercises. Let me leave you with a thought to mull over for now. MAYBE we all are training the abs, at least fairly well, with heavy squats, deadlifts, etc. I remember how he did his ab work and being surprised by his answer that did none. Is extra ab work needed or not? I'll pick this up next month with more detailed look at ab exercises. Until then, look for my upcoming ad in PL USA for the total abdominal belt, which covers your entire stomach and provides maximum intra/abdominal pressure everywhere. It's sure to be a REAL knockout. (Just kidding).

REFERENCES:
(1) "Exercise and Abdominal Muscles" edited by R. H. Clark, Physical Fitness Research Center, National Strength Research Center, 1976, (published by President's Council on Physical Fitness and Sports, Washington, D.C.)

ACKNOWLEDGEMENT:
(1) Some of these ideas were developed from conversations I had with Dr. F. Zenitke, Professor of Bio Mechanics, Department of Kinesiology, UCLA, whom I was visiting the Professor there in 1979.

NEW GYM. Likeable Vinco White has opened a gym at 1008 Quarter St., Charleston, West Virginia 25301 and invites all lifters to stop by for a visit.

in powerlifting, particularly with long attempts in deadlifting, for example. (Acknowledgement No. 1).

Because of these valuable results from increased intra/abdominal pressure, it is probable that stronger abdominals help the powerlifter keep his back off the floor as well as allow him to lift more weight safely. But the BELTS all wear attempt to do externally the same thing the abdominals are doing, that is to increase intra/abdominal pressure. The tighter the belt, the better, and, just as Pacifico and others first started doing years ago (and probably very intelligently) by putting the wider part of the older belts in front, over the stomach, one wants the wider part of the belt over the abs, NOT the low back, to increase intra/abdominal pressure as much as possible.

There is little question that a good, tight, wide belt applied to anyone (whether a powerlifter, mover, longshoreman, etc.) will result in less low back stress and greater weights lifted without injury.

To briefly summarize, it is clear that the abdominals and weightlifting belts properly used help increase intra/abdominal pressure, which results in reducing low back stress and permitting more weight to be lifted safely. Obviously then, one should want to develop stronger abdominals for powerlifting as well as using a good belt.

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Startin' Out

A special section dedicated to beginning lifters.

Helping out the Novice Lifter by Masters Champion, Fred Glass

Numerous articles have been written concerning the training routines and diets of Larry Pacifico, Mike Bridges and all the superstars of powerlifting. Unfortunately, few articles have been written pointing to the novice or beginning lifter.

Having coached lifters ranging from world champions to novices, I'd like to stress the most important part of the training cycle - contest preparation.

After competing in over 125 contests, I've noticed one common mistake of the novice lifter - too many men are bombing out, or giving a poor showing of their capabilities. Very few beginners live up to their potential.

In most cases, 3 major faults lie in the training routine. The first I'd like to discuss is the program used in the 10 days prior to a contest. Many beginners train harder and harder as the meet gets closer. I've even heard of some lifter going for a maximum lift 2 days before the meet! They do this in good order to see what they will be doing in the meet.

In the past 17 years I've found out that it takes approximately 10 days from recover from an all-out

starting attempt. A recommended procedure is doing your weight so that it is even with the bar that is on the platform, e.g., if the contest bar is at 250, do your set of 250-1 at this time. Should a major tie up occur on the platform bar, you can always go back and do a few extra light reps. This is what has worked best for me, and I'd advise it for all lifts.

The final mistake lies in the post meet work outs. As previously mentioned, it takes about 10 days

to recover from a maximum lift. Take a few days off afterwards. Work out very light 3 or 4 days later, and slightly heavier 6 to 7 days later. The following week you can start all over again.

With proper stretching and these techniques you can peak for the meet and also minimize injuries. It has helped me win 110 trophies and set a Masters World record, and I think it will work for you. Good luck!

The Voice of Experience. Fred Glass with some of his many trophies photo courtesy Tim McClellan



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FLYWEIGHTS

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For USA lifters competing from August 1980 through July 1981

SQUAT	BENCH PRESS	DEADLIFT	TOTAL
457 Dunbar, C 11/17/80	314 Dunbar, C 11/17/80	451 Sanders, B 7/11/81	1180 Dunbar, C 11/17/80
458 Cuthbert, J 6/11/81	315 Cuthbert, J 6/11/81	452 Cuthbert, J 6/11/81	1191 Cuthbert, J 6/11/81
459 Ellis, M 2/12/81	320 Ellis, M 2/12/81	453 Ellis, M 2/12/81	1203 Ellis, M 2/12/81
460 Heath, D 4/18/81	321 Heath, D 4/18/81	454 Heath, D 4/18/81	1205 Heath, D 4/18/81
461 Escobedo, H 6/13/81	270 Kna, R 2/28/81	418 Heath, D 7/11/81	1030 Pannelli, M 3/29/81
462 Escobedo, H 6/13/81	271 Kna, R 2/28/81	419 Pannelli, M 3/29/81	1115 Pannelli, M 3/29/81
463 Pannelli, M 3/29/81	255 Bluchetti, C 4/18/81	413 Pannelli, M 3/29/81	1000 Heath, D 7/11/81
464 Pannelli, M 3/29/81	256 Kna, R 2/28/81	414 Pannelli, M 3/29/81	995 Pannelli, M 3/29/81
465 Pannelli, M 3/29/81	257 Kna, R 2/28/81	415 Pannelli, M 3/29/81	984 Pannelli, M 3/29/81
466 Pannelli, M 3/29/81	258 Kna, R 2/28/81	416 Pannelli, M 3/29/81	984 Pannelli, M 3/29/81
467 Pannelli, M 3/29/81	259 Kna, R 2/28/81	417 Pannelli, M 3/29/81	984 Pannelli, M 3/29/81
468 Pannelli, M 3/29/81	260 Kna, R 2/28/81	418 Pannelli, M 3/29/81	984 Pannelli, M 3/29/81
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474 Pannelli, M 3/29/81	266 Kna, R 2/28/81	424 Pannelli, M 3/29/81	984 Pannelli, M 3/29/81
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496 Pannelli, M 3/29/81	288 Kna, R 2/28/81	446 Pannelli, M 3/29/81	984 Pannelli, M 3/29/81
497 Pannelli, M 3/29/81	289 Kna, R 2/28/81	447 Pannelli, M 3/29/81	984 Pannelli, M 3/29/81
498 Pannelli, M 3/29/81	290 Kna, R 2/28/81	448 Pannelli, M 3/29/81	984 Pannelli, M 3/29/81
499 Pannelli, M 3/29/81	291 Kna, R 2/28/81	449 Pannelli, M 3/29/81	984 Pannelli, M 3/29/81
500 Pannelli, M 3/29/81	292 Kna, R 2/28/81	450 Pannelli, M 3/29/81	984 Pannelli, M 3/29/81

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Vitamin C (Natural Ascorbic Acid)	500 mg	...
Lemon Bioflavonoids	50 mg	...
Ascorbyl Palmitate	50 mg	...
Hesperidin Complex	50 mg	...
Rutin (Green Buck wheat)		
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Vitamin B ₁₂ (Hydro Cobal Conc. & Yeast)	130 mcg	216%
Biotin	130 mcg	44%
Pantoic Acid (d cal pan & yeast)	130 mg	1300%
Choline Bitartrate (Soy)	130 mg	...
Para Amino Benzoic Acid	130 mg	...
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Copper (Amino Acid Chelate)	4.5 mg	225%
Zinc (Amino Acid Chelate)	15 mg	225%
Manganese (Amino Acid Chelate)	100 mg	...
Potassium (Potrate)	150 mcg	...
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Super Pack - The original high potency vitamin-mineral pack
One packet contains:
• Vitamin A 25,000 IU • Vitamin D 1400 IU • Vitamin E 600 IU • Balanced B Complex 125 mg. sustained release • Vitamin C Complex 1500 mg. • A complete Multi-Mineral Complex • Digestive Enzymes
30/\$18.00 60/\$33.00 90/\$45.00

One Pack - For the individual who desires a medium potency pack
One packet contains:
• Vitamin A 10,000 IU • Vitamin D 400 IU • Vitamin E 200 IU • Balanced B Complex 50 mg. • Vitamin C Complex 1000 mg. • A complete Multi-Mineral Complex • Digestive Enzymes
30/\$12.00 60/\$21.00 90/\$29.00

One Gram Liver (15 grain) with B-12
Argentine Beef Liver, a 90% Protein
100/\$3.00 250/\$7.00 500/\$13.00
1000/\$24.00

* If you would like a complete list of Marathon Nutrition Vitamin, Mineral and Glandular Supplements, check here. ☐

SHOP BY PHONE OR MAIL

PRODUCT	SIZE	QTY.	PRICE	EXT.	PRODUCT	SIZE	QTY.	PRICE	EXT.
Gold Medal Pack					B Complex 125 mg.				
2 Gram Liver					Protein				
Super Pack					Multi-One				
One Pack					One Daily				
One Gram Liver					Super C				
B-15					Maxi-Mins				
TOTAL \$									

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ATTENTION

Beginning to Intermediate Lifters

Are you fed up with all of the endless trial & error involved with developing a winning total? Are you frustrated with all of the conflicting advice you hear daily about diet, training, drugs, etc.? Worst of all, are you disgusted with tossing your hard earned dollars away on so-called guaranteed routines? I know that I am, so I am announcing the creation of a **TOTALLY NEW CONCEPT** in powerlifting seminars: **Ron Fernando's MONITORED TRAINING SYSTEMS**. What makes this system unique? All advice is given on a two, four or six month basis. Paying \$25-50 per routine for a 'one shot deal' is not only highly expensive, but unrealistic, as a routine needs to be monitored over a minimum period of 2 months to ascertain its effectiveness. Therefore, the lifter chooses either a 2, 4, or 6 month subscription where their progress will be monitored carefully and adjusted accordingly. That is the scientific way to the winning total.

Okay - you might say - what do I get for my subscription? *Unlimited letters during the period of subscription.*
A bi-monthly analysis of your routine.
A personalized biorhythm chart.
Unlimited telephone advice (no collect calls, please).
PLUS...a Money Back Guarantee on all of the above services

The Cost - hold on your wraps and belts, folks
 • 2 months subscription \$25.00
 • 4 months subscription \$40.00
 • 6 months subscription \$60.00

Through the use of advanced IBM Word Processing systems, all training requests will be processed the same day received. Since I am not a 'name lifter', but one who is closely associated with many World and National Champions I don't have to justify a high price. I sincerely want to help the beginning to intermediate lifter - the subscription fee is just to cover my time involved.

RON FERNANDO
 5600 E. Orangethorpe No. 1403
 La Palma, California 90623
 (714)-739-2970

ATTENTION LIFTERS

The 'Mercedes Benz' of lifting belts, the **BOB MORRIS Belt** is now available from Ron Fernando. All standard styles, any color of suede. Prices available on request.

WHO'S WHO IN POWERLIFTING



Former World Champ and Record Holder, Tony Fratto, is back from Italy and heavily into bodybuilding. In a recent contest he won his height class, Most Muscular, and Best Legs. He still lives for heavy power training despite the injuries and keeps him off the lifting platform. Plans to open a gym in Butler, PA (4 for powerlifting, 1/4 for bodybuilding).



Winner of his class at the World Games, Chokichi Ito began powerlifting in 1976 and holds the Japanese total record at 60kg. He is a man of many talents, having won the bodybuilding title of his precinct in 1976 and 1980, along with being a proficient gymnast and karate practitioner, and a Moto-Cross champion. Photograph courtesy of Susumu Yoshida.



11 year old **JAMES HAWKINS Jr.**, son of highly ranked, national competitor and meet promoter, **JAMES HAWKINS Sr.**, weighs 97 pounds and lifted 215 at the 1981 Region III meet in Dothan, Alabama. This lift exceeds the Alabama State High School record, and represents one of the youngest and strongest lifters on the record. Photograph taken by Jan Sewell.

WEST PENN IRONMEN'S OPEN

7/25/81-PITTSBURGH, PA

	SQ	BP	DL	T
114. P. Seneca	235	180	360	775
115. A. Bacz	215	145	325	685
120. J. Miller	300	165	435	810
121. E. Jackson	---	---	---	---
132. K. Howard	330	155	405	890
133. R. Human	230	180	360	775
140. R. Allen	435	285	550	1270
141. F. Washington	430	320	460	1220
142. D. Caplan	330	270	365	965
143. F. Washington	330	270	365	965
144. P. Campbell	230	275	325	830
145. P. LeCroyer	250	165	325	740
146. R. Nelson	525	375	585	1435
147. J. Galloway	415	270	475	1160
148. J. Galloway	275	245	450	1070
149. J. Galloway	275	245	450	1070
150. J. Galloway	275	245	450	1070
151. W. Carroll	330	230	390	950
152. J. Galloway	330	230	390	950
153. J. Galloway	330	230	390	950
154. J. Galloway	330	230	390	950
155. J. Galloway	330	230	390	950
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195. J. Galloway	330	230	390	950
196. J. Galloway	330	230	390	950
197. J. Galloway	330	230	390	950
198. J. Galloway	330	230	390	950
199. J. Galloway	330	230	390	950
200. J. Galloway	330	230	390	950

Team standings: 1st: Huntington-41 pts; 2. West Penn-31 pts; 3. Rockwell-21 pts; 4. Ambridge-11 pts; 5. Champions-10 pts; 6. Summer-7 pts.
 *state record, BL - best lifter.
 Here are the results of the West Penn Ironmen's 1981 meet. The results were as follows: 1st place in the 150 lb. class went to J. Galloway, 2nd to J. Galloway, 3rd to J. Galloway, 4th to J. Galloway, 5th to J. Galloway, 6th to J. Galloway, 7th to J. Galloway, 8th to J. Galloway, 9th to J. Galloway, 10th to J. Galloway, 11th to J. Galloway, 12th to J. Galloway, 13th to J. Galloway, 14th to J. Galloway, 15th to J. Galloway, 16th to J. Galloway, 17th to J. Galloway, 18th to J. Galloway, 19th to J. Galloway, 20th to J. Galloway, 21st to J. Galloway, 22nd to J. Galloway, 23rd to J. Galloway, 24th to J. Galloway, 25th to J. Galloway, 26th to J. Galloway, 27th to J. Galloway, 28th to J. Galloway, 29th to J. Galloway, 30th to J. Galloway, 31st to J. Galloway, 32nd to J. Galloway, 33rd to J. Galloway, 34th to J. Galloway, 35th to J. Galloway, 36th to J. Galloway, 37th to J. Galloway, 38th to J. Galloway, 39th to J. Galloway, 40th to J. Galloway, 41st to J. Galloway, 42nd to J. 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NEW MASTERS FORMAT... some lifters were surprised/upset to find that competition for World titles, as far as US lifters go, will be limited to 2 official teams (over 40 and over 50) of 10 each, as opposed to last years format where both the World and National meets were essentially open competitions. Additionally, the World team title will be contested on a National level only and World Team champs of last year, the Ambridge VFW Club, will not be able to defend their title.

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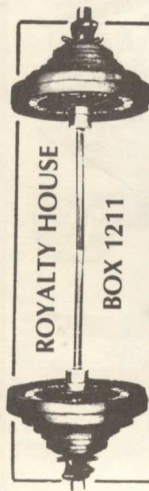
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Class I 882 953 1025 1152 1257 1350 1422 1505 1554 1588 1670
Class II 777 838 904 1009 1102 1190 1257 1323 1367 1411 1472
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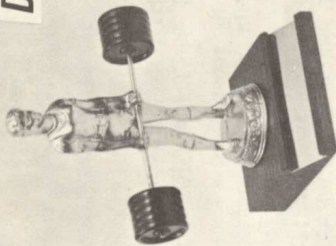
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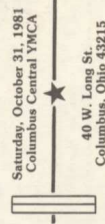
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MEN
114 123 132 148 165 181 198 220 242 275 SHW
★ MASTER 981 1064 1146 1279 1400 1505 1593 1675 1736 1786 1857
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WOMEN
97 105 114 123 132 148 165 181 SHW
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BOB'S Custom Lifting Belts from MARATHON™ Distributing Co.



Style (B) Suede Covered belt has stitching twice around belt and once down center. Double row of holes ... \$75.00



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Additional orders or special instructions						Total

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Check, Money Order, MasterCard or Visa must accompany orders.

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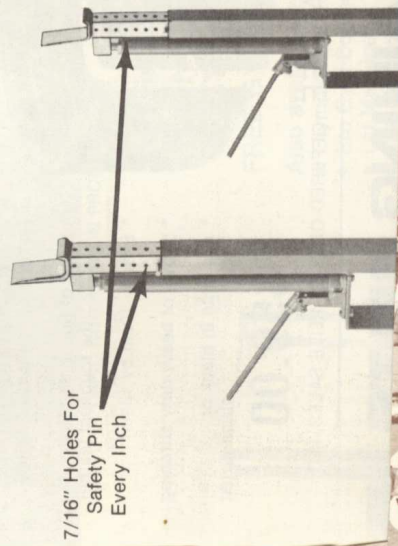
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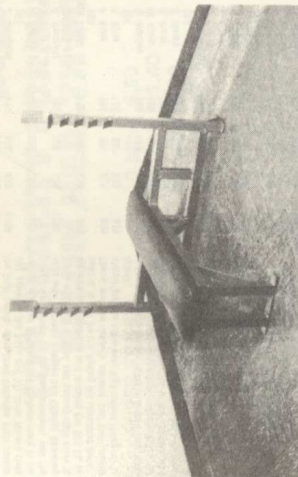
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include waist size
and color choice

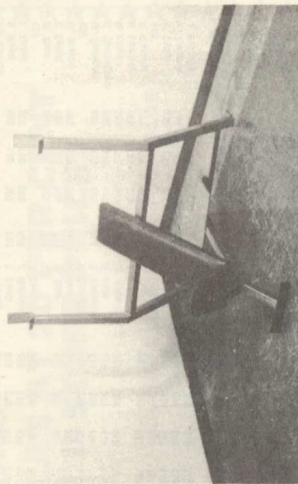
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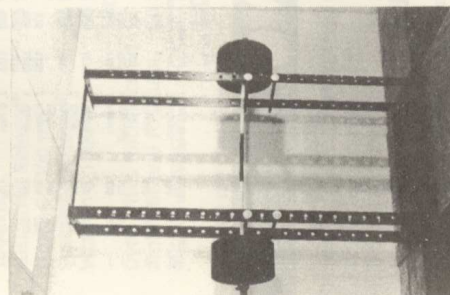
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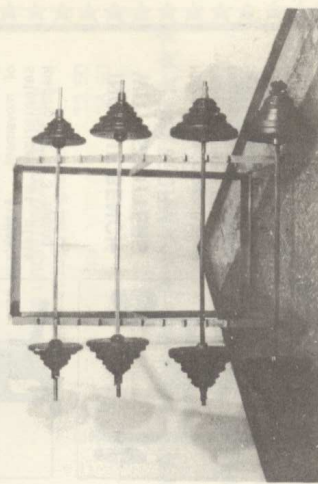
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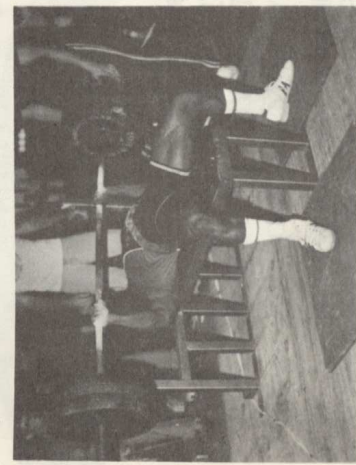


POWER AND OLYMPIC SETS

FLORIDA STATE CHAMPIONSHIPS

7/25/81-TAMPA, FL

114 NOVICE	SO	BP	DL	T	165
S. Beyer	260	190	280	730	J. Gualtero
F. Beyer	230	150	240	590	T. Thomas
M. Starr	200	215	335	750	T. Smith
E. Cital	190	200	345	735	J. Camp
132	180	190	275	610	W. Baur
M. Rodriguez	280	255	415	1050	N. Sindard
R. Cunningham	280	200	440	1020	T. Trevan
D. Lawrence	280	285	365	830	B. Gallo
T. Manning	325	170	400	895	R. Roberts
144	330	200	425	955	B. Beckley
K. Trevar	340	165	330	835	J. Lombardo
J. Donnelly	245	200	280	805	D. Orr



Unofficial WR try. Okonkwo gave 415 a solid push at the Florida State meet, and ended up with a great 405. photo by Jeff Temple.

WESTERN BRANCH YMCA MEET

7/18/81-WILMINGTON, DE

	50	BP	DL	T
32				
Crews	320	205		
Sauers	315	245		
48				
566				
Pitzer	425	175		
275				
0'Hara	475	275		
95				
420				
Mason	420	330		
0'Hara	385	290		
340				
Esch	340	325		
98				
C. Center	390	275		
98				
Kreiss	350	265		
20				
335				
Powers	335	225		
440				
M. Marshall	400	340		
42				
861				
FW				
Propp	460	400		
550				
320				

NAME	STATE	PA/COLLEGIATE	MOUNTAINEER
CONNECTIONS	CONNECTICUT	FLORIDA	

STATE	SOUTH DAKOTA	WISCONSIN	SOUTH AFRICAN	WORLD RECORDS
100 YARDS	18.8	18.8	18.8	18.8
200 YARDS	38.2	38.2	38.2	38.2
400 YARDS	1:16.8	1:16.8	1:16.8	1:16.8
800 YARDS	2:34.2	2:34.2	2:34.2	2:34.2
1,600 YARDS	5:12.8	5:12.8	5:12.8	5:12.8
3,200 YARDS	10:28.2	10:28.2	10:28.2	10:28.2
6,400 YARDS	20:52.8	20:52.8	20:52.8	20:52.8
12,800 YARDS	41:48.2	41:48.2	41:48.2	41:48.2
25,600 YARDS	83:12.8	83:12.8	83:12.8	83:12.8
51,200 YARDS	166:28.2	166:28.2	166:28.2	166:28.2
102,400 YARDS	332:52.8	332:52.8	332:52.8	332:52.8
204,800 YARDS	665:12.8	665:12.8	665:12.8	665:12.8
409,600 YARDS	1330:28.2	1330:28.2	1330:28.2	1330:28.2
819,200 YARDS	2660:52.8	2660:52.8	2660:52.8	2660:52.8
1,638,400 YARDS	5321:12.8	5321:12.8	5321:12.8	5321:12.8
3,276,800 YARDS	10642:28.2	10642:28.2	10642:28.2	10642:28.2
6,553,600 YARDS	21284:52.8	21284:52.8	21284:52.8	21284:52.8
13,107,200 YARDS	42569:12.8	42569:12.8	42569:12.8	42569:12.8
26,214,400 YARDS	85138:28.2	85138:28.2	85138:28.2	85138:28.2
52,428,800 YARDS	170276:52.8	170276:52.8	170276:52.8	170276:52.8
104,857,600 YARDS	340553:12.8	340553:12.8	340553:12.8	340553:12.8
209,715,200 YARDS	681106:28.2	681106:28.2	681106:28.2	681106:28.2
419,430,400 YARDS	1362212:52.8	1362212:52.8	1362212:52.8	1362212:52.8
838,860,800 YARDS	2724425:12.8	2724425:12.8	2724425:12.8	2724425:12.8
1,677,721,600 YARDS	5448850:28.2	5448850:28.2	5448850:28.2	5448850:28.2
3,355,443,200 YARDS	10897700:52.8	10897700:52.8	10897700:52.8	10897700:52.8
6,710,886,400 YARDS	21795401:12.8	21795401:12.8	21795401:12.8	21795401:12.8
13,421,772,800 YARDS	43590802:28.2	43590802:28.2	43590802:28.2	43590802:28.2
26,843,545,600 YARDS	87181604:52.8	87181604:52.8	87181604:52.8	87181604:52.8
53,687,091,200 YARDS	174363208:12.8	174363208:12.8	174363208:12.8	174363208:12.8
107,374,182,400 YARDS	348726416:28.2	348726416:28.2	348726416:28.2	348726416:28.2
214,748,364,800 YARDS	697452832:52.8	697452832:52.8	697452832:52.8	697452832:52.8
429,496,729,600 YARDS	1394905664:12.8	1394905664:12.8	1394905664:12.8	1394905664:12.8
858,993,459,200 YARDS	2789811328:28.2	2789811328:28.2	2789811328:28.2	2789811328:28.2
1,717,986,918,400 YARDS	5579622656:52.8	5579622656:52.8	5579622656:52.8	5579622656:52.8
3,435,973,836,800 YARDS	11159245312:12.8	11159245312:12.8	11159245312:12.8	11159245312:12.8
6,871,947,673,600 YARDS	22318490624:28.2	22318490624:28.2	22318490624:28.2	22318490624:28.2
13,743,895,347,200 YARDS	44636981248:52.8	44636981248:52.8	44636981248:52.8	44636981248:52.8
27,487,790,694,400 YARDS	89273962496:12.8	89273962496:12.8	89273962496:12.8	89273962496:12.8
54,975,581,388,800 YARDS	178547924992:28.2	178547924992:28.2	178547924992:28.2	178547924992:28.2
109,951,162,777,600 YARDS	357095849984:52.8	357095849984:52.8	357095849984:52.8	357095849984:52.8
219,902,325,555,200 YARDS	714191699968:12.8	714191699968:12.8	714191699968:12.8	714191699968:12.8
439,804,651,110,400 YARDS	1428383399936:28.2	1		

[illegible]

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SQ BP DL T[illegible]

	SQ	BP	DL	T
1	100	100	100	100
2	100	100	100	100
3	100	100	100	100
4	100	100	100	100
5	100	100	100	100
6	100	100	100	100
7	100	100	100	100
8	100	100	100	100
9	100	100	100	100
10	100	100	100	100
11	100	100	100	100
12	100	100	100	100
13	100	100	100	100
14	100	100	100	100
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69	100	100	100	100
70	100	100	100	100
71	100	100	100	100
72	100	100	100	100
73	100	100	100	100
74	100	100	100	100
75	100	100	100	100
76	100	100	100	100
77	100	100	100	100
78	100	100	100	100
79	100	100	100	100
80	100			

[illegible]

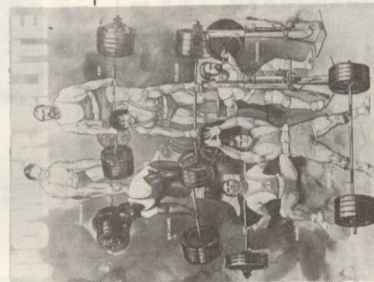
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UL

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114

C. Lee

198

104

237

540

132

T. Alvino

165

115

237

518

2815

1815

3365

7998

L. Devine

143

87

203

446

435

148

S. Coe

296

154

241

782

181

104

275

529

L. Cummings

176

115

237

529

L. Rios

154

99

283

457

L. Flinders

181

104

253

540

148

Nelson



Southern Bench Press Open, featured such strengthworld dignitaries as Johnny Peabbles III, Strength Coach at the Jewish Community Center, and the Great Kaiser, Pro Wrestler, photo courtesy Johnny Peabbles III.

1982 NATIONAL

Meet Qualifying Totals

Wt.	Senior	Junior	National	Collegiate
114	1008	903	837	672
123	1179	1030	837	959
132	1267	1135	959	1146
148	1388	1333	1146	1256
165	1581	1421	1256	1350
181	1780	1642	1421	1455
220	1868	1719	1455	1555
242	1956	1725	1455	1655
275	2055	1890	1455	1755
319	2105	1862	1499	1855

NOTE: totals for the Jrs. and Srs. are computed in accordance with 5 year averages of previous meets

California record.

Takata. Meet sanctioned by US Powerlifting

record. -Region 10 Masters record. -National

California record.

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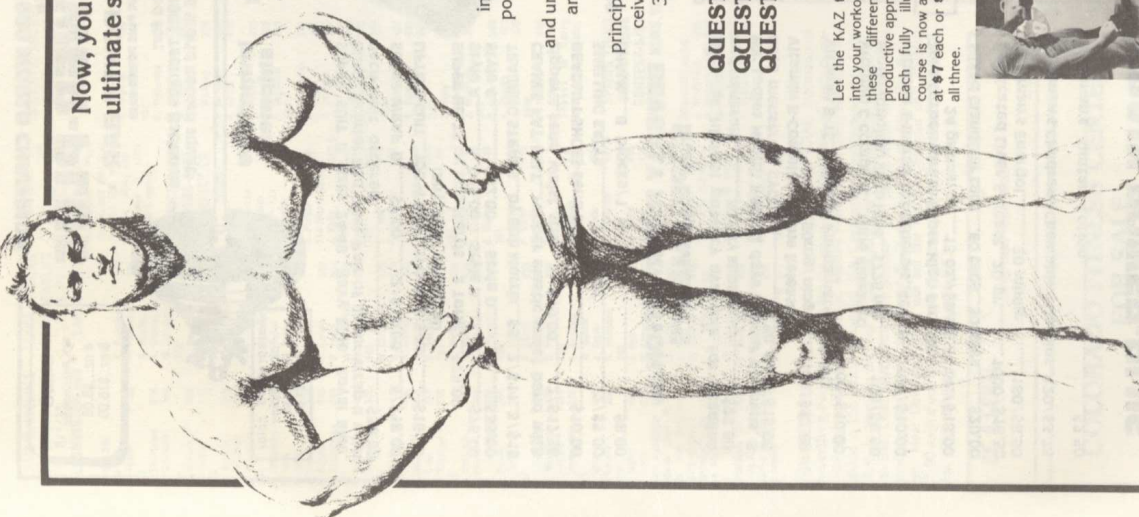
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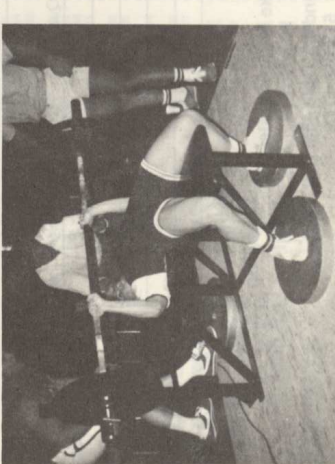
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661 - BENCH PRESS
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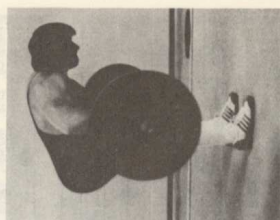
WORLD RECORD! Danni Hartmann pumps out 194.2 at 132 on a 4th attempt. photo courtesy of husband Bill Hartmann.

THE BENT OVER ROW

by Ron Fernando
Training Editor, PL USA

1. Standing-wide grip pull to chest—this hits the smaller upper back muscles a bit more and is also one of the stricter versions.
2. Standing-close grip pull to the waist. Take note—this is the Numero Uno version for helping to EX-PODE a max weight off the floor. Body position is key in this one. Assume the exact position of the CONVENTIONAL deadlift, grip the weight and pull, trying not to round the back too much. Pull until the weight hits the lifting belt.
3. Lying-BB/DB. This is the one that will affect your Bench the most, since it is the ABSOLUTE STRICTEST method to perform this exercise. Utilizing a high bench such as on a leg extension machine grasp two DB's or a moderately heavy barbell and pull; get ready for sore muscles after this one.

As for employing the row and its variations in a power schedule, it is best to really concentrate on them during the off season and really pile on the weight, perhaps 10 to 15 sets weekly will suffice. During the pre-meet cycle, cut it down to 4 sets a week. Of course, eliminate the move altogether about 10 days before the contest. Try these and you will be pleasantly surprised at the results. Oh, yes, a nice side benefit is that you will have a "Bent Over" in that you will be proud of the lifter that employs the bent over row. I have found an interesting formula. That is DL equals 2xBRx5 or, for you non-mathematical people, such as myself, a maximum deadlift should equal 1/2 the Bent Over Row x 5. So if you can pull 500 you should be able to handle at least 250 for 5 reps in the row. Til next time...



Ron Collins demonstrates the Bent Over Row at a training session.

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Spirulina. Robert E.T. Stark, M.D. of Phoenix, Arizona (who is a Master lifter) emphasizes that Spirulina is currently a very expensive source of protein, and that its value lies in the fact that it should be inexpensive. I have been told by people in the health food industry that production costs for this supplement are quite low. As Mike D'Vito explained in his article, current demand for the product has far outstripped availability from the manufacturer in Japan and Mexico. As demand falls off and/or production catches up, the price should fall.

Apologies to Tom Hardman. Results of the Strongbow contest in the August issue placed Tom 6th, when actually he placed 5th. The error was in the number of dumbbell reps credited to Hardman and Ekstrom, which were reversed in the results available to PL USA. Our apologies to Tom and any of his friends who may have been confused.

Error. somehow, after sorting through hundreds of results, thousands of names, and tens of attempts to make up last month's TOP 100 Super list we actually got John Barnett's 425 Bench on the list. Actually, we don't feel too bad, because John's lift did not appear on the results for the contest involved, but we want him to receive credit anyway.

Request for Donation. Walter Thomas will be traveling to the World Championships in India, but can not afford to bring his wife, Julie. If you would like to contribute to the \$2,000 expense of sending her, please mail your donation to WALTER THOMAS, BOX 48510, OKLAHOMA CITY, OK 73145. PL USA has already sent in its contribution, so why don't you?

WORLD GAMES RETROSPECTIVE
Alan Kishner, Ph.D., has informed me of many of the difficulties involved with that contest. It should be remembered that the local people who were key to bringing the entire contest off, were not invited to the initial pre-meet planning sessions. Jim Waters, in particular, worked very hard for several weeks to make sure that the meet was a successful one for the participants. Jim Lem had just completed the week to the competition, and lifted only after other top 198 pounders had been contacted and were unable to participate. There was some resentment about replacement of scheduled announcers, distribution of IPF uniforms, and a mixup regarding the admission fees to the contest.

Alan felt that the contest came off well, but does not look forward to any more IPF functions in Norther California. He also wonders why Women's Powerlifting was not included, as several other Women's events were on the World Games Program.

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