How to become a bear: a Soviet commando's secret

What is an Afghanistan-scarred commander of a Russian special forces unit to do when a locust of an inspector descends from HQ? A big wig who joined the military through the Soviet equivalent of ROTC, worked his way up the food chain with intrigue, and never tasted the sweat and blood of the war trade? The general expects Arnold clones performing *Matrix* style acrobatic shootouts. The officer in charge would have as much luck convincing the moron that this is not what the special ops are about as Dilbert would trying to talk his boss out of painting a database blue. So he does exactly what every other Russian professional under incompetent management has been doing since the days of Catherine the Great. Build a 'Potemkin village'.

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It takes a big man to cry, but it takes a bigger man to laugh at that man.

—'Deep Thoughts', Saturday Night Live

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In the eighties, when the Soviet Empire still had an iron grip on its colonies, it deployed a paratroop division in the Lithuanian city of Kaunas. Its commanding officer developed multiple personalities to do his job right and to keep HQ happy. He organized a 'Hollywood unit' which was busy pumping iron, practicing spinning jump kicks, and leaping over moving vehicles—with the help of an expertly camouflaged trampoline—while shooting up the bad guys.

These guys were awesome! They bulged with muscle and thought nothing of having a stack of bricks smashed on their armored abs with a sledgehammer, shattering a few with nearly any body part, or breaking a thick board struck at them, just by flexing their gorilla traps or shoulders.

I doubt that you are interested in these Russian supermen's acrobatic and martial arts exploits. But I am sure your ears will perk up if I told you that a trooper transferred to a Hollywood unit sported forty-centimeter arms in just a couple of months of training! That is over sixteen inches, Tovarisch!. Get a tape and see for yourself what you would look like when you fill the tape at this mark. What a stud!

A bear of a warrant officer I served with had done a stint with one of those 'Hollywood units' and shared the secret with me. I will send a KGB 'active measures' squad after you if it goes any further!

The premise behind the Russian commando muscle building workout was elegantly simple, as all solid science is. Tension increases the uptake of amino acids, protein building blocks, by the muscles. Therefore the higher is the tension (weight) and the longer time the muscle spends under it (reps)–the better are your chances of making it big. It is like throwing a scoop of protein into your muscles with every rep. The bigger the scoop and the more scoops you have thrown down the hatch—the greater the results.

The logical way to meet the above requirements is to:

1) reduce the reps to 4-6 per set to allow for heavy weights;
2) perform many, 10-20 on average, sets;
3) terminate all the sets a couple of reps before failure to avoid premature fatigue which would force the reduction in weights or/and sets.

The basic *Power to the People!* program which develops strength without bulk calls for one heavy set of five reps and one set with 90% of that weight, for example 100x5, 90x5. A little comrade who wants to become the Big Brother should not stop there. Reduce the weight to 80% of the first 'money' set, and keep doing sets of five reps with short, 30-90sec, rest periods. When you have had enough, that is you cannot lift 80x5 in good form, call it a day. It might take five or twenty five sets, everyone is different. Just do not call it quits too soon. The beefy commando who shared this program with me lifted 40-50 tons every workout. He had to if he wanted to remain a bear.

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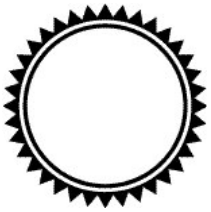

Weight and rest reduction in the above routine are compromises. Taking a couple of plates off your barbell is necessary to enable you to do multiple sets. A reasonable compression of the rest intervals promotes growth hormone production. HGH, like muscular tension, increases amino acid uptake by the muscles; read: builds them. Less rest between sets also enables you to squeeze your workout into forty-five minutes, supposedly the top end limit for optimal testosterone release.

Because of the increased work load you may have to reduce your training frequency somewhat, but restrain yourself from cutting back too much. The US powerlifting community used to accept training each lift once a week and keeping their set number low as the gospel. Recently it has been raving about a multiple set, low rep, three-sessions-for-each-lift-per-week workout, imported from Germany by Stephan Korte. Heavy but never-to-failure, frequent, and high volume training delivers!

LAST THREE PIECES OF THE BIG BICEPS PUZZLE

Which exercises should you do with your commando muscle program? Deadlifts, perhaps? Good guess!

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Life is too short to be small.

—Benjamin Disraeli
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"His thighs, both back and front, were unusually big and his calves were enormous," awed Liederman describes a physique built with nothing but deadlifts. "Naturally he had big chains of muscles along the spine, but the striking thing was the phenomenal development of the trapezius muscles, which are in the upper back just below the base of the neck. These muscles, when they contract, "shrug up' the shoulders, and when he did his "hand-and-thigh" lift and heaved his shoulders up, you could see these muscles bunch themselves into enormous masses. Even when standing at ease these muscles were so big that they made his shoulders slope at a high angle from the deltoids to the sides of his neck. No ready-made coat would fit him. His forearms—especially the outside parts of them—were covered with muscles so powerfully developed that there were big furrows between them. His grip was something to be avoided. His biceps muscles were pronounced in their size…"

Yes, you can build huge muscles on a super abbreviated program of deads and presses! There is no need to do other drills. "If you work the heck out of the deadlift," Mr. America Tony Pandolfo used to say in his heyday in the sixties, "you'll get growth in your upper and lower back, thighs, and hips. If you press or bench hard, your upper body will take off." Words to live by.

William Gerardi—A turn of the century athlete whose 31 inch thighs are rare for a period that preceeded the age of squat obsession.

Having done your job as a human crane, go home and eat. A lot. I am not going to waste my time taking apart the incompetent studies by pencilnecks that 'prove' that you do not need any extra protein to build muscle. Russian research is clear: you do, and a lot of it. Meat, eggs, milk—whatever works for you. How much is an individual matter; experiment. Do not buy into the third grade arithmetic of the simple minds who think along straight lines. In the non-linear Alice's Wonderland of your body a gram of fat may be worth more or less than the accepted nine calories and it takes a lot more that an ounce of protein to build an ounce of

muscle. I may elaborate on this point and other implications of the complexity theory on your training in a future book, for now just remember that the Party is always right!

If having the muscular development of a Calvin Klein model does not satisfy you and you desire to be huge, you could try the following maneuver of Marty Gallagher's prize powerlifting pupil Kirk Karwoski. "I started eating every hour on the hour –high protein…" says this dinosaur, 300 pounds and ripped, "I'd set the alarm twice a night so I could get up and eat. But it paid off."

Is it healthy?—Hell, no. But who ever said that weighing 250 pounds plus was healthy? Muscle, or fat, the extra weight undoubtedly provides extra work for all of your body's systems. Do you prefer a long life or huge muscles? It is America, the land of choices.

Another step to take towards seventeen inch arms is to buy the Anabolic Diet book by Mauro Di Pasquale, M.D. This Canadian doctor and former powerlifting champion's eating plan maximizes your natural production of anabolic hormones by selecting the right foods at the right times. Unlike the typical bodybuilding blah of tuna and rice, Di Pasquale's plan is a feast. To order the *Anabolic Diet,* call (800) 582-2083.

A critical piece of the big biceps puzzle is rest. Old timers used to say, "Don't run if you can walk, don't walk if you can stand, don't stand if you can sit, and if you sat, might as well lie down and take a nap." Cut back on your yard work, add an extra hour or two of sleep every night and an odd nap in between, and in a couple of months DEA agents might knock on your door looking for steroids!

Getting adequate rest also means not being a high strung type. Stress creates a highly catabolic, or muscle destroying, endocrine environment. Learn to relax, take up Chi Kung! Call Dragon Door Publications at (800) 899-5111 and get a free catalog of resources on this fine art of self-improvement. Once you have developed a calm, undisturbed state of mind, your bodybuilding gains will be magnified.

Here you have it. The complete Russian recipe on how to become a bear!

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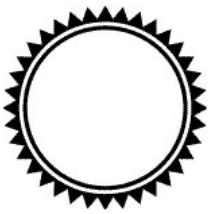

Can I get built up with a very light weight by pumping my muscles up?"

Yes, if you are willing to settle for Potemkin village muscles.

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Physical strength is all very well if one has a purpose for it.

Otherwise it's just a nuisance and a distraction, like wings on a dodo.

—Robert Sheckley,

Immortality, Inc.

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"Some years ago a certain Mr. America came to New York to give an exhibition," reminisces professional strong man Sig Klein in his old age. "I always admired his photos and asked him to show me his arm. He refused, saying that he had just made the long flight from California and this could have shrunken his arms. I was flabbergasted. If a few hours trip or a few days layoff from training makes that much difference in his muscles, then those muscles were useless and I didn't care to see them."

Back in the fifties California bodybuilders took up 'muscle spinning', a purely cosmetic activity, like using Rogaine, or getting silicone implants. They would strut around a mirror all day and pump up their biceps with their grandmother's dumbells. Like a leaking tire, the golden boys' muscles had to be daily refilled with blood. It explains the California physique star's unwillingness to show his muscles, deflated after a day's layoff from pumping.

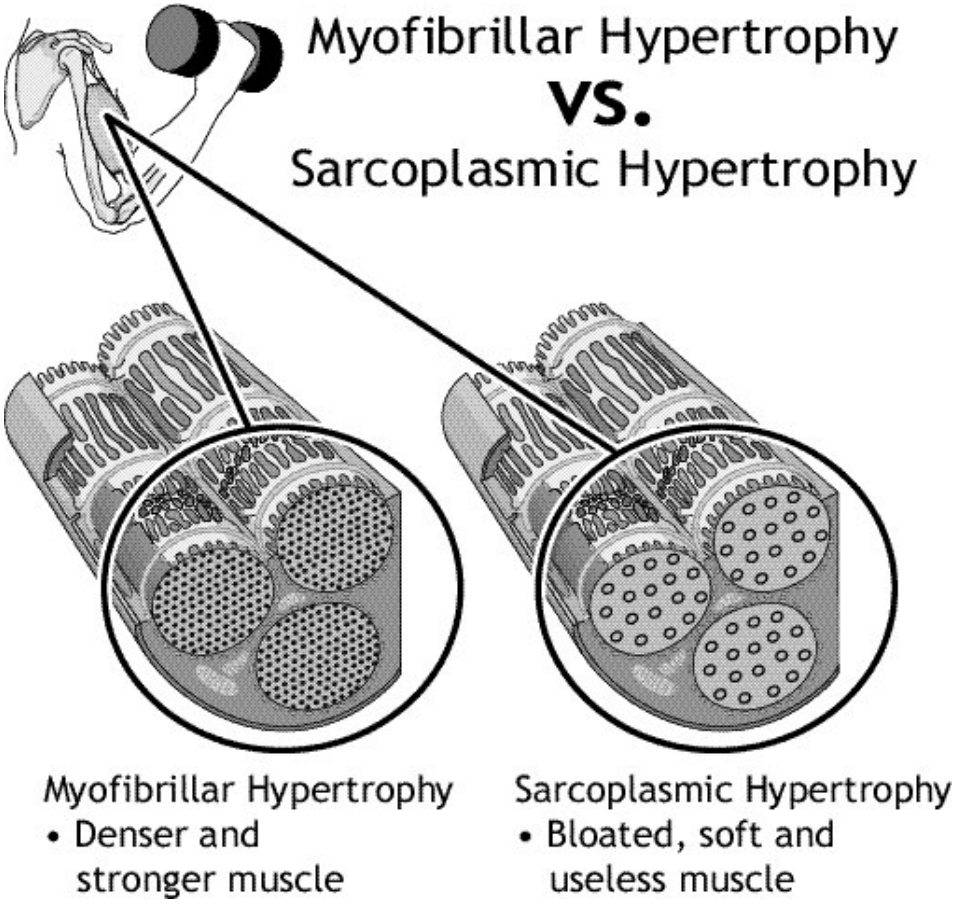
In addition to a long term pump, high rep training leads to 'fake' muscle growth.

There are two types of muscle growth. Myofibrillar hypertrophy, or 'real' muscle growth, is an enlargement of the muscle fiber as it gains more myofibrils, things which contract and generate tension. The muscle gets stronger and harder. Myofibrillar hypertrophy is accomplished by training with heavy weights.

Sarcoplasmic hypertrophy, on the other hand, is a worthless increase in the volume of the muscle cell fluid as a result of high rep training. The fluid, sarcoplasm, accounts for 25-30% of the muscle's size.

Mitochondria, the 'power plants' of the cell, which, when well developed, make up 20-30% of the muscle's size also grow from high reps. The same applies to capillaries: an early eighties study found twice as many capillaries per muscle fiber in elite bodybuilders than in normal subjects!

Needless to say, building things like capillaries or increasing cell fluid volume is form above the function. I have no respect for that.



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In addition to a long term pump, high rep training leads to 'fake' muscle growth.

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ON VARIETY, SORENESS, AND KEEPING THINGS IN FOCUS

"And what about 'muscle confusion'? Just two exercises? Shouldn't I change my program to keep improving?"

Yes and no, a truly Zen answer.

You come into a room and smell something. Pleasant, or unpleasant, it is beside the point After awhile you start screening out the smell, the so-called rebound phenomenon. What would it take to get your nose to react again? Increase the intensity of the smell, or get assaulted by a new flavor.

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The height of cultivation runs to simplicity. Half-way cultivation runs to ornamentation.

-Bruce Lee

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Your body responds to exercise in the same manner. As former Mr. Universe Mike Mentzer put it, "First we get the swing of things, then we get pretty good at them, but finally we tire of them." After awhile the same old thing has no training effect whatsoever. Your workout has to change if you are to keep making progress. Unfortunately, very few coaches have mastered the black magic of effective exercise variation. Unless you are dealing with postural muscles like the abs, there is a lot more to this voodoo art than switching to another exercise for the given muscle group or isolating the weakness with some other drill. Do not believe your personal trainer with a weekend certification course that triceps pushdowns will help when your bench press has stalled. It may build some new mass, but never strength. Heed the words of G. J. Nathan: "The confidence of amateurs is the envy of professionals."

Russian weightlifting coaches have one hundred and fifty special exercises at their disposal to assure their charges' non-stop progress and sophisticated algorithms that help them employ the right exercises at the right time. This is obviously a 'don't try it at home' method.

If you disregard what I have just said and switch to a different set of exercises every time you hit a plateau, you will fall into the vicious circle described by Ken Hutchins: "A novice usually requires about six weeks to become reasonably confident and competent on a basic... routine of exercises... At about the six-week point, the novice begins to lose his feeling of novelty... It is then that he states that he is bored with his present routine. He requests to learn new exercises. A battery of new exercises, of course, renews his attitude of novelty... At the six-week point, the novice has just obtained an objective base line with his original routine... His instructor assumes the base line... to indicate a performance plateau; so what does he do but recommend a change of routine. This satisfies the subject's whim to see the resistances ever improving again. And to the instructor this confirms his belief that he successfully broke the subject's plateau. In reality, the subject's progress has to start practically from scratch anew. He must go through the process of mastering new exercises... for another several weeks to attain a base line once more."

Today's folks have a short attention span. Ellington Darden, Ph. D. made a good point that most people do not have what it takes to be successful at any endeavor, marriage, studies, or a diet, for more than six weeks. Once you have gotten the basic form down pat, it is time to pick up the stuff that really matters: learn to maximize the tension in the involved musculature and integrate the tension of different muscles into a focused superhuman effort, what karate masters call kime. "If you change the components in training, then you are constantly stiff and you must retrain constantly. What good is that?" exclaims coach Charlie Francis who has kept his notorious charge, Canadian sprinter Ben Johnson, on a steady diet of squats, benches, and a couple of other basics, for years. However the routine's load was varied. That is the approach that you should take. Cycling, or a planned variation of your intensity and volume with the same exercises is explained in the next chapter. Cycling will keep the gains coming without complicating your program. And, because you stick to the same two drills, it will allow you to live relatively free of muscle soreness.

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Never interpret soreness or stiffness as signs of progress. And do not get hung up in variety for variety's sake. Stick to the basics, the deadlift and the press.
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We do not know for sure what causes muscle soreness—don't get me started on lactic acid; it ain't it—but switching to new exercises will make you sore. Be warned that how miserable you feel the morning after is not an indicator of progress! No correlation has been established between getting sore and getting stronger. Some comrades are hurting units for five days following their leg workout yet lift the same weights for years. Others never ache—very annoying, if you ask me—but keep getting stronger from workout to workout.

Never interpret soreness or stiffness as signs of progress. And do not get hung up in variety for variety's sake. Stick to the basics, the deadlift and the press. It is possible to achieve spectacular results with a very abbreviated program, as long as one pays attention to details.

"Keep your program simple. Avoid distractions. Complex programs are wrought with pitfalls and drain the focus. Do only things that help most. Concentrate your energies on doing few tasks well, rather than many tasks poorly." This is the advice of world record bench presser J.M. Blakley.

Gym rats love reciting the story of Milo of Crotona to illustrate the principle of progressive overload. According to the legend, this ancient Greek started lifting a young calf daily. Milo kept growing stronger and stronger as the animal grew into a bull. From calves to bulls, from bulls to elephants, from elephants to whales. Sure.

▼
Catch the wave, and you'll be on top of the world!

—The Beach Boys
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"Progressive overloading produces diminishing, and ultimately zero, returns," writes Professor Verkhoshansky, top Russian strength training expert. If you started lifting at the age of sixteen with a 60 kg or 130 pound, bench press, says Verkhoshansky to illustrate his point, and add one kilo, less than 2.5 pounds, per week, you will be lifting 1,275 pounds by the age of twenty six and 2,240 pounds by the time you are thirty six years old! Yeah, right. Dream on.

Why can't you train heavy full time and progress indefinitely? No-one knows for sure. But we are certain that if you try you will only go backwards. "A prize-fighter preparing for an important contest will spend six weeks in training for the battle," noted US physical education director Earle Liederman in the beginning of the century. "Experience has shown that an athletic man can be brought to the very top notch condition in that length of time. And if the training is too prolonged, the athlete will become over-trained or "stale" and will lose energy."

When Stalin was still around Soviet scientists observed that in order to reach top form, an athlete must exhaust his adaptivity, or the ability to improve, greatly. That meant the peak had to be followed by an unavoidable drop in performance. A decade later, in Khruschev's times, Russian researcher Leonid Matveyev analyzed a great many athletes' training logs and concluded that things worked out a lot better if the athlete voluntarily backed off after a push instead of carrying on at full throttle and waiting for a crash. "...continuing training with high loads unduly magnifies the drop in performance while reduced training helps overcome the decrease in performance and ensures a new improvement," as another big brain from the former Soviet Union, Estonian Dr. Atko Viru, summed up this idea.

"Literally he has worked himself out,'" writes strongman Earle Liederman three quarters of a century ago describing a man of iron who has the habit of regularly pushing the envelope, "and this is exactly the thing the strength-seeker cannot afford to do." The guy's name must have been Milo. Matveyev would have told the ancient Greek who had maxed out with his bull to start over with another calf! Taking a step back after you have taken two steps forward is the essence of his periodization or cycling approach to strength training which revolutionized the strength world.

Cycling enables even world class athletes to improve year after year, when progress would have come to a screeching halt if any other strength training method was used! "Periodization is the best way to train… There were guys around who worked to their limit either on reps or singles all the time in their training, but they didn't last long," recalls Terry Todd, Ph.D., one of the forefathers of American powerlifting. "They either burned out or got an injury of some sort. Those of us who lasted and continued to improve found that we had to start out conservatively—to use light weights for a while and then go on to the increasingly heavier poundage. Then, following a meet, we'd always take a break before coming back to begin again with light weights."

Cycling is about a gradual buildup of intensity to a personal best, and then starting all over with easy workouts. Using the earlier smell analogy, once your nose has stopped responding to the aroma although its intensity has been cranked up, you lower the stimulation, walk out of the room perhaps. Your system will become responsive to the stimulus again. Now it is time to build up to a new peak! A smart powerlifter typically takes a week off after a meet, then he resumes his training with light weights. Some iron heads call this process 'softening up'. Slowly, over a period of eight to sixteen weeks, he builds up the poundage until he peaks with a new personal best. Then he starts all over with a weight slightly heavier than in the beginning of the previous cycle. Like a karate master who has reached greatness in his art and turns in his black belt to wear a beginner's white belt again.

Cycling is the ultimate formula of strength which succeeds where other methods, often a lot more complicated, fail. Do yourself a favor and jump on the bandwagon with the world's strongest people. You will gain beyond your wildest dreams. You will suffer fewer, if any, injuries. Dr. Joseph Horrigan, a Los Angeles chiropractor who fixes up many elite athletes, could not help noticing that those who cycle their lifts experience a lot fewer injuries than those who do not. Powerlifters who have been practicing cycling compete at the international level in their forties and even fifties, while bodybuilders who always push the pedal to the metal burn out, get hurt, and quit at half that age.

Accept the necessity to take a step back in order to take two steps forward. Those who insist on stepping only forward are walking on a treadmill. If hard work was all it took to get strong, there would not be such a thing as sports science. No, pushing the pedal to the metal all the time will get you nowhere fast! And if your head cannot take it and you cannot help pushing your ever-so-stable limits every time you train, see a therapist.

▼
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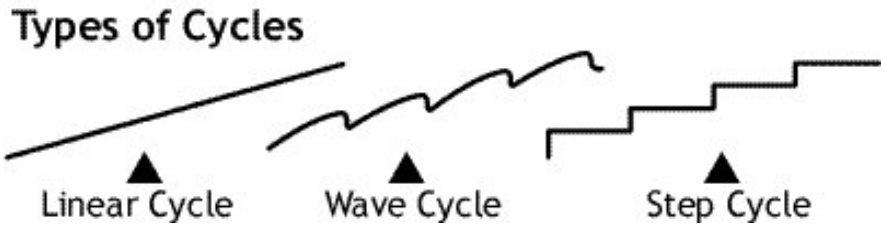
Here is a couple of powerlifting cycles for you to choose from which are short, sweet, and do not take an advanced math degree to follow.



The Linear Cycle

▼ Cycles vary in length but generally should consist of no fewer than eight workouts. ▲

Start the cycle with one set of five reps (1x5) with a comfortable weight. 70-80% of your best set of five (80% 5RM) is a good starting place, but you do not need to be so exact. The weight you could easily do ten reps with is about right to start with.

Say you have lifted an empty bar, or 45 pounds, and did five reps. It felt light. You added twenty pounds. Still a feather. 85 and going strong. 95 felt good, but you start noticing it. You decide to add just a little more weight. 100x5 feels just right. You could have done ten reps with this weight, but you know better. Let it be the starting weight for your first power cycle: 100x5.

Rest for a few minutes, and do another set of five reps with 90% of the weight you have just used: 90x5. Do not be pedantic about fractions; round up the numbers. The lighter set is there to double the workload without tiring you out, especially in the end of the cycle when the first set gets downright brutal.

Add five pounds to the first set every workout, and recalibrate the second one accordingly.

Before you know it, things will get heavy. Do not attempt a rep unless you are 100% certain you are going to make it in good form! Just drop the rep or reps that you have not made and carry on the cycle until you are down to two or three reps. Another option is not to peak at all, but terminate a cycle once you have made a little gain, say five pounds per lift, over a previous one.

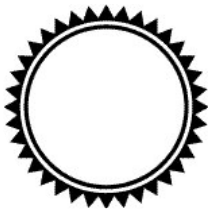
Cycles vary in length but generally should consist of no fewer than eight workouts. A competitive lifter has to plan his cycle in advance to peak in a competition. You do not need to worry about it. However you should note how well cycles of different lengths work for you and try to plan accordingly.

Here is a hypothetical linear cycle:

Workout Number	1st set Weight	x	reps	2nd set Weight	x	reps
1	100	x	5	90	x	5
2	105	x	5	95	x	5
3	110	x	5	100	x	5
4	115	x	5	105	x	5
5	120	x	5	110	x	5
6	125	x	5	115	x	5
7	130	x	5	115	x	5
8	135	x	5	120	x	5
9	140	x	4	125	x	5
10	145	x	2	130	x	5

You probably could have lifted 150x2 next workout, but you decided to play it conservative and saved it for another cycle. Take a few days off, and start another cycle with a slightly heavier weight then the previous one. It might look like this:

Workout Number	1st set Weight	x	reps	2nd set Weight	x	reps
1	110	x	5	100	x	5
2	115	x	5	105	x	5
3	120	x	5	110	x	5
4	125	x	5	115	x	5
5	130	x	5	115	x	5
6	135	x	5	120	x	5
	(135x5 is your old limit.)					
7	140	x	5	125	x	5
8	145	x	5	130	x	5
	(145x5RM—your new best set of five a 10 pound gain is awesome!)					
9	150	x	3	135	x	5



The end of cycle. As you see, the cycle started with fairly easy workouts and gained momentum. It kept getting more intense until it culminated in a new personal record. You have added 10 pounds to your best set of five in eight workouts, which may have taken you anywhere from two to nine weeks. A great improvement! Your muscle tone will certainly reflect it.

Understand that results will vary from person to person and from cycle to cycle. While an advanced lifter is content with a five pound gain on his bench press in twelve weeks, a beginner in that period of time may add fifty pounds to his or her dead. The deadlift will always progress faster than the press because your neurological efficiency, or the ability to recruit as much muscle as possible. is higher in your upper body and thus has less room for improvement. Math matters too. Adding 10 pounds to a 200 pound deadlift is only a 5% increase, while it is a whopping 20% for a 50 pound press. One of the implications is that your deadlift cycle might outrun your press cycle. No sweat, treat them as two independent cycles; only competitive lifters have to go to all the trouble of matching them.

▼ If you have skipped more than a week of lifting, or simply are having a really bad day, back up two or three workouts and resume your cycle. ▲

There are times when an illness or a trip keeps you away from the gym longer than you wanted. If you have skipped more than a week of lifting, or simply are having a really bad day, back up two or three workouts and resume your cycle. If in the above example you had a two week gap after workout #6, here is what you do:

Workout Number	1st set Weight	x	reps	2nd set Weight	x	reps
6	135	x	5	20	x	5
	a two week vacation in Russia (you are brave!)					
7	125	x	5	115	x	5
8	130	x	5	115	x	5
9	135	x	5	120	x	5
10	140	x	5	125	x	5
11	145	x	5	130	x	5
12	150	x	5	135	x	5
	(your new best set of five; a 15 -vs. 10-pound gain!)					
13	155	x	2	140	x	5

Yes, sometimes you will reach a higher peak if you take a step back in the middle of the cycle! Soviet studies determined that such wave cycling—as opposed to the basic linear cycling—is highly effective. Feel free to experiment with these 'cycles inside a cycle' even if you do not have to take training breaks. You could back off here and there when you are having an off day:

The Flexible Wave Cycle

Workout Day	1st set Weight	x	reps	2nd set Weight	x	reps
Mon	200	x	5	180	x	5
Tue	205	x	5	185	x	5
Wed	210	x	5	190	x	5
Thur	200	x	5	180	x	5
	(feeling fatigue from three days of training, decided to back off)					
Fri	205	x	5	185	x	5
Sat	off					
Sun	off					
Mon	210	x	5	190	x	5
Tue	215	x	5	195	x	5
Wed	210	x	5	190	x	5
	—too tired, late night					
Thur	215	x	5	195	x	5
Fri	220	x	5	200	x	5
Sat	off					
Sun	off					
Mon	225	x	5	205	x	5
Tue	230	x	3	205	x	5
Wed	215	x	5	195	x	5
	(you feel that you can hit 230x5 on a second try)					
Thur	220	x	5	200	x	5
Fri	225	x	5	205	x	5
Sat	off					
Sun	off					
Mon	230	x	5	205	x	5
	(you were right, but 230x5 was very exhausting and you take a step back to recover for another push)					
Tue	220	x	5	200	x	5
Wed	225	x	5	205	x	5
Thur	230	x	2	205	x	5
	(you could not repeat your Monday workout; it happens. You have milked this cycle dry. Time to wrap it up.)					

... or follow a more organized approach, for instance four steps forward and three back:

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Understand that results will vary from person to person and from cycle to cycle. While an advanced lifter is content with a five pound gain on his bench press in twelve weeks, a beginner in that period of time may add fifty pounds to his or her dead.

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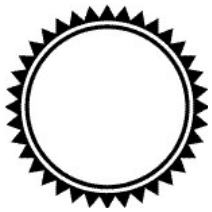
The Structured Wave Cycle

Workout Number	1st set Weight	x	reps	2nd set Weight	x	reps
1	200	x	5	180	x	5
2	205	x	5	185	x	5
3	210	x	5	190	x	5
4	215	x	5	195	x	5
5	205	x	5	185	x	5
6	210	x	5	190	x	5
7	215	x	5	195	x	5
8	220	x	5	200	x	5
9	210	x	5	190	x	5
10	215	x	5	195	x	5
11	220	x	5	200	x	5
12	225	x	3	205	x	5

▼

Because an effective cycle generally lasts between eight and sixteen workouts, five pound jumps each workout would be too much for this trainee.

▲



Because an effective cycle generally lasts between eight and sixteen workouts, five pound jumps each workout would be too much for this trainee. The max will be reached too soon, not allowing one to build enough of what one fellow aptly named 'gaining momentum.' Some people use tiny, one pound and even lighter, plates to solve the problem. Don't bother. Just stay at the same weight for two or even three workouts, then add five pounds. Soviet experience proved step cycling to be a very powerful strength builder. Here is a hypothetical step cycle for someone with a top set of five with 100 pounds (100x5RM):

The Step Cycle

Workout Number	1st set Weight	x	reps	2nd set Weight	x	reps
1	80	x	5	70	x	5
2	80	x	5	70	x	5
3	85	x	5	75	x	5
4	85	x	5	75	x	5
5	90	x	5	80	x	5
6	90	x	5	80	x	5
7	95	x	5	85	x	5
8	95	x	5	85	x	5
9	100	x	5	90	x	5
10	100	x	5	90	x	5
11	100	x	5	90	x	5
12	105	x	5	95	x	5
13	105	x	5	95	x	5
14	110	x	4	100	x	5
15	110	x	5	100	x	5
16	115	x	3	105	x	5

▼
Greater strength gains, higher safety, fewer hard workouts… If you have a better deal than cycling, keep your Brooklyn Bridge for yourself!
▲

If you wish, you can switch from one basic exercise variation to another—for instance, from conventional to sumo deadlifts—at the beginning of a new cycle. You can also trade one type of a cycle for another, say linear for wave. Other changes are not recommended. You have to follow too many rules to make them right.

Greater strength gains, higher safety, fewer hard workouts… If you have a better deal than cycling, keep your Brooklyn Bridge for yourself!

HYPERIRRADIATION: HOW TO BOOST STRENGTH AND SAFETY

Nature has downloaded a lot of useful software into our nervous systems so we can function efficiently. For example, one neural program, or reflex arc, makes your body follow your head. That is why it is easier—and safer—to deadlift with your head up: the muscles that extend the neck order all the muscles on your backside to contract.

▼
Employing every tooth and claw In the awfullest way you ever saw...

—E. Field
▲

Some of these helpful neural programs are easily run, while others require a little skill to hack into. The next few chapters will teach you how to use various muscle software to maximize your strength training effectiveness and safety. It is almost the XXI century. It's time to learn to use your computer for something other than hammering nails!

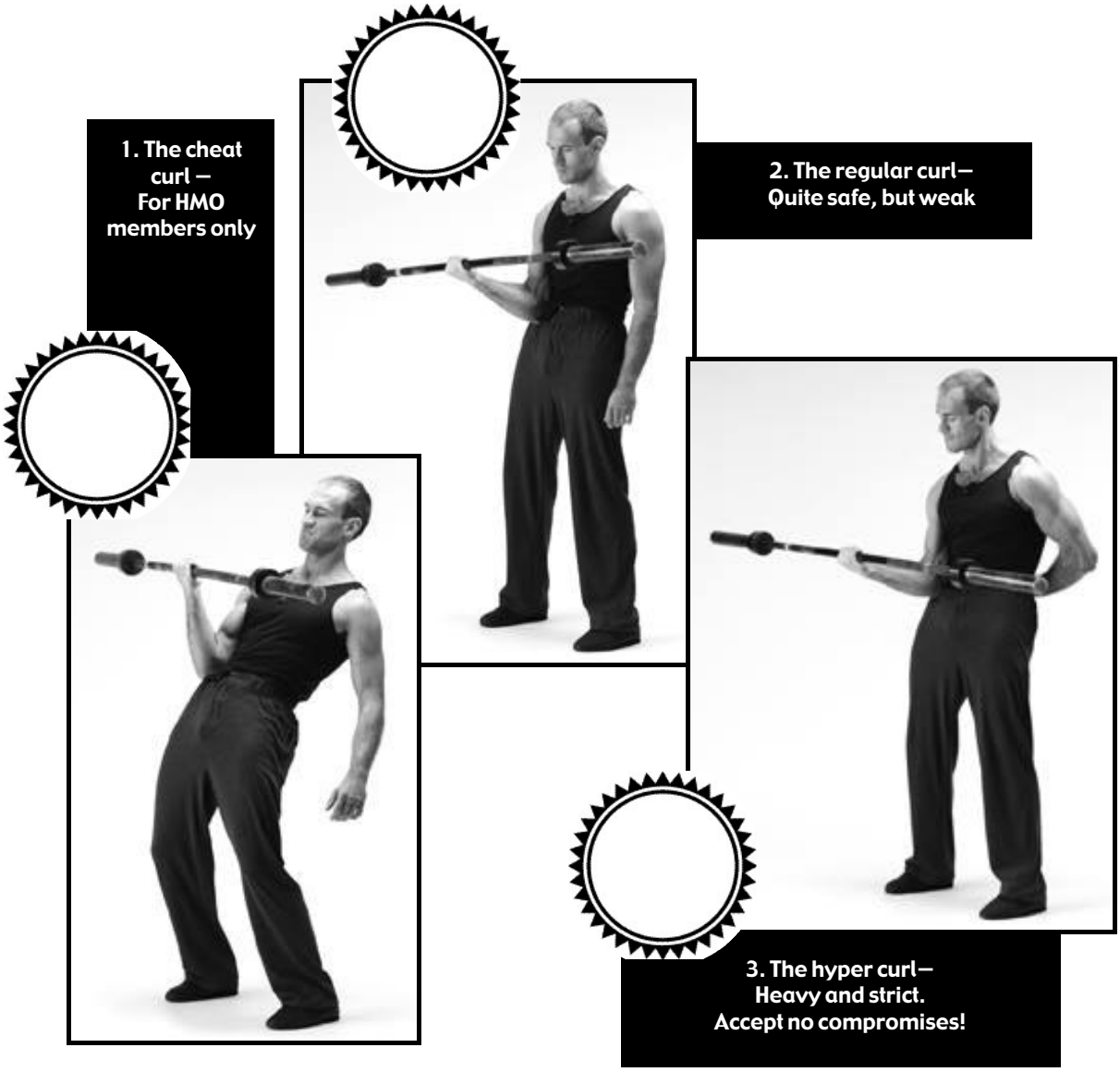
Let's start with irradiation. You can milk this phenomenon for all its strength amplifying worth by intentionally bringing even more muscles into play. Simply squeeze the barbell hard on all upper body exercises and flex your abs and glutes on all lifts! Enter hyperirradiation, a high intensity technique that delivers a no delayed gratification strength boost. Powerlifters whom I taught this deceptively simple move report a typical increase of ten pounds on their bench press the first time they try it!

In addition to its powerful force building effects the new 'anti-isolation' technique dramatically increases workout safety by stabilizing the trainee's body and forbidding heaving and bouncing. I suggest that you immediately test the safety and effectiveness of hyperirradiation with barbell or dumbell curls.

First do a few curls in the accepted 'good form', your body upright and no cheating with your back. When things start getting hard simultaneously do the following:

- squeeze the weight as if you are trying to crush it to pulp;
- squeeze your glutes as if pinching a coin with them;
- tighten your abs as if bracing for a punch.

You will have an easier time integrating your abs and glutes into the action if you follow this advice of the late karate great Masatoshi Nakayama: "For strength and stability, it is necessary to have the feeling that the line connecting the navel and the anus is short as possible."



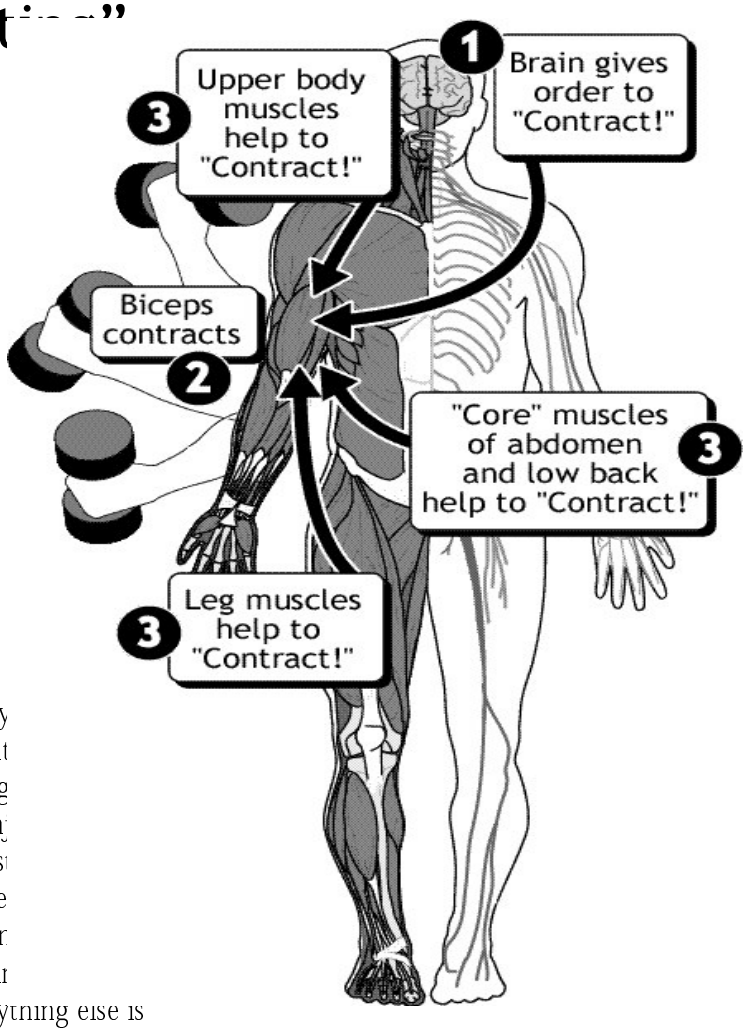
Once you have done the three secret moves, the weight will immediately acquire whimsical lightness. You will be able to crank out a few extra reps—and do it in your best form ever! Your body will freeze in a rock hard position of maximum safety. When the reps get harder, the bell will slow down but will keep moving slowly without any assistance of body English because the body will get even more braced. Talk about safety!

▼

Learn the 'anti-isolation' technique, stabilize your body by overall muscular tension, and your odds of getting injured will plummet faster than Dow Jones on 'Black Monday'

▲

Hyperirradiation—"Cheering", not "Cheat[illegible]"



You cannot shoot a cannon from a canoe. You cannot lift a respectable weight safely your whole body is tight and braced against the g many weight training in place when the trainee s ing under the load if the feeling heavy. The brain stream advice of 'isolati at the exclusion of everything else is largely responsible for these injuries. Learn the above 'anti-isolation' technique, stabilize your body by overall muscular tension, and your odds of getting injured will plummet faster than Dow Jones on 'Black Monday'.

Martial arts masters understand how body tension improves one's stability, which is one of the reasons formal exercises like sanchin which require maximal tensing of the whole body are practiced. "Mr. Uechi performed these feats not to show how strong he was but to prove to his students that the human body has not so many limitations as most people believe it to have," tells my time-yellowed book *The Way of Karate.* "He wanted to stress the importance of sanchin by doing feats which he said required no other methods but sanchin.

"The first feat he demonstrated was the stability test. He asked two of his largest and strongest students to pick up a large bamboo pole hanging over the door to his school and place it against his stomach. He then positioned himself in a sanchin stance and requested the two students to push as hard as they could. They did so for a minute or two, but they were unable to budge Mr. Uechi an inch."

Old time Olympic weightlifters, better educated than today's iron heads, understood this concept clearly and braced themselves against the ground before pressing a barbell overhead. "This full tension of the thighs and buttocks is of utmost importance because it provides a solid base for pressing," wrote Englishman George Kirkley, in bold type, in the early sixties. Slack muscles of the body absorb 'the recoil' of the muscles directly responsible for the task at hand and let their strength dissipate in the flesh instead of lifting the weight. Time went by and then men, and later women, took up the habit of exercising lying down—I was surprised when I did not find the bench press in a book named *Exercising in Bed.* The ancient secret of power and stability was lost.

▼ Old time Olympic weightlifters, better educated than today's iron heads, understood this concept clearly and braced themselves against the ground before pressing a barbell overhead. ▲

"Keep every body part tight during the entire movement". Powerlifting world champion Ernie Frantz instinctively understood irradiation of tension when he developed this Fifth Commandment of Powerlifting. "As long as your body is tense and rigid, the risk of injury is small," says Iron Ernie. "Picture this: You go to squat, your legs are tight, but your arms are lightly clutching the bar. What will happen is the weight will feel heavy and probably shift on you. Now if you were holding on firmly with every muscle ready for action, you would probably make the lift with ease."

I will sum up the benefits of hyperirradiation, or purposeful tensing of muscles other than the ones directly responsible for the task at hand:

1) increased strength through additional neural stimulation of the target muscles by the impulses from working 'extra' muscles;

2) increased strength through providing a solid and efficiently aligned foundation to lift from ("Give me a pivot point, and I will turn the world upside down!" bragged ancient Greek scientist Pythagoras);

3) improved workout safety through dramatically improved body stability.

HARD ABS + STRONG HANDS = POWERFUL BODY

▼
If you get scared—tighten your abdomen and charge.

—Samurai wisdom
▲

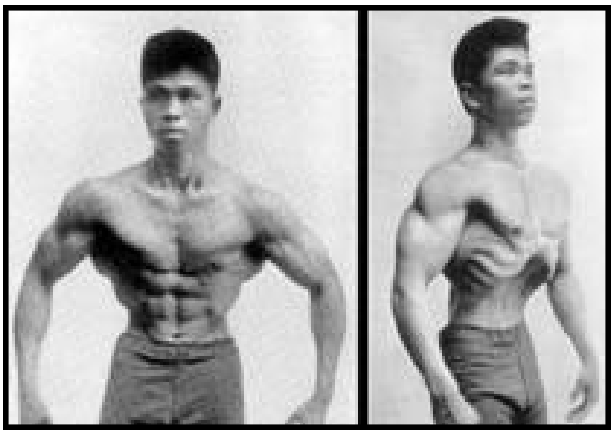
'Surrounding' the working muscle by commands from the center (abs/glutes) and the periphery (hand and forearm muscles) leaves the former no choice but be stronger! When Dr. Ken Leistner of Long Island, NY reached a certain poundage in a deadlift, his grip strength started limiting him and he was tempted to use straps which unload your hands by making the barbell hang off your wrists. But he did not. "When I made the decision to forego the use of straps and persevere until I could handle heavy weights without them, I surpassed my previous bests. In fact, the entire exercise became much more intense and my overall gains in strength and muscular size were quite unexpected. Perhaps my level of concentration was higher because I was so intent on maintaining my grip on the barbell.

As neuroanatomists know, the area of the brain that exerts control over the hand muscles has a much higher representation relative to actual muscle size than other muscle groups. Although it is strictly conjecture, perhaps intense forearm/hand work heightens neural stimulation for all muscles worked during a particular movement. My experience has shown that taking the time and energy to directly stimulate the forearm musculature leads to increased ability to handle heavy weights in many exercises."

▼
Check out "Beyond Crunches." In the back of the book, you can order my videos and books. Or else.
▲

Even if you do not bother with squeezing a tennis ball or doing other specialized grip exercises, the hand strengthening effect of your deadlifts, plus concentration on squeezing the life out of your barbell every time you lift it will pay off handsomely with new strength in all your lifts! You will also protect your wrists during your presses. In every gym you see people pressing with their wrists hyperextended, or collapsed back. Not only does this maneuver rob you of your power, it also damages the ligaments and makes you a candidate for carpal tunnel syndrome.

And what about the abs? In a recent poll, nearly an equal number of men and women responded that it is the most important body part to develop. Frequently cosmetic preferences are evolutionary choices we are making without being aware of it. Large widely set eyes are not only attractive but provide their owner with fine stereoscopic vision that may play a role in survival. Heroin-emaciated models have taken over the media but men still prefer women who do not look like adolescent boys. Although perpetuation of his genetic code may be the last thing on a guy's mind, he is attracted to a gal who is most fit to be a mother—which is why she has all the right curves.



Simon Javierto demonstrating the phases of isolation of the abdominal muscles. This control is accomplished by complete exhalation of all air from the lungs drawing in the abdominal wall to fill the vacuum (second photo). Then by bending forward and contracting the rectus abdominus (first photo). (Photo from Earle Liederman)

America's obsession with abs may be explained by the little known fact that a person with strong midsection muscles is generally pretty strong all over. Vasily Alexeyev, a Russian weightlifting icon whom *Sports Illustrated* hailed as 'the strongest man in the world' a couple of decades ago, made a big deal about training his waist muscles because he believed they were the weak link limiting everyone's performance. He told an *L. A. Times* reporter that a lifter needs abs "so strong that they can stop a bullet, but don't print that. Somebody might try."

He was right; shortly after the Great Patriotic War, as World War II is know in Russia, Soviet scientists discovered that while in low intensity movements most work is performed by the extremities, when the load is significant, the core muscles take over much of the work. "The strength of the low back and abdomen is the key to lifting big weights," agrees Yuri Spinov, two times world champion powerlifter from the Ukraine.

And as if doing their fair share during maximal squats and deads was not enough, the abs amplify the strength of other key muscles as well. Intensely contracting abdominals send nerve impulses to other muscles which starts a chain reaction. Martial artists know that flexing the abs adds more umpph to any punch or kick. Neural commands—or chi, if you prefer the Chinese terminology—transmitted by the tensed abdominals reach your quads, triceps, etc. and make them stronger!

▼

"The strength of the low back and abdomen is the key to lifting big weights," agrees Yuri Spinov, two times world champion powerlifter from the Ukraine.

▲

WARNING!

US physicians generally do not approve breath holding during exertion. Elevated internal pressure can be dangerous to your health and life! Discuss the appropriate for you exercise breathing pattern with your physician.

▼
Lives there a man with breath so dread...

—A. Smith
▲

Maximally tensed abs and obliques also elevate your intra-abdominal and intra-thoracic pressure which fortifies any exertion. There is a positive relationship between your inside pressure and your power, a so-called pneumo-muscular reflex. Somehow this pressure potentiates muscle excitability. In non-geek words, it amplifies your strength. Karate masters understood this phenomenon centuries ago. They learned to synchronize their strikes with a forceful 'Ki-ai!' Sudden forcing of the air out by a powerful contraction of the respiratory muscles and the abs peaked the internal pressure at the moment of the impact. This maneuver dramatically increases the muscular tension, or force, for a fraction of a second. That gives you a hint why heavy weight boxers are yet to break the punching power record registered on a dynamometer by a hundred thirty pound Japanese karate master.

The problem is, a bench press lasts a lot longer than a karate punch. Following the expiration the pressure drops to zero, and so does your power. I was reminded of this fact when I arm-wrestled a Harley Davidson type recently. 'Don't let me hear you breathe," warned the longhaired biker, with forearms that could be featured in a spinach commercial. To make his point the veteran arm bender pinned my arm in a flash of inside pressure, forearm tattoos a blue blur—just as I finished exhaling.

So unless you perfectly synchronize your expiration with the effort, you will get buried the same way I got pinned to the arm-wrestling table. Then what's a poor boy to do if he wants a strength boost of high internal pressure?—Hold his breath!

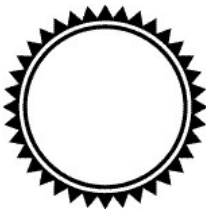
It is the most natural thing to do when one is exerting himself. But will it kill you, as the fitness instructor at your health club, a big brain with twelve grades of public education, has warned you?

Here is what Prof. Verkhoshansky and Dr. Siff have to say: "Many medical and other authorities state that one should never hold the breath when training with weights. This well-meaning, but misinformed, advice can lead to serious injury… the breath-holding (or Valsalva) maneuver increases the pressure in your abdomen and supports your lower spine. Without breath-holding, far greater pressure is exerted on vulnerable structures of the lumbar spine, in particular the intervertebral disks and ligaments. Prolonged breath-holding (of more than a few seconds) causes a dramatic increase in blood-pressure, followed by a sudden drop in this pressure after exhalation, so it is definitely not advisable for everyone, particularly older folk and those with cardiovascular disease."

Talk to your doctor before deciding how you breathe during exercise. I have no desire to see your family lawyer should you decide to check out in the middle of your workout. If the Doc is down on breath holding, run this alternative by him or her: "…drive up and blast out the air at the same time… Think of your mouth as the nozzle of a garden hose and… begin to exhale in a narrow, high-pressure stream. As you get past the sticking point, open your mouth wide (just like the nozzle on a hose) and empty your lungs as quickly as you can." This is the advice of Randall Strossen, a Stanford Ph.D. and a man of great knowledge of modern and vintage strength training. Make sure to save some air to stabilize your spine at the completion of an exercise, especially the deadlift!

The talk about spine stabilization brings up the issue of lifting belts. A belt restrains your inside pressure which makes you stronger via the pneumo-muscular reflex and protects your spine. Imagine surrounding your spine with a tire and then pumping the latter up. The air compressed inside your body by the belt has that effect.

▼
Today's gym rat follows Marty McFly's slick tradition and protects his soft underbelly with a foot wide armored belt.
▲



It does not mean that you should ever wear a belt though. In *Back to the Future*, Part III a grizzled gun fighter broke his knuckles against Michael J. Fox's stomach cleverly protected by a cast iron plate. Today's gym rat follows Marty McFly's slick tradition and protects his soft underbelly with a foot wide armored belt. Big mistake. Containment of the internal pressures is part of the midsection muscles' job description. Consistent use of a belt, especially not backed up with proper ab training, creates a weak link in the midsection. A powerlifter acquaintance of mine who decided to try himself in a 'raw' meet which does not allow belts found out to his surprise that his abs gave out before his legs! Say no to artificial lifting aids and develop a 'virtual belt' out of rock hard abs like Yuri Spinov, the human crane from the Ukraine who does not bother to wear any belt at all, even when he squats 914!

Here is an abdominal exercise recommended by Prof. Vladimir Zatsiorsky, a leading Russian strength authority who betrayed the Dark Side of the Force and immigrated to the US. The ex-Soviet professor cites a double-blind study that showed this type of exercise to be superior any other.

After a normal inhalation—earlier Soviet research by Vorobyev recommends 75% of your maximal air intake—contract your abs while keeping your glottis closed and the rectal sphincter contracted. Expel your air forcefully in three to five seconds. Make fists if it helps you (just another demonstration of your body's interdependence and how to use it to your advantage). You can make this drill even more effective the karate way by adding a grunt after you have supposedly expelled all your air.

The prof recommends ten to fifteen contractions per set, three to four sets spread throughout the day, every day. You know me. I would double the sets and halve the reps.

Strong abs also happen to be the best insurance policy against hernias, according to Zatsiorsky. Like a submarine hull, they should stop your guts from protruding. The professor states that comrades with strong backs but weak stomachs face the highest risk of hernias. So it may be a good idea to practice his drill for awhile before pulling really heavy deadlifts.

▼
Say no to artificial lifting aids and develop a 'virtual belt' out of rock hard abs.
▲

Zatsiorsky's Shaolin fighting monk style drill will not only strengthen your abs, but also the diaphragm and other muscles that generate high intra-abdominal pressure. It will teach you how to use them to contain the pent up pressure inside you and not let your gut hang out when you lift (a no-no!). This skill comes in handy for minimizing your odds of back injuries and hernias.

Naturally, your overall strength is increased via the pneumo-muscular reflex. Mas Oyama, a Japanese karate master famous for battling bulls unarmed and chopping their horns off barehanded (!), regularly practiced drills of this type to build up his might. If you are heavily into abs, you will find many unique midsection exercises from full contact karate, old time strong men, and the X-files labs of Eastern Europe in my book *Beyond Crunches: Hard Science. Hard Abs.* Call Dragon Door Publications at (800) 899-5111 and order a copy!

The rectal sphincter contraction recommended by Zatsiorsky as a part of his abdominal drill not only increases the inside pressure and amplifies one's strength, it also acts as an insurance against hemorrhoids. People inexperienced in lifting correctly tend to let their intestines go when they strain. Such a style of lifting could lead to hemorrhoids and offers no performance advantage. It is interesting that Chinese Chi Kung masters have been pulling their anuses up during their esoteric practices for centuries.

To sum up the eight effective breathing habits for lifting weights:

1) Clear my recommendations with your doctor.
2) Inhale 75—100% of your max lung capacity before loading your muscles.
3) Hold your breath (keep your glottis closed) as you are lowering and lifting the weight. Exhale near the end of a rep, or right after it.
4) In exercises which allow a safe relaxed pause on the bottom, for example situps or curls, you may exhale and inhale again before reversing the movement. One breathing cycle for each half rep instead of a full rep.
5) Do not expel all of your air, or you will lose tightness and stability following the exhalation.
6) Feel free to take a few breaths between your reps, but do not hyperventilate.
7) Keep your midsection rock hard but do not let your stomach bulge out.
8) Always use the anal lock (contract your rectal sphincter).

The last word on breathing and weight training safety. I cannot guarantee that you will not get hurt or killed whether you follow my advice or not. Just keep in mind that people who never lifted anything that could be classified as 'heavy' got hernias from coughing and died from a stroke when they strained on a toilet. As someone smart said, fear of doing things does not prevent you from dying, only from living.

▼
As someone smart said, fear of doing things does not prevent you from dying, only from living.
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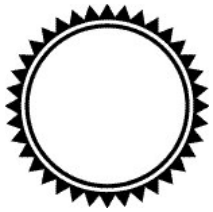

SLOW AND STEADY WINS THE RACE

Bodybuilders say that you should concentrate on working the muscles instead of lifting the weight. It does not have to be either or. The unique feature of the *Power to the People!* program is its techniques simultaneously maximize the training effect, safety, and performance!

"By and large, people do not get injured from using too much weight… people get injured because of their behavior—with a heavy or light weight," states Ken Hutchins who crusades for extremely slow strength exercise performance.

▼
Impatiently rushing produces no result.

—Chinese proverb
▲

"Go to your car and lift it… begin to evenly apply force. Apply force, gradually increasing to a maximum force over a duration of 10 seconds or so, sustaining the maximum for several additional seconds, continuing to ventilate [indeed, holding your breath for 10 seconds is a bad idea. –P.T.], sustaining the maximum for several additional seconds, continuing to ventilate, then slowly decreasing the force and relaxing.

"Did you hurt your back? No… But what if I simply commanded you to lift your car—without the detailed instruction and admonishments to slowly apply and let off the force? The typical reaction is to yank and heave at the resistance. And this behavior—not the weight of the car—commonly results in injury."

Apart from safety, there are many reasons to lift and lower your weights slowly: three to five seconds on the way up and three to five on the way down is the *Power to the People!* rule. First, muscular tension drops off as the velocity increases. Considering that tension is what we are after, it is a dumb idea. Just note that the athletes with the most spectacular muscular definition are those from sports requiring slow exertions, such as gymnastics.

Second, contrary to what you might think, you will not be able to lift more weight if you jerk it. Ballistic cheating helps only when you lift light, Barbie and Ken weights that can be thrown in one burst of effort. You cannot do it with the mother of all weights. Watch a powerlifter deadlift 600 pounds. You will see him slowly building up tension at the start, then strain for a few seconds until the bar bends and reluctantly leaves the ground, like a space shuttle taking off. He then will grind through the rest of the lift, which might take as long as five seconds.

Neurogeeks know of a phenomenon called a firing rate burst. If you jerk the bar, you have an immediate surge of power followed by complete muscular relaxation. If you did not succeed in throwing the barbell to lockout in one heave, you have failed. If the powerlifter in the above example tried to jerk 600 pounds, even if he did not get hurt, he would just budge the barbell a few inches off the ground where it would run out of momentum and crash down. He could not generate enough momentum to throw the weight to the top and his neurophysiology did not let him switch gears and grind the weight the rest of the way.

Studies of the bench press kinematics revealed that second rate powerlifters gunned the barbell from their chests and died half way through the lift. Top dogs, on the other hand, started slow and finished the lift with steady confidence. Yes, safety and performance are the two sides of the same coin!

Ironically, a show-off who is used to heaving and jerking his barbells fails miserably when confronted with a heavy weight. Studies show that when he attempts a ballistic lift but the weight is too heavy to cooperate, his muscles feel impotent, his nervous system panics and shuts down the operation: the barbell stays welded to the ground. On the other hand, scientists determined that a person who treats the weight the way the super slow advocate recommends lifting cars, finishes the lift . He builds up tension slowly and steadily, without what Hutchins calls 'off/oning'—and will surprise everyone with his strength once he has to demonstrate it.

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A show-off who is used to heaving and jerking his barbells fails miserably when confronted with a heavy weight.
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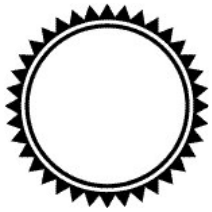

Once the weight stops or nearly stops moving, the nervous system of a jerky lifter or a non-lifter interprets this event as a failed attempt and calls it quits. Slow lifting teaches the nervous system not to give up when the gravity seems to be getting the upper hand. As a powerlifting teenage national champion whom I consulted put it, 'You've gotta learn how to grind!'

Feed-forward tension—how to acquire the strength of the mentally deranged

I want you to do a test. Take an empty pitcher and stick it under a faucet while holding it with a bent arm. Turn on the water and look away. Without any conscious thought on your part, your biceps will progressively tense up to hold up the heavier pitcher.

Now another experiment. Ask a friend to lift an empty suitcase but warn him that it is very heavy. He will brace himself for an effort, and grab the suitcase. Powered by excessive force, the suitcase will fly into the air. Without thinking, your friend will immediately take it easy to make his effort appropriate for the load at hand.

▼

Act like your light lifts are heavy, so your heavy lifts will feel light.

—Frantz's Third Commandment of Powerlifting

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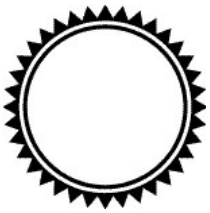
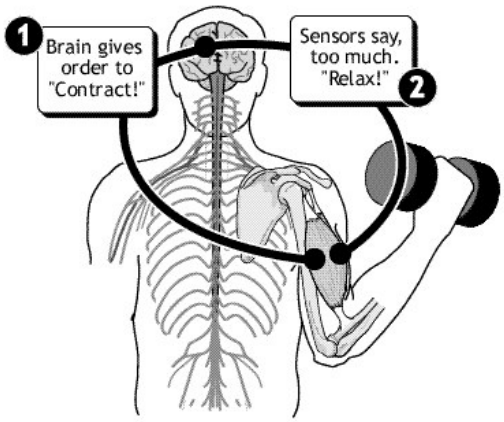


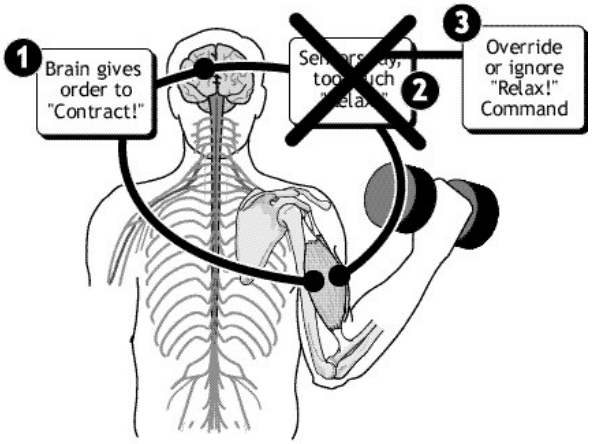
The intensity of a muscular contraction is the sum of 'Go!' and 'Stop!' commands coming from your brain and other parts of the nervous system such as various sensors in your muscles and tendons. Your spinal cord is constantly processing information from these proprioceptors about the resistance and joint angles. Then it makes the necessary corrections in your muscular efforts to make them appropriate for the situation at hand, such as ordering your biceps to contract harder as the pitcher is getting heavy with tap water.

It is an efficiently run feed-back operation designed to prevent you from looking like a fool when you slap an ice-cream cone into your face or try to lift a very heavy object with a dainty move, little finger sticking out. Unfortunately, this slick computerized system becomes a detriment to displaying your maximal strength. Once the resistance approaches what you believe is your maximum, the feed-back loop starts acting up. Fearing a tendon injury, it sends very powerful 'Brake!' comands to your muscles.

1. The Feed-Back Loop



2. Feed-Forward Training



Because your strength generally does not exceed 30% of your tendon structural strength, the strength governor mechanism is set up way too conservatively. Scientists believe that pulling the brake from under your gas pedal, that is minimizing the inhibitory input into the muscles is the key that will open the door to super-strength undreamed of by the strongest people in the world. Desperate grandmothers wrestling leopards and mothers lifting cars to save their progeny supposedly do something to prevent the 'take it easy, you might get hurt!' commands from reaching their muscles. Insane people bend metal bars in the windows of their cells—I believe, they call them 'wards' in the US—because their neural circuitry is goofed up. It does not recognize the inhibitory input and does not hold you back. This is the essence of disinhibition training, the hottest new direction in strength training. Of course, we do not want to totally lose our senses, rather learn to ignore them when we choose to.

▼
Scientists believe that pulling the brake from under your gas pedal, that is minimizing the inhibitory input into the muscles is the key that will open the door to super-strength.
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Enter feed-forward tension, one of the most promising disinhibition techniques. It requires that you maximally contract all your muscles with a submaximal weight—or no weight whatsoever! Remember Charles Atlas and his 'dynamic tension' method? You were supposed to imitate lifting a weight by flexing your muscles for all you have got. Just as Tai Chi Chi Kung differs from visually similar calisthenics in concentration and awareness, dynamic tension is an Oscar winning pantomime of a world record powerlift, and not just mindless going through the motions.

Bodhidharma, the semi-mythical progenitor of the Oriental martial arts from India is credited with developing the Yi Ji Jing—dynamic tension exercises. They were a series of postures demanding forced tension developed a millennium and a half ago. Shown at right is one of them called Pull Bull's Tail. Bodhidharma supposedly developed them to help his weak and sickly monks to strengthen their bodies.

The guy in a leopard skin swimsuit did not invent this method. Russian scientists Anokhin and Proshek did in the early 1900s. Or so they thought. Bodhidharma, the semi-mythical progenitor of the Oriental martial arts from India, may have practiced such exercises a millennium and a half ago. Scientists were skeptical of dynamic tension for awhile, suspecting that by creating artificial resistance within your muscles you learn to put on the brakes. Then a Soviet study by Kovalik established beyond the shadow of a doubt that 'virtual lifting' builds strength, even in so called quick lifts!

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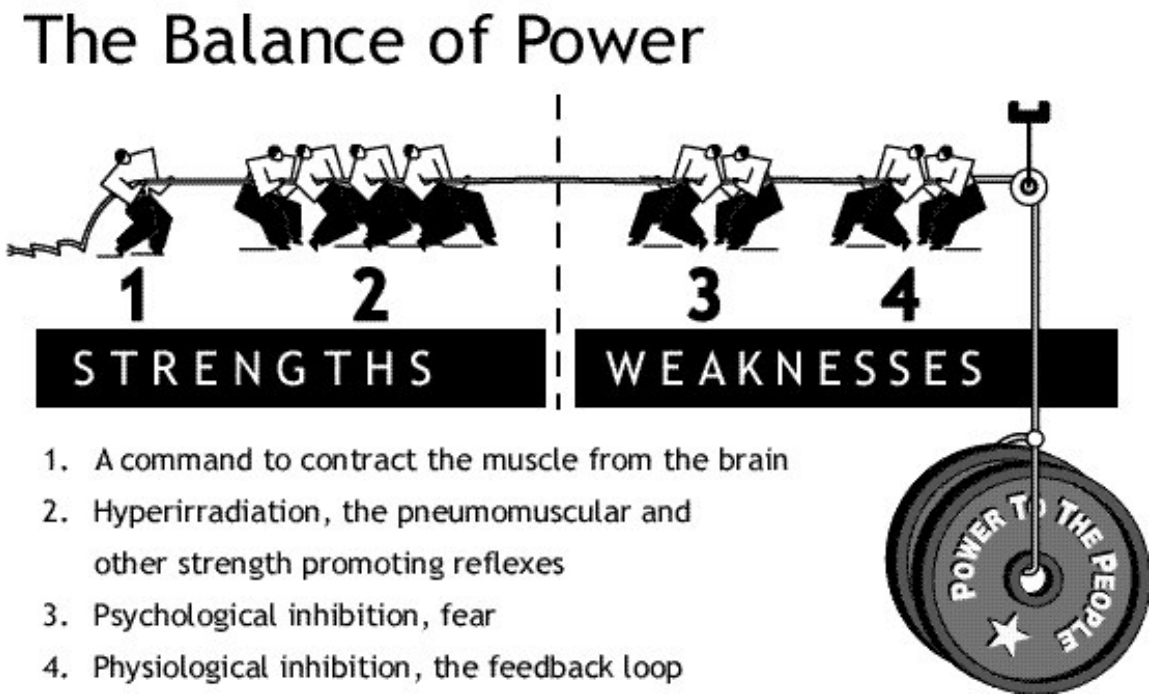
High values of muscular tension was one reason, but today we can think of another. Maximally tensing the muscles in the absence of resistance or with a light weight is only possible when the subject ignores the feed-back offered by his muscles and tendons, namely, that there is no resistance to contract against. The opposite of a normal feed-back operation, the feed-forward tension technique of maximally contracting the muscles regardless of the weight, should build superhuman strength! Once the muscles are subjected to a very heavy load, they will be able to successfully ignore the reality and lift the damn thing! Keep in mind that you must lift real heavy weights at least some of the time. Martial arts masters who practice sanchin or 'Iron Shirt' exercises know that they must break things or otherwise strike solid objects to realize the power built with dynamic tension. Your joints and connective tissues must get stronger as well as your muscles—for them virtual resistance will not cut it!

In a conversation with the super slow guy Ken Hutchins his associate Keith Johnson, M.D., coined the word 'internalization' for concentrating on the process of lifting the weight instead of the results: "They urge you to beat the equipment, as… a competitor you must defeat. They teach you to externalize a feigned aggression. You do the opposite. You seem to advocate reaching inside your body. When exercising he [Hutchins' subject] seems to turn off his surrounding environment and concentrate into an internalized trance. That's the fitting word: 'internalize'." Compare that with externalizing the effort against the barbell. Keep in mind that if you do the 'internal' gig in the context of *The Power to the People!* techniques, the 'external' results, that is the weight of the barbell lifted, will also be at its max! We accept no compromises.



Although I have quoted advocates of super slow exercise performance a few times in this book, I must make it clear that I do not subscribe to Ken Hutchins' school of strength training. In a nutshell—or 'in a nutcase' as I used to say in my early years in America—the trademarked Super Slow exercise protocol requires that one lifts the weight in ten seconds and lowers it in five. Such exaggerated slowness demands that you hold back the force output and necessitates the use of a very light weight. Muscular tension—and the results—are compromised.

The Power to the People! lifts are slow—about three to five seconds to lift, same to lower—because maximal tension of all the musculature emulates a maximal lift which usually takes that long. There is no need to time yourself. Full body tension will take care of slowing you down. Try moving fast when all your muscles are flexed—you just cannot! Compared to Super Slow, or any other exercise protocol for that matter, ***The Power to the People!*** **program produces superior results because it allows the highest levels of tension, full body involvement, and employs heaviest weights.** In fairness to Hutchins, he makes many excellent points, especially regarding strict exercise performance, and his protocol has some bodybuilding and rehab applications.

Feed-forward tension is not the same thing as 'feeling the muscle' either. Feeling your entire body cease to be a carbon based life form and get compressed to the density of a black hole is more like it!

PRE-TENSION FOR MAX POWER AND SAFETY

When I first arm-wrestled a professional, I got annihilated. The fellow loaded his muscles with maximum tension, to the point of shaking, before we even gripped hands. On the 'Go!' he flashed my arm to the table. When he hit me, it was too late for me to load.

Speed and technique of arm-wrestling notwithstanding, after some practice you will always be able to tense your muscles the hardest before they are subjected to the load.

▼

I turn myself into a rubber band, I am ready to accept the weight and toss it back up.

—Ernie Frantz, Powerlifting World Champion

▲

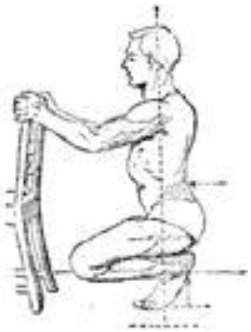
"If the body is tight it can accept any shock", explains powerlifting great Ernie Frantz who instinctively took the right track in his training and whose book ***Ernie Frantz's Ten Commandments of Powerlifting*** had the rare honor of being translated into Russian. "If someone were to hit you in the stomach it might hurt, but not if you tensed your stomach muscles first..." Indeed, Chinese practitioners of Iron Shirt Chi Kung would dive off an eight foot wall, land on their chests, and live to tell about it! (Call Dragon Door Publications at (800) 899-5111 to order a free catalog which features books and tapes on Chi Kung, but try to restrain yourself from jumping off walls.)

Your best bet is to get tight before you unrack the weight and keep that tension for the duration of the rep. Ernie Frantz swears that practicing tightening up his entire body throughout the day has helped his lifting (try it on your vacation when you have no access to weights). Recall that when your tendons get loaded and your joints get compressed, they start sending negative vibes to your muscles. Maximally flexing all your muscles before you get under the iron allows for a most intense, nearly-unmitigated-by-the-sissy-reflexes contraction. Once the weight is on top of you—it is too late for them to commit their strength sabotage! You should be able to keep most of the tension gained before you felt the weight, which translates into greater strength and safety.

There are other solid scientific reasons to tense up before you get under the bar and lower it. I do not need to remind you that there is a high correlation between muscular tension and strength gains. Of all combinations of the three types of contraction (overcoming, yielding, and static, or holding), a yielding contraction which followed a static one showed the highest values of tension in a late sixties Soviet study. I believe this has to do with some peculiarities of maximal force production. If you compare a muscle to a rubber band, you can understand how it gains tension when stretched. Imagine how much more snap you can load into a rubber band if you also twist it before stretching it!

Some scientists believe that this is what happens when a muscle has to produce an extraordinary amount of force. Pre-tensing to the point of cramping before getting under a barbell can be compared to twisting a rubber band after it has fully contracted. This move enables the muscle to store great amounts of elastic energy as the descending weight stretches the rubber bands and the twists in the bands on the way down. Not surprisingly, Russian research from the days of Stalin showed that the ability to store and use the tension loaded into the muscles in the yielding phase of the movement separated elite athletes from 'also-rans'. Sly Ernie Frantz must be a CIA man with an access to classified Russian research: he always knew that the key to lifting a big weight is the amount of tension built up in the muscles before the barbell is even unracked!

Tense up maximally before getting under the weight. Attempt to maintain, and even increase, this tension as you are lowering the barbell. The more tension you have stored on the way down, the easier you are going to get up.



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His arms bend easier than most people's.

John McCallum about a man with strong biceps in a 1960s Strength & Health *magazine*
▲

Successive induction: how to get a strong biceps by contracting your triceps

Successive induction is another one of the Sherrington Laws exploited to the max by unscrupulous Commies. According to this law, a contraction of a muscle—say, the triceps —makes its opposite number—in our case, the biceps—stronger than usual. In the early eighties scientists suggested that this maneuver has a disinhibition effect. In non-geek terms, when your triceps powerfully contract, they send the neural centers controlling the biceps a message that your bis do not have to hold back out of fear of an injury; if things get out of hand the tris are strong enough to stop them!

A year later the same group of researchers determined that a strength training program which employs the antagonist pre-tensing, or successive induction, is more effective than a conventional one. The benefits of antagonist pre-contraction do not stop at immediate performance improvement, but include lasting changes in your strength.

Like before, let the basic barbell curl be the testing range of the effects of successive induction. Perform a set of strict curls the way you were taught: butt, abs, and grip tight. Use a weight that allows about five solid reps and make sure that your elbows stay at your sides and do not drift back. Note how many reps you have done in good form.

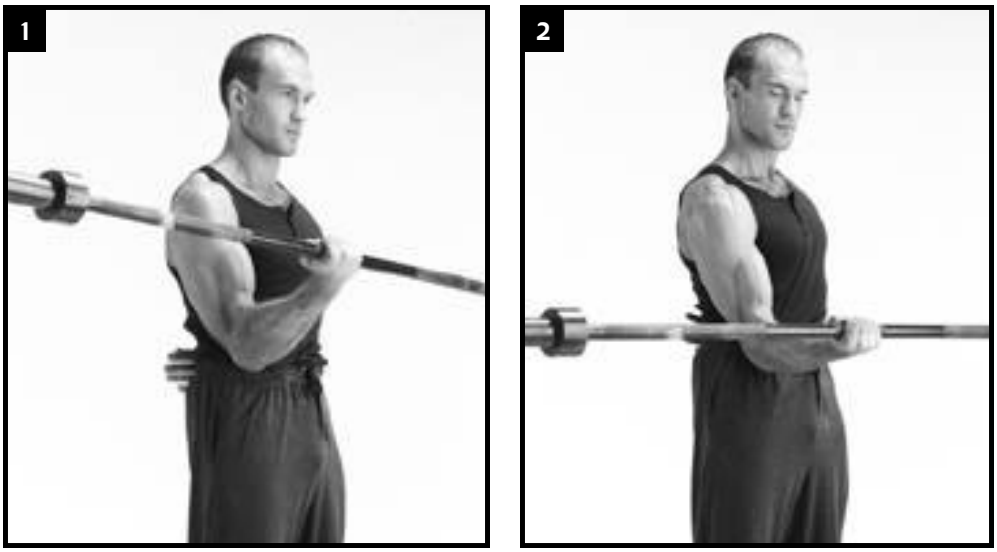

Photo one demonstrates a regular curl with good form. The upward motion uses irradiation, good posture and breathing. But in photo two successive induction is utilized as well. Use the triceps to pull the weight down.

Rest for five minutes and do another set of curls with the same weight, but employ the new trick. Instead of lowering the barbell with the braking strength of your biceps, try to 'push' the weight down and away from you with your triceps. You are guaranteed to squeeze out an extra rep or two with this technique! These reps will be super strict because now you have two 'motors' to control the weight instead of one.

Incidentally, the successive induction maneuver offers superior joint stabilization because of the co-contraction of the muscles on both sides of it. Thus it dramatically reduces the joint stress. Encourage a friend with joint problems to discuss this powerful technique with his or her doctor. Chances are, you will be owed a big favor!

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ON SHOES, GLOVES, AND MIRRORS

There is a Russian joke about a guy who wore shoes two sizes too small for him. When asked about his bizarre behavior, he complained about his miserable life and concluded that his only happiness in life was to come home and take off his shoes! You will be even happier than this dude if you lose yours—at least when you lift.

▼
Sometimes you have to look reality in the eye and deny it.

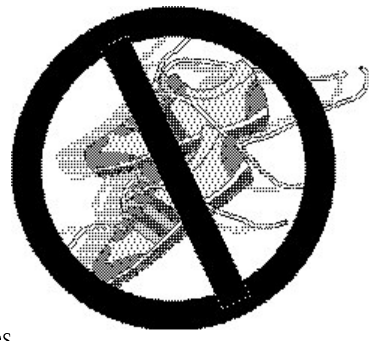
—Garrison Keillor
▲

"Running shoes or any shock-absorbing shoes suitable for the aerobics class are potentially unsafe in the gymnasium," warn Prof. Verkhoshansky and Dr. Siff. "For instance, compression of any part of the sole during... deadlifts, standing presses... and other standing exercises can cause general instability and consequent injury. Moreover, inappropriate height of the heel can shift the center of gravity of the body forward, thereby increasing the stress on the knee joint and altering the optimal patterns of movement for safe, maximal lifts from the ground. These are all major reasons why powerlifters often wear thin heel-less shoes much like ballet pumps."

There is more. The forcefulness of a muscular contraction is determined by the sum of the mental effort and various reflexes. When you wind up your shoulder to pitch a baseball you take advantage of the stretch reflex. Another power boosting reflex is called the positive support reaction. This reflex causes the leg musculature to contract in response to the pressure on the sole of your foot. It is a protective measure against loading.

Research suggests that always wearing shoes diminishes the sensitivity of the foot, which may turn off the strength friendly reflex. Too bad, because when the barbell is intent on squashing you like a bug on the windshield, you could use any help you can get! The only iron man who has recognized this problem is Dr. Fred Clary from Minnesota, a human crane who has elevated 900 pounds. Fred regularly performs heavy, 1,000 pounds plus, squat walkouts barefoot 'just to fire off those receptors'. Clary believes that such training sensitizes the extensor reflex receptors and enables him to lift heavier.

You do not have to walk around with half a ton on your shoulders, but you sure could lose your sneakers on steroids. Since the gym owner might object to your going native with your dirty toe nails scraping his floor, get yourself a pair of 'deadlift slippers' from Crain's Muscle World, (800) 272-0051. They look almost like ballet slippers and are probably available in pink. Have fun.



Another option is flat shoes with non-giving soles, for instance Chuck Taylor's Converse old fashioned basketball shoes. Many elite powerlifters favor this understated hard core design. You can get a pair for around thirty bucks in any athletic shoe store. Your Gramps must have worn a pair of these canvas-topped classics. They have a flat thin sole which helps your performance and safety.

Scientists believe that that running, aerobic, and other fancy shoes cause injuries which would not have happened without them! It is a fact that barefoot populations of the countries with nice climates and no extradition suffer fewer running injuries than Americans and others who look up to Amelda Marcos. The extensor reflex recruits the leg muscles in a precise pattern according to the direction of pressure from the ground. Poorly designed shoes may redirect the pressure where it does not belong and alter the proper recruitment pattern.

Besides, shoes with high shock absorption delay the transmission of pressure to the sole of your foot. That has the effect of a devious KGB trick devised to find out if a person who pretends to be deaf, is really deaf. The men in black have the American spy suspect read a script into a microphone and feed it back to his headphones with a slight delay. This will not phase a deaf guy but will totally confuse the enemy of the state who is faking it. He will stumble and will be unable to continue. The cushy soles of your workout shoes, thick as the platforms hippie girls wore at Woodstock, will play the same joke on your extensor reflex. Although the consequences, a reduced deadlift poundage and increased odds of injury, are less drastic than a firing squat in Lubyanka courtyard, this is considered a problem in this land of minor inconveniences.

The Chuck Taylors, probably the best all around shoes for weight training, do not offer a lot of give in the soles, which improves your survival odds.

By the same token, say good-bye to your pink lifting gloves. The positive support reaction is present in your arms too when you do pressing exercises. "The human body has a number of... reflexes that serve mainly to protect the body from injury. It has been shown, for example, that pressure... near the fleshy part of the palm on the little finger side... causes extensor or stabilization response in the upper arm. This reflexively aids in stability of the whole upper arm by stimulating greater contraction of the... triceps," explains biomechanics expert and seasoned powerlifter Dr. Thomas McLaughlin.

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The cushy soles of your workout shoes, thick as the platforms hippie girls wore at Woodstock, will play a bad joke on your extensor reflex.
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Gloves reduce the pressure against your hands and sabotage your presses in the same fashion tennis shoes mess with your deadlifts. On the other hand, holding the bar with bare hands in the manner suggested by Dr. McLaughlin —"You will be surprised if you try this at how powerful and comfortable this maneuver makes the arm feel." —and squeezing it hard will up your power!

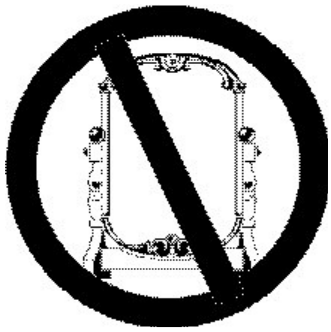
Having disposed of gloves and cushy sneakers, let us send gym mirrors the way of the Berlin Wall!

▼ Robert Roman's sportsmen develop their muscle-joint sense by lifting ...blindfolded! ▲

Prof. Robert Roman used to conquer gold for the Soviet Empire on the weightlifting platform. Today he is a top coach who has trained many young lifters to greatness using his revolutionary methods. Roman is convinced that developing superior sport specific body awareness will make a difference between being good and great!

It is not enough to have muscle, you have got to know how to use it. Soviet experiments revealed that even elite lifters made huge errors in estimating the height of the lift, the magnitude of the force, etc. When special techniques for maximizing what Roman calls the 'muscle-joint sense' were developed, the top guys outdid themselves and some unpromising also-rans became world class!

Robert Roman's sportsmen develop their muscle-joint sense by lifting ... blindfolded! Their coach explains that because we so heavily rely on our eyesight, we do not pay enough attention to the various sensations in our muscles, tendons, ligaments, and joints. When blindfolded, the lifter is forced to listen to his body. Contrary to what a mirror gazing bodybuilder wants to believe, this tremendously improves the technique and its stability!



Kick off your muscle-joint sense training by getting a pair of airline blindfolds. Roman does not recommend lifting with your eyes closed because it distracts you from what you are supposed to be doing. Training with the lights turned off may be an effective alternative, but the gym owner might object, at least if he finds you before he stumbles on a dumbell and cracks his head against the Smith machine. So blindfolds it is.

Start deadlifting or pressing light with your eyes open, then cover your eyes. Keep alternating open and shut eye sets or reps but do not add wheels until you own a given weight blind. Do not just go through the motions but concentrate on various feed-back your body has to offer: muscular tension, joint angles, etc. When something feels wrong, correct it and remember what you have corrected.

The purpose of this drill is not to make your deadlifts pretty, but to make them heavy. By finessing your skill, you are guaranteed to lift a lot more iron. Just ask four times Powerlifting World Record Holder Dr. Judd Biasiotto who spent a lot of time developing his squatting body awareness with special techniques of his own. "...I was able to become aware of the muscles I was using during each segment of my lifts. When I got stuck at a certain part of the lift, I knew exactly which muscles to recruit and/or concentrate on to make the lift. " And stood up with 605 pounds at 130 pounds of bodyweight! Have no doubt that his proprioceptive sensitivity training paid off.

Even if you do not muster the courage to lift blindfolded once in awhile, at least stop using mirrors. A friend of mine was squatting in a health spa which had more mirrors than a Las Vegas hotel room and hurt his back, confused and distracted by the reflections.

Mirrors, gloves, belts, and fancy sneakers are expensive and dangerous distractions from effective training. Just say no. If you can't, get help.

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POWER STRETCHING

"When I' m done with you," I promised to the new batch of hard asses in the Soviet Special Forces, or *Spetsnaz,* "You will have the flexibility of a mutant. Or else."

The storm troopers of the Evil Empire knew that a muscle that can easily relax into an extreme stretch is a muscle that can do things. Hit hard and fast, lift heavy, never quit, never hurt, blast into action without warm-up, and recover from it overnight. Deprived of food and sleep, exhausted from every exertion known to man, bloodied in full contact hand-to-hand combat, we still did things like one arm chins and ten foot standing broad jumps all in a day's work.

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I'm only a hamstring tear away from oblivion.

—Steve Jones

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Do you want to get super strong and live to tell about it? Start stretching the Russian way, Comrade! You will say good-bye to most aches and pains which veteran weight trainers put up with as a part of the game. You will recover from your bar bending deadlifts twice as quick as your friends and you will get stronger faster.

And do not forget the cliché that stretching improves your odds against injuries. You cannot add another inch to your chest if your shoulders scream in pain and you are forced to reduce your benching poundage by fifty pounds. And you cannot do much of anything, least of all get strong, if your back punishes you with an electric shock every time you move.

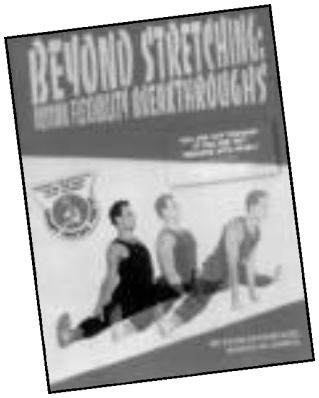
"I stretched my spine in every workout and with every available exercise," recalls Soviet weightlifting legend Yuri Vlasov who could bend over with his knees locked and touch his head to his shins. "Because I stuck to this rule religiously, in all my years in the big sport I never knew the back pains so common to athletes."

Ironically, all of the above does not mean that you should stretch or warm up BEFORE your lifting. At the most do a couple of lighter sets of two to three reps just to get in the groove. Even that, in my not so humble opinion, is an overkill. You have started your power cycle with light weights and by the time you are moving heavy iron you should have developed acceptable technique. Understand that you might get injured whether you warm up and stretch or not. As the French say, *C'est la vie!,* such is life.

If you want to know why I am down on warming up and pre-workout stretching, please read my *Beyond Stretching: Russian Flexibility Breakthroughs* book. It is also the source for state of the art flexibility techniques decades ahead of the lame 'relaxed stretches' and 'active isolated stretches' popular in this country.

In addition to the mentioned health management benefits, scientific stretching can make you a lot stronger and, if that is your desire, slap on some serious meat on your bones! Did you know that the most dramatic muscle growth on this planet

took place in a chronically stretched muscle? In slightly over a month of progressively more intense stretching the mass of a bird's wing muscle increased by an out of this world 334%! Stretching induced muscle damage appears to trigger muscle cell splitting, or hyperplasia. Although all the bugs have not been worked out for humans yet, the possibilities are awesome!



In a 1977 study by Yefimov, Russian weightlifters reported an average 9.4% strength increase when they added special Loaded Passive Stretches between their sets. In a recent US study by Westcott the subjects who stretched the muscles they have just worked with a strength exercise for twenty seconds gained almost 20% more strength than the group that did not stretch in the end of a ten week program! Dr. Wayne Westcott could not explain why but suggested that contraction and stretching are the two functions of a muscle, and by not training one of them you sell yourself short on the other one as well. The Yin and Yang of muscle function.

▼
Check out "Beyond Stretching." In the back of the book, you can order my videos and other books. Or else.
▲

Then why, you might ask, are most stretching fanatics such pencilnecks? Because they are stretching wrong. Russian hand-to-hand combat instructor Vlad Fadeyev made a point that a fighting man cannot afford the rag doll looseness developed with Western stretching systems. Neither can you. The alternative: stretch the Russian way!

In Eastern European sports science stretching is considered to be a form of strength training. It is, if you do it right. Take Plyometric Flexibility Training. It increases your muscles' and tendons' ability to store energy like a coiled spring. It is elementary, Watson. If you can load more tension into your pecs and delts when you are lowering a heavy bench, you will be able to lift more as well. In an Australian study a group of experienced powerlifters who stretched their shoulder girdles twice a week gained an average of fifteen pounds on their bench in only eight weeks!

Some state of the art flexibility drills, especially Shutdown Threshold Isometrics and Fascial Stretching, make you stronger by as much as 20% through desensitizing the Golgi tendon organs. The GTOs are the governors limiting your strength. These tiny sensors in your connective tissues shut down the muscles once they register a force that exceeds their limit. Do the right stretches and pull that brick from under your gas pedal!

You get the idea. Special flexibility training will help you get superstrong. **Call (800) 899-5111 and buy my book.** Or else.