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What makes HARDGAINER different to other bodybuilding magazines?

- 1. HARDGAINER is the specialist source for everyone of average genetic potential who wants to develop a terrific physique *without* using drugs, *and* without being a slave to a gym or having to sacrifice a balanced life. Though small in size, we're big in our specialization.
- 2. HARDGAINER is almost totally free of paid advertising. So you don't have to wade through countless pages of ads. While there are only 48 pages per issue (this 2-page introduction is additional to the usual page count), what we have is almost totally practical information you can really use to maximize the results you get from your training. It's no exaggeration to say that HARDGAINER has more truly practical and useful information for drug-free typical trainees than most of the mainstream magazines have in a year of issues. Please judge us on our content, not our appearance or page count.
- 3. HARDGAINER has absolutely no time for bodybuilding drugs and the physiques that owe much of their development to drug abuse. You won't find photos of today's "elite" bodybuilders in HARDGAINER. Some people may say the magazine is old fashioned, but we proudly promote *genuine* Physical Culture—health, strength *and* physique.
- 4. While most mainstream printed sources of bodybuilding information don't actually promote drug abuse, they promote training methods

and routines that usually only work if you're a genetic phenomenon, or if you're pumped to the gills with drugs. (Some mainstream magazines do, however, give advertising space for how-to books on drug abuse.) HARDGAINER promotes methods and routines that don't need drugs or fantastic genetics to make them work.

- 5. Because we don't have to pander to advertisers, don't support drug-fed physiques and their contests, and have no "parent" food supplement company to promote, HARDGAINER is truly an independent training magazine. And because we don't admire drug-fed "champions," we don't have to turn a blind eye to the squalid mess of drug abuse among those "champions" and in much of bodybuilding in general.
- 6. HARDGAINER publishes few photographs. There's no shortage of photographs in the training world, but there *is* a major shortage of training instruction that's 100% relevant to the training masses. *That's what we concentrate on.* Photographs are, however, essential for teaching proper exercise form. To that end there are nearly 250 photographs in our book on exercise technique.
- 7. Relative to what you read and hear in the mainstream, HARDGAINER presents a rebellious perspective. You *need* a rebellious perspective; otherwise you're going to fall prey to the training mainstream *due to ignorance*. That many magazines and books give similarly irresponsible and even harmful advice will never make that advice right.

Please see WHY CONVENTIONAL BODYBUILDING METHODS SUCK at http://www.hardgainer.com/sucks/ for the details on what's wrong with mainstream bodybuilding.

HARDGAINER has been published every other month since July 1989. Here's a sample copy in electronic format—issue #61. The four photos in the printed edition have been substituted by text boxes (or enlarged type), to reduce the downloading time of the electronic edition. HARDGAINER is not available at newsstands. If you're interested in subscribing to the printed magazine, please go to http://www.hardgainer.com/order.html

issue #61

July-August 1999 Vol. 11 No. 1

4		Editorial
5	Christy	Mid-Year Checkup
9	McDonald	HARDGAINER Nutrition 109
13	McRobert	Ten Years Wiser
17	Wilkinson	The Bottom Line
18	Minogue	Injury Recovery
22	Whelan	"Common Sense" Periodization
25	Piche	Information Overload!
27	Finander	Finding Your Optimal Program
33	Rydin & Maurice	Questions & Answers
38	Leistner	The Steel Tip
42	Strasser	From the Grassroots
44	Steiner	Shoulder Pain
46		Forum

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Subscription rates

6 issues/12 months: US \$29.95, UK £18.95 12 issues/24 months: US \$54.95, UK £34.95

HARDGAINER (ISSN: 1019-519X) is published bimonthly by CS Publishing Ltd., P.O. Box 20390, CY-2151 Nicosia, Cyprus tel: +357-233-3069 fax: +357-233-2018 cspubltd@spidernet.com.cy www.hardgainer.com

US office for orders	CS Publishing Ltd., P.O. Box 1002, Connell, WA 99326
	tel: 509-234-0362 fax: 509-234-0601
	order@hardgainer.com www.hardgainer.com
	subscription orders at http://www.hardgainer.com/order.html

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EDITORIAL Personalize your training program

By Stuart McRobert

ve long been urging people to personalize their training programs. What may seem to be just a minor change, can, however, have a major impact on overall progress.

Last year my squatting progress was grinding to a halt, and pre-workout trepidation was becoming extreme. At the time, I was squatting (Tru-Squat) one day each week, and stiff-legged deadlifting at the other training day.

I thought that seven days between squat workouts was enough time for recovery. So to help recovery I dropped the stiff-legged deadlift. Immediately, progress on the squat started moving easily. I could guarantee getting my 20 reps with half a kilo more on the weight carriage each week. Not only that, but the intensity of effort needed to get the 20 reps actually *dropped*. I still had to work hard, but not as hard as before even *though* the volume of squatting was identical to before, and the resistance actually more. Not training my lower back, hamstrings and glutes at the second workout day each week enabled me to recuperate fully from the squat workout.

I continued to progress steadily for several months. The only glitch was a "down" period due to an overseas trip in December followed by a week of sickness. I needed several weeks after returning from the trip before I was back to where I was just before I left the island. Then progress continued as before. And still the intensity of work needed to get all 20 reps did not increase noticeably, despite a tad of iron going on the carriage nearly every week.

Recently I wondered whether the explanation for the boost to my squatting

was the result of dropping the stiff-legged deadlift, or of not working my lower back, glutes and hamstrings at a *second* day each week. So, I reinstated the stiff-legged deadlift. The squat is still the focus exercise, so the squat is done first in the workout, and the stiff-legged deadlift later on in that workout. While the latter will suffer a tad relative to if it was done first, the difference is marginal so long as enough rest is had between the two exercises. So far, progress on the squat is unaffected. If I'm able to work into new ground on the stiff-legged deadlift while not hampering the squat, I'll know that the former wasn't the problem earlier on, but where I had it in my program.

Of course, my situation is not yours. But I reckon that some people are struggling because they are squatting one day each week, and performing some form of deadlifting on a second day. That means two heavy poundings over the week for the lower back. Putting both exercises in the same workout, and thus giving a full seven days between heavy lower back work, may make all the difference. While overall training volume, frequency and set/rep format may be bang on target, if the arrangement of exercises is not right for you, the progress of the whole setup will suffer. An *apparently* minor adjustment of exercise arrangement can make a big difference. Don't necessarily go making wholesale changes if your training is not going well. Relatively minor adjustments may be all you need, assuming that you're following an already abbreviated and sensible training program.



MID-YEAR CHECKUP

By John Christy

y the time you receive this issue of HARDGAINER we will be about half way through the year. So it's a good idea to take stock as to how your training is going so far, so that you make the rest of the year as productive as possible.

Question #1

Are you stronger now than you were at the beginning of the year?

This will always be my number one question. If you've been training consistently for the past six months, you should be stronger now than you were in January. If you aren't—why? If you're a beginning or intermediate weight trainee you should have increased your strength on the big basic movements by at least 10%. An advanced trainee should be up at least 5%. For instance, if you were training under my guidance and were capable of completing six reps with 200 pounds on the bench at the start of the year, you would be handling at least 220 pounds by now. By the end of the year it would be at least 240 pounds for six. If you're not making this kind of progress (and your goals are to get bigger and stronger), your training isn't working. There may be many reasons for this. The following questions should help you realize the answers

Question #2

Are you breaking the rules of sensible training?

If you're using a single progression format, are you adding weight at a rate

that the body can adapt to, or are you letting greed run the show-making weight increases that are forcing poor form and stagnation, and possibly injuries? If you're using a double progression approach, did you really make the "goal rep" in good form? Or did you cheat a little so that you could add weight? If you want to get results, you need to follow the rules. If you've been a regular reader of HARDGAINER you know what I'm talking about. If you're new I suggest that you purchase some back issues or, more importantly, buy BRAWN. This book will get you up to speed fast.

Question #3

If your goal is to get bigger, how much weight have you gained since January?

You should be at least 12 pounds heavier by now. That's 2 pounds per month. At my facility, if someone wants to seriously gain some weight, we would be pushing for 3-4 pounds per month. How would you feel right now if, for example, you weighed 180 muscular pounds instead of the 160 pounds you started the year at? I can tell you from witnessing this that you would feel great! So, why haven't you gained the weight? I can probably tell you. You haven't dedicated yourself to getting your six "feedings" in every day for six months. Tell me-why not? And don't make excuses because making excuses won't help you to correct the problem.

One of the major reasons for not getting your six feedings in every day is the lack of preparation. Think of how many times you knew that you should be eating and you only had a 15-minute break at work, and you had no food prepared. I've heard this scenario before—you have to plan and you have to prepare!

As I've stated before, use Sunday as your food preparation day. Make a bunch of pasta or rice, put it in a container so that it can be flavored quickly, heated up or even eaten cold. Make 10–15 sandwiches and stick them in the fridge so that you don't have to make then in the morning before work (when you should be preparing and eating breakfast). Mix up enough protein drink so that it will last you at least a couple of days. Prepare a dozen hard boiled eggstalk about protein to go! Like anything else, if you want to succeed bad enough, you will do it. Do this so that you can make the most out of the rest of the year and be 10-20 pounds bigger.

Question #4

How many different programs have you tried over the past six months?

Four or five? You tried a particular program for several weeks but it just wasn't bringing home the results. Then you read a great article about 20-rep squats, and you were sure that they would give you the results you desired. After about three weeks you tired of them, and you've a buddy who tells you that high-intensity training is the way to go. Of course, after a couple of weeks you're off looking for something else. On and on and on. If this is you, you better make a decision to stick with a tried and true program for at least six months, and follow the "rules" of the program to the letter! If you don't, you're in for a long haul of frustration and unproductive training.

Question #5

Do you have a lingering ache or pain that's coming from a particular

exercise that's not severe enough (yet) to make you stop doing it?

If you're getting pain, something is wrong. For instance, if dips are hurting your shoulder, you're going to have to stop doing them for a while, till the pain subsides. "But," you say, "I love dips and the pain really isn't that bad." I'm not saying you have to stop doing them forever, but you better let the pain disappear and then reapproach the exercise slowly, making sure your form is perfect. If you're getting pain, you're doing damage and some day the pain will get severe. So, address it now and clean up your form so that you can enjoy doing the exercise for a lifetime.

Question #6

Have you been performing aerobic work two times a week for at least 20 minutes, and stretching before and after workouts?

In my opinion, aerobic work should be performed by everyone—period. Even a trainee who is extremely skinny should do aerobic work. The aerobic work is not going to prevent you from putting on muscle as long as you implement it correctly and are getting a caloric overload. As a matter of fact, it will actually help you in your weight-training efforts by increasing the rate of recovery between workouts, and help to limit the fat that you gain. Most of all, aerobic work will keep your most important muscle in shape—your heart.

You need to stretch. Yes, I've read the various "reports" that stretching is not necessary. My opinion? There are more studies supporting stretching than against it. As a matter of fact I don't really care what some report says. I *know* that stretching is important—from working with a thousand trainees over the last 14 years! You don't have to devote an hour to stretching and try to become some kind of human pretzel. Our basic stretching program takes approximately seven minutes. *Seven minutes!* We do this before and after every weight workout and aerobic session. I promise you that a basic stretching program performed consistently will help to prevent injuries, and may relieve some of the joint aches and pains that you have.

Miscellaneous thoughts

Be careful whose advice you listen to, but be respectful of someone trying to help you. Many people are giving advice that—in my opinion—is ridiculous. I don't just mean in mainstream "muscle magazines" either. The internet is full of it. Even our own HARDGAINER Round Table has its share. Now don't get me wrong, I think TRT is great! I really believe that these people mean well. Many of them are giving advice based on many years of their own experience in the gym. Some of this advice is good, but only *if* you're put together (physically and lifestyle wise) the same as they are. And that's the key point.

In my opinion, an authority in the Iron Game is someone who has logged many hours in the gym "under the bar" and has helped many, many other trainees (with various physical and lifestyle differences) to achieve their goals. I know that what has given me my understanding of this "game" is not so much my 25 years "under the bar," but logging (in training log books) over 35,000 hours of training, hands on, on a very diverse cross section of the population. And let me tell you that I still don't have all the answers! There are many fellow trainees out there that vou can learn from—just be careful who you listen to.

My purpose in telling you this is that I've been hearing from readers who are not selective enough in the advice they listen to. Not only are they not getting anywhere, but they are getting hurt. Some of the time, the advice that was given wasn't that bad, just not applicable to that particular trainee's physical and lifestyle "makeup." I want you to be successful and not waste years of your training life doing things wrong. Stay with the basics of sound exercise programs and good nutritional practices.

Curl challenge update

If everything always went as planned, I'd have 25-inch arms by now. About a month ago my curls were "rolling along" at a pound a week, and then I came down sick with an upper-respiratory infection. When I was in my teens or twenties this would have thrown me for a loop, but being an experienced trainee I knew that this was just a temporary set back. I was forced to miss a couple of curl workouts.

So, what did I do after missing two weeks of curls? I put my old weight back on and being the "bad ass" that I am, I hammered out the reps—only to cause an injury to my elbow! *Just kidding*. I took 90% of my last curl weight and started over by using that. The next week 95%; and the third week 100%. So, four weeks after getting over the infection I'm into "new territory" again. No big deal. Listen, this sort of thing is going to happen from time to time—don't let it throw you.

To update the scoreboard I'll be up 27 pounds for 6 reps (instead of the 32 pounds if I hadn't been sick). Not bad progress for 32 weeks of training. I expect that all of you are up 32 pounds if nothing has side-tracked you. For the next issue I should be up another 8 pounds (as well as another notch or two on my arm size), along with many of my students; and so should you be if you've accepted this challenge.

Recommended reading

Leafing through some back issues of HARDGAINER I ran across one of my favorite articles. It's Stuart's article entitled "All-Time #1 Article." It's in issue #28. If you have it, I suggest you study it. If you don't, you should get your hands on it. It's great. I would like to leave you with an excerpt from this article:

"I'd be experiencing the most important motivating input of all for my unrelenting efforts on the mighty fivesome [squat, deadlift, bench press, pulldown or row, and press]-bigger muscles from month to month. How many of those who go through scores of different exercises over each year can say the same? Results are what count, remember, not hours in the gym, not exercise variety and approach according to the current commercial angle, and not keeping up with supplement fashions. Results! And they from focus come and progression."

John Christy owns Total Fitness, Inc., in Indianapolis, tel. (317) 466-9933.

Exercise selection and form

Your choice of exercises should be determined by what is safe and productive *for you.* No matter how productive an exercise may be for someone else, if that exercise does not suit you, it will do you no good but perhaps do you harm. When considering an author's preferences, always keep in mind your own limitations and technical proficiency. When necessary, either modify an author's suggestions, or choose alternative exercises. Naturally you should choose from comparable exercises. A pec deck cannot substitute for the bench press, but the parallel bar dip can. Laterals cannot substitute for presses behind the neck, but dumbbell presses can. Upright rows are not a good alternative to high pulls, but deadlifts are. And if a machine variation of an exercise is safer for you than a free-weights version, use the machine. The bottom line is what allows *you* to train safely, intensively and progressively.

Because I have physical limitations due to having damaged myself as the result of poor exercise selections during my years of training foolishness, which was a time when I gave training intensity greater priority than good technique, I am particularly aware of the need to personalize exercise selection according to the individual. A conservative approach to exercise selection, *and* strict adherence to perfect form, are the priorities for safe long-term training.

Using perfect and *controlled* exercise form means having the discipline to use good technique even when training intensively. Breaking form in order to be able to gut out additional reps in the name of intensity is the mark of undisciplined training that will sooner or later injure you, and ruin your progress.

– Stuart McRobert

HARDGAINER Nutrition 109: Making Minor Dietary Adjustments

By Lyle McDonald

Introduction

In my previous two articles I addressed the topic of setting up a baseline diet, and then adjusting it for varying goals (primarily bodyfat loss and muscle gain). Additionally, strategies for tracking progress (e.g., body composition) were discussed, as this provides a way for trainees to objectively track their progress.

In this article I'll discuss a few ways that trainees commonly modify their diet for better progress. While I'm not going to talk about specific diet interpretations, some of what will be discussed will be applicable to those diets. Possible strategies which can be tried are specific supplements, changes in protein intake or type, changes in carbohydrate intake or type, and changes in fat intake or type.

One important caveat

Before discussing possible tweaks to the diet, there's a very important point I want to make: You must establish a baseline diet before trying any of the adjustments discussed in this article. Conceptually, this is no different than setting up a baseline training program, and testing it out, prior to experimenting with more advanced techniques (partials, rack work, different set and rep schemes, etc).

Without knowing how your body responds to a good baseline diet or training program, it will be impossible to know whether a given adjustment provided better, worse, or the same results. Although there are no hard and fast rules. I think it probably best to establish a baseline diet and couple it with a good, basic training program over at least one or two full cycles of training. This, along with good record keeping, should give you a rough idea of how your body responds. Once this baseline is established, other nutritional or training strategies can be tested. You're encouraged to change only one variable at a time, so that results can be objectively determined. Of course, in some situations, changing one variable, for example carbohydrate intake, requires that another variable—fat intake—be changed at the same time.

Supplements

Since many of the questions I've received for this column address supplements, let me cover those first. In the first article of this series I tried to make this point regarding supplements: there's no magic pill currently available that will make you gain muscle if your training and diet aren't in order. Assuming you've dialed in your training and diet, even the best supplement can only add perhaps 5% to your gains. Yet many trainees concern themselves with the 5% before they have gotten the 95% taken care of.

All I'm going to say about the multitude of "magic pills" on the market is that if you're determined to try a supplement, first establish your baseline response as described above, and then try adding supplements one at a time. Many trainees continue to take supplements based on some vague notion of, "I think I recover better," or "I get a better pump," but this is no substitute for objective record keeping. If your gains in terms of mass, strength or fat loss are significantly better with a given supplement compared to the baseline, that supplement may be worthwhile. If not, it's not. Simple as that.

Quantity of protein

Protein is probably the nutrient that most lifters concern themselves with the most. As well, the bulk of magazine advertisements typically deal with protein. As discussed in issue #55, most data points to a protein intake of 0.8 gram/pound as being sufficient for lifters as long as caloric intake is sufficient. However, this doesn't mean that individuals may not benefit from higher (or lower) protein intakes. As discussed in other articles in this series, a key aspect of protein intake is caloric intake.

individuals Frequently, the reporting increased gains from increased protein intake are underconsuming calories in the first place, and the excess protein is serving primarily as an energy source. To truly determine if protein above 08 gram/pound is going to be beneficial, trainees must have established their maintenance caloric intake-i.e., your bodyweight should be stable or increasing slightly-and be consuming it on a consistent basis. Once that has been accomplished, trainees may experiment with higher protein intakes than 0.8 gram/pound to see if gains truly come faster or easier. As an easy experiment, trainees might add an additional protein feeding to their daily meals. Alternately, an additional 5–10 grams of protein might be added at each meal

It would be a rare situation where a trainee needed to see if *less* than 0.8 gram/pound of protein provided better gains. However, some trainees have reported better (or at least no worse) reducing protein from very high levels (1+ gram/pound) to more reasonable levels. As well, as an odd data point, a study done near the beginning of this century noted better gains in strength with lower versus higher protein intakes As a final comment individuals should recall that an increase in protein intake necessitates an increase in water intake as well

Type of protein

To reiterate the point made in issue #55 (protein intake), and a point which has been made by other HARDGAINER authors, there's little evidence to suggest that one high-quality protein will be better than any other highquality protein. About the only time that protein quality becomes of major importance is at below-maintenance protein intakes (e.g., as seen in many Third World countries). At the types of protein intakes seen in most bodybuilders (near 1 gram/pound). protein quality becomes fairly moot.

As long as trainees are deriving their protein intake primarily from highquality sources—dairy, eggs, meat, chicken, some types of beans—it seems unlikely that gains will be significantly different with the use of other types of protein such as whey protein. For bodybuilders to spend twice as much on a protein supplement to gain a claimed few percent improvement in protein quality is sheer folly.

Quantity of carbohydrate

In the past few years there has been quite an outcry against carbohydrates. Carbohydrates, and specifically the insulin response which occurs from their consumption, has been blamed for any number of ills including obesity and many diseases. There's little doubt that the *over* consumption of carbohydrates (especially refined carbohydrates), and especially when it's coupled with inactivity, can be problematic.

There is, however, little doubt that many cultures successfully consume high levels of carbohydrates, although this is typically offset by activity and carbohydrate choice (e.g., vegetables rather than refined starches). There's also little doubt that carbohydrates are an absolute requirement for optimal high-intensity exercise performance. The question, which is as of yet unanswered, is just how many carbohydrates weight-trainees truly need, especially those involved in lowvolume, infrequent training.

Along these lines, certain individuals find that thev mav gain disproportionate amount of bodyfat with excessive carbohydrate intake. It should be noted that overconsumption of carbohydrate (relative to energy needs) also causes an overconsumption of calories. As a general guideline. anywhere from 45–55% of total calories mav come from carbohvdrates for most trainees

Trainees may wish to experiment with higher intakes (usually during mass-gaining phases) and lower intakes (usually during reducing diets). While on a reducing diet, lowering dietary carbohydrates has a primary effect of lowering caloric intake. Additionally, some evidence shows greater fat utilization when muscle glycogen is maintained at lower levels. Of course, this also tends to hamper recovery, so it's a double-edged sword.

Source of carbohydrate

In all likelihood, many of the ills which are ascribed generally to carbohydrates

(high insulin levels, etc.) are due to the reliance on highly-refined carbohydrate sources in modern society. As mentioned earlier, many cultures do just fine with high carbohydrate intakes, but they are not eating the refined carbs found in most modern diets. Generally, carbohydrate sources are divided into starchy (e.g. potatoes, rice, pasta, fruit) and fibrous (vegetables). Carbohydrates can also be rated by glycemic indexrefer to issue #57 for more details

In general, but not always, sources of fibrous carbs have a lower glycemic index than sources of starchy carbs. In all likelihood, an ideal diet would contain some mix of starchy and fibrous carbs. Some individuals have reported less fat gains, but good mass gains, with diets made of primarily fibrous carbohydrate sources. Increasing the intake of fibrous carbohvdrate sources can also be good on reducing diets. for a few reasons. First and foremost. sources of fibrous carbohydrates generally have fewer calories for a given volume of food. This means that a greater amount of veggies can be eaten (helping with fullness) with less total calories. As well, the insulin response to fibrous carb sources is much lower, which may enhance fat burning.

Quantity of fat intake

As discussed in issue #56 (dietary fats), the average trainee should aim for a fat intake of 15–25% on a daily basis. With few exceptions, I generally think it's a bad idea for the average trainee to use extremely low-fat diets. as this may lower testosterone levels. Individuals high risk for at cardiovascular disease may stand to benefit the most from relatively lowfat diets. There can be both pros and cons to higher fat intakes.

For many individuals, higher fat intakes tend to promote feelings of fullness. While this may be very beneficial during reducing diets (note the popularity of lowered carb/higher fat diets, which tend to control hunger better than very low-fat diets), it can be disastrous during mass cycles by preventing a trainee from eating enough calories. If individuals are already having trouble meeting their caloric requirements, an increased fat intake may make it doubly difficult, by increasing fullness, so that the trainee doesn't want to eat as frequently. On the other side of the coin, assuming that overall appetite is not decreased, the caloric density of fat may make it easier for some individuals to obtain sufficient calories

Type of fat

Numerous studies have linked high-fat intakes with an increased incidence of heart and other diseases. It should also be noted that other factors such as a high intake of refined carbohydrates, and lifestyle habits such as smoking and inactivity, also contribute. Unfortunately, most studies pay attention only to fat quantity, not quality.

A trainee obtaining 25% of total calories as unsaturated fats (vegetable oils) is in a far different boat than the trainee obtaining 25% of his total calories from saturated fats (animal fats). It has been suggested that the low incidence of heart disease in many Mediterranean countries, despite a high fat intake, is due to the high intake of unsaturated fats (although factors like activity, low sugar consumption, and high vegetable consumption surely play a role).

Trainees who consider using higher fat intakes—either to decrease appetite on reducing diets, or to increase caloric intake on gaining diets—should consider the long-term health consequences. Ideally, increased fat intake should come primarily from unsaturated sources like vegetable oils, nuts and seeds. As well, trainees are encouraged to have their blood lipid levels tested to ensure that damage is not being done by one's diet choice.

Summary

As a general summary, once a baseline diet has been established, there are a number of minor modifications that can be tried with the diet. Here's an outline of each of these modifications, as a final summary.

- 1. Increased protein may increase the potential for mass gains, but above a certain point, excess is simply used as an expensive source of calories. Also increases water requirements.
- 2. Increased carbohydrate intake is a good way to increase calories when on a mass gaining diet.
- 3. Decreased carbohydrate intake may be useful during reducing diets as this will reduce total caloric intake, and may enhance fat burning.
- 4. Increasing dietary fat intake is another way to increase caloric intake as long as increased fullness doesn't compromise intake at other meals. As well, many diseases have been linked to excessive fat intake, especially saturated fats.
- Decreasing dietary fat may increase hunger. At the same time, however, total caloric intake may fall. Reducing dietary fat is also one way to lower caloric intake on fat-loss diets, although excessively low fat intakes tend to have the opposite effect desired.

TEN YEARS WISER...

This issue of HARDGAINER marks the start of our eleventh year. In it we're starting a new series in which an article from exactly ten years prior to the current issue will be reviewed and updated, to reflect what the respective author has learned over that ten-year period. Because I wrote most of the articles in the early issues of HARDGAINER, I'll be writing the early installments in this new series. But later on, other authors will be involved.

Stuart McRobert

Training On The Right Lines

By Stuart McRobert, from HARDGAINER issue #1, July-August 1989

Excerpts from issue #1

This routine is a great start to a long and sustained period of appropriate and effective training. A simple but sound initiation (or return, as the case may be) to rational training methods for you. This routine itself will give you twelve weeks or more of progressive training. If correctly carried out, it will give your strength and muscular size a very satisfying increase. Twelve weeks aren't enough to transform your body, but it's enough time to make obvious physical improvement; and to establish some of the changes in training methods that are required to bring about a long-term metamorphosis.

This routine is simple and basic for one reason only—this is the only sort of approach that offers the chance for a hard gainer to get impressive. Let's not have legions more of hard gainers trying to prove to the contrary! We must rid ourselves of the mentality that lots of exercises and very frequent workouts are the way to progress. The more work that's done, the more that the effort put in is diluted.

The routine isn't just the given number of exercises. It's the unified whole of the choice of exercises, manner of exercise performance, rest, cycling of intensity, frequency of workouts, nutrition, keeping of records, planning, progressive poundages, will, effort and persistence. A large combination of important factors. To start off this routine, take ten days of complete rest from the gym. Rest, relax and get fully recovered from all signs of overtraining. Return to the gym no more often than twice a week. Assuming that you don't have access to quality sophisticated machines, use the following routine of freeweights exercises. Only modify or change an exercise if you have a sound reason to.

- 1. Crunch style situp
- 2. Squat
- 3. Heel raise
- 4. Deadlift (once a week only)
- 5. Bench press
- 6. Pulldown to the chest, or barbell row with head braced *[see revised views]*
- 7. Press behind neck [see revised views]
- 8. Barbell curl
- 9. Nothing else, absolutely nothing!

Rep targets are 20 for calves, 10 for crunches and squats, 8 for everything else. If you're new to training, we advise you to get [the assistance of] an experienced instructor or friend.

We'll start out training very comfortably. For the first workout, following a warmup set or two for each exercise, select a poundage that you could comfortably use for 5 more reps than the target number, but only do the target number, 2 sets per exercise. Please *avoid* training hard for the first part of the program. We need to get a gaining momentum going—perpetual progression.

Now comes the intensifying factor every workout, add 5 pounds to exercises 2, 3 (if using a machine) and 5; 10 pounds to once-a-week deadlifts, and 2.5 pounds to all the other exercises. In practice, this roughly means that the first two weeks are very easy, the third needs a bit of effort, the fourth and beyond are quite hard through to super hard. Only do the target reps, remember.

As the weeks accumulate, it'll become impossible to maintain the target reps for both top sets of each exercise. When this happens, either drop the second set, or, if you have the energy, do the second set with a 10% poundage reduction.

As the poundages build up it will become impossible to maintain the target reps for even the first top set. When this happens, let the target reps drop, as slowly as possible, to a minimum of 15 for the calves and 6 for everything else. Take a pause for a few seconds between the final reps of sets. Use this modified rest pause technique to enable you to keep getting the reps out. Keep exercise form good. A bit of relaxation of form on the final rep or two of a set is all right, but nothing more. [*This is not all right! See my revised views.*]

When at the minimum target reps, reduce the poundage increments to once every other workout. Keep this going for another few weeks. When the workouts become brutally hard, you're recommended to reduce training frequency to no more than three times every *two* weeks. Deadlifts should still be done at alternate workouts only once every nine or ten days now. At this stage, add one or two forced reps once a week for each exercise. Get a training partner or spotter to give just enough help to make the rep happen. Push hard!

Concerning training frequency, avoid being locked into a fixed pattern. Take an extra day or two between workouts whenever you feel the need for it. Some rare people even have difficulty recovering properly from workouts done more frequently than once every six days. This may particularly apply to you if you do a lot of manual labor. If you do work that's physically very demanding, take extra rest between workouts, while simultaneously doing [fewer] sets when in the gym.

On the other hand, if you truly feel fully rested after only three days between workouts, then train again. Just be absolutely honest with yourself—take the extra rest if in doubt. You're the judge.

Keep a written record of each workout. Know exactly what you did at your previous workout. Write down exactly what needs to be done at the next session.

Aim to do this program for a minimum of twelve weeks, with *every* week being progressive. When you're absolutely at your maximum, for the minimum target reps, you should have well exceeded your previous 6/15 rep bests in these exercises. Not only will you be stronger but you will be many pounds heavier in muscle.

All this will work if, and it's a big if, you truly push yourself when the workouts become tough, holding absolutely nothing back! Maximum fighting to resist dropping the reps. Adding the required poundage while *not* cheating and just heaving the weights up; keep things strict. Resist the urge to add more exercises, sets, reps or workouts. Many people think they are training hard when in fact they are ending every set a couple or more reps before the true end of the set. Beyond the early easy workouts (and warmup sets aside), you must give your absolute all to do *every* possible rep!

If you're thin, be sure you eat enough, especially when the training gets tough. For the hard gainer it'll likely be a waste of time trying this routine if you don't intend combining it with some substantial eating of quality food and substantial drinking of milk. When training heavily, at least for the extreme hard gainer, you must eat heavily. Prudent and thoughtful use of quality food supplements is recommended if you can afford it. If you find gains extremely hard, then keep all non-bodybuilding athletic activities to a minimum, or, better still, temporarily eliminate them. We need our recovery capacities to concentrate fully on restoration from our gym activities.

Let's take the squat as an example, Suppose that before reading HARDGAINER you could just manage to squat 250 for 6 reps. To start this program, select 200 [80%] and do 2 sets of 10 reps (2 x 10) even though you could do 15 without much struggle.

Week 1: Mon 200 2x10 Fri 205 2x10 Week 2. Mon 210 2x10 Fri 215 2x10 Week 3: Mon 220 2x10 Fri 225 2x10 Week 4: Mon 230 2x10 Fri 235 1x10. 1x8 Week 5: Mon 240 1x10 Fri 245 1x10 Have dropped the second top set. Week 6: Mon 250 1x10 Fri 255 1x10 Week 7. Mon 260 1x9 Fri 265 1x9 Week 8: Mon 270 1x8 Fri 275 1x8 Week 9: Mon 280 1x7 Fri 285 1x6 Now training three times every two weeks. Week 10. Wed 290 1x6 Week 11: Mon 290 1x7 Fri 295 1x6 Week 12. Wed 295 1x6 Week 13: Mon 300 1x5 End of cycle, terrific progress!

While doing this routine, perform some progressive warmup work prior to the top sets. Do 2 or 3 warmup sets for the powerlifts, and 1 or 2 for the other exercises.

Now ten years wiser

Here are five major areas in which I've modified my views relative to when Iwrote the 1989 article. These changes evolved as a result of additional personal experience, and from studying the experiences of others.

1. I'm more conservative with exercise selection. For example, I no longer recommend the press behind neck, or barbell row. In fact, I now *discourage* those exercises. (Though not relevant to this routine, neither do I recommend the T-bar row, any sort of squat with heels elevated, or any explosive movement, unlike ten years ago.)

- 2. I'm far more insistent on the use of good form. (I cringed at the sentence I wrote ten years ago: "A bit of relaxation of form on the final rep or two of a set it all right..." No it's not all right!) Impeccable exercise form is the bedrock of bodybuilding, or any type of resistance training. Without good form, injury is inevitable—and sooner rather than later. I suffered serious injuries since writing the 1989 article, and I've learned the hard way of the paramount need to train with perfect form, and to take no liberties whatsoever. Back in 1989 I used to give intensity more importance than form. This explained why lused to hurt myself so often-I'd compromise a tad on my form, in order to get out an extra rep or two, just like many others do. Now, Ihave no time for this sort of undisciplined training, and neither should you.
- 3. Though the 1989 article doesn't mention rep speed, I didn't object to explosive form in those days. I'm cringing again! Safe exercise form is not just about the pathway a bar takes during a given exercise, as critical as that is. It's also about speed of movement. Explosive movements greatly increase the risk of injury. Inow urge a truly controlled rep cadence-about 3 seconds for the ascent, and another 3 seconds or so for the descent. "Long stroke" exercises take longer than "short stroke" exercises. Idon't, however, urge the counting of seconds. The focus needs to be on effort and poundage progression while maintaining perfect form. Just keep the bar moving in a controlled manner—no explosive movements. The key word is "smooth." Keep every rep smooth-no jerky or sudden movements.
- 4. As abbreviated and infrequent as the training routine in issue #1 is relative to conventional

training, I now recommend even more recovery time, and in some cases even a reduced volume of training per workout too.

5. Training cycles don't have to be structured quite as rigidly as described in this 1989 article. *Even better* results can be had from using cycles with no predetermined end dates—ones lasting even over a year at a time. Consistent gains are the greatest motivating factor. Properly designed *and personalized* programs can produce poundage gain on each major exercise every week or two for *very long* periods.

In most cases Iwould no longer urge a reduction of 20% of weights to start a new training program. A 10-15% reduction would be adequate.

I also wouldn't urge twice a week training of all exercises (aside from the once-a-week deadlifting). I'd generally recommend training each exercise just once a week. So, the listed eight exercises (substituting the front press or dumbbell press for the press behind neck), would be divided into two even groups, one group trained on day one, and the other on day two.

I'd also add two exercises—the side bend (so long as there are no back problems that preclude this exercise) and the L-fly, one at each workout. Here's the revised program of ten exercises:

Monday

- 1. Squat
- 2. Stiff-legged deadlift
- 3. Press (barbell or dumbbells)
- 4. L-fly
- 5. Crunch style situp

Friday

- 1. Bench press
- 2. Pulldown or, preferably, the pullup/chin
- 3. Curl (barbell or dumbbells)
- 4. Heel raise
- 5. Side bend

I've substituted the stiff-legged deadlift for the deadlift, and put it in the same routine as the squat. Some may prefer the deadlift, or the partial deadlift. And some may prefer to put their choice in the *non*-squat routine. But others may not respond well to that arrangement—see my Editorial in this issue.

I'd written, "If you're new to training, we advise you to get [the assistance of] an experienced instructor or friend." The last ten years have taught me that experience is no guarantee of expertise, and finding truly competent instruction on form is nigh on impossible to find in most gyms. This is one of the major reasons why Iwrote a book on exercise technique—to provide a reference to help people become their own form experts.

In the 1989 article I recommended the pulldown, or the bent-over row while keeping the head braced. Today, I rate the chin/pullup as a superior exercise to the pulldown (so long as there's sufficient strength to perform chins correctly). And today I'd never recommend the barbell bent-over row. The one-arm dumbbell row is a much safer exercise.

With training frequency for each *exercise* reduced, there would be fewer occasions over the twelve weeks for poundage increments. Though the weights wouldn't be cut back so much, the cycle would need to be extended in order to match the sort of gains given in the illustration in the 1989 article. But this would tie in with my preference today to have longer cycles, using smaller poundage increments once you're in new poundage territory.

This slower and extended progression schedule would help to minimize if not eliminate perceived increase in intensity from week to week, once you're back at your best working weights. This is vital for producing long-term consistent gains because it means you can keep adding a tad of iron every week without having to work harder to get your rep targets. This is *The Golden Fleece* of training—increasing load on the bar but without any perceived increase in training intensity.

THE BOTTOM LINE

By Daryl Wilkinson

or quite some time now I've found I make better progress (progress being defined as consistently adding weight to the bar), by terminating a set 1 or 2 reps short of failure.

A typical routine for me consists of the squat, bench press, shoulder press, chin or pulldown, rear shrug and some ab, calf, grip and neck work. I spread this out over two workouts. I also perform some "insurance exercises" such as back extensions and the L-fly. to help prevent injuries. For the first 8 weeks of a cycle I build back to my best one-set max poundage, so the weights don't start to feel challenging until I'm into week 6 or 7. At this point overtraining, L risk more or specifically, killing the progression and gaining momentum I've built up over previous weeks, so I increase rest days between workouts and switch from twice-weekly training, to 3 times every 2 weeks (Monday, Friday, Wednesday, Monday).

By the time week 8 rolls around I'm still performing 2 sets, I'm still training a couple of reps short of failure and I'm still able to add weight to the bar each workout. This is my first sign of real progress—I'm performing 2 sets of an exercise, using a poundage that I previously only managed to use for 1 set and, more encouraging for me, it feels easier! I know that if my weekly increments were too high, or if my build up was too short, because at this point the reps would be difficult to attain. I believe this is a matter of intensity and I define intensity as the amount of effort required to perform the task at hand, in this case, getting all my sets and reps.

I've experimented in the past with training to failure on most of my exercises, usually in the hope that it will further my progress. I found it did not. At the time I believed I was gaining benefit from training to failure, but looking back with wiser eyes I can see that was not the case. To-failure training did not deliver the poundage gains for me, which is the priority, in my opinion.

I would like to point out for those people who may think I'm loafing in the gym, that training 1 to 2 reps short of *true failure*, is still hard training and certainly harder than what's done by most gym members. However, I do feel we should not get hung up on how hard we're training, but rather, we should be focusing on how *productive* it is.

The famous saying "work smarter not harder" can be applied here. If training to the point of momentary muscular failure *does* deliver the poundage gains faster for you, then stick with it, as that's obviously the smarter approach for you. Think about what you're doing, and ask yourself why you're doing it. Don't think that more is necessarily better, be that volume or intensity.

BACK ISSUES All back issues of HARDGAINER are available, but the first 26 are in photocopy format only. The back issues represent a treasury of experience and advice. n this issue there are two injury-related articles—one from Dr. Gregory Steiner, a chiropractor and professional injury specialist, and the following "grassroots" one from a reader. When I was in my youth I had no time for injury-prevention or injury-awareness type articles. I only wanted articles on training, or inspirational type pieces that would help crank me up for my next bout with the weights. It was, however, my neglect of injury prevention, my taking of liberties with exercise form, and use of high-risk exercises, that, eventually, was my downfall. There was nothing unusual about my attitude. It was the typical macho "it won't happen to me" type outlook, and the "no pain, no gain" madness that have been the undoing of millions of trainees over the years. I'm training injury-free today, but I'm unable to safely perform some of the most productive exercises—most notably, I can't barbell squat, or do any type of bentlegged deadlifting—which is a major loss.

Part of the training strategy needed to minimize the chance of injury, is avoiding high-risk exercises. While a few people like to boast of their heroics with handling heavy awkwardly-shaped objects, for example, for each reported success there are many people who got hurt trying to do something similar, and rue the day they got caught up in such high-risk lifting. Play safe, be sensible, and don't take unnecessary risks.

A body free of limitations that you can push hard for the rest of your life is a lot more satisfying than a body limited by injuries but accompanied by a few anecdotes of what you used to be able to do in former "it won't happen to me" days.

Stuart McRobert

INJURY RECOVERY

By Brian Minogue

he reality of physical injury is omnipresent to all human beings. Whether it comes in the form of broken bones, muscle tears, strains or sprains of connective tissue, damage to our all-too-fragile form is a cost of doing business on earth. While a proper strength training program can do much to decrease our risk of injury from outside forces, it can't make our bodies impervious. Not only that, but improper exercise can do much to inflict the injuries that we try to avoid. But even with the safest training practitioners and environments. sometimes people still get hurt.

Once an injury occurs, the body must be allowed to heal. But the process is rarely as simple as just bed rest. The damage which our muscles, bones and connective tissues can incur while exercising can be drastic, and often difficult to discern from the naked eye. To promote full recovery from an injury, the sufferer must ensure proper steps are taken. Put generally, these are: (1) diagnosis, (2) rehabilitation and (3) recovery. Each of these steps needs to be explored in the event of an injury, so that future damage to the same areas can be avoided, and long-term pain and loss of mobility do not result.

Diagnosis

The first step to be taken whenever an individual suffers a training-related injury, is proper diagnosis. It's

imperative that we, as exercise enthusiasts. don't attempt self diagnosis. Unfortunately, this is one of the steps in injury recovery which is most often forgotten. Strength trainees can often become a hodge podge of varied anatomical, kineseological and biological information. This lav person's level of knowledge can't replace the expertise of a medical professional. Don't self diagnose.

As an example, allow me to relate the recovery process of one of my training partners. This individual suffered numerous shoulder dislocations, following the initial injury that resulted from a nasty fall. In response he and I, with only a limited understanding of the function and anatomy of the rotator cuff, decided that the injury was the result of an excessive mobility in the shoulder joint, which had been caused by overstretching of the rotator cuff muscles in the initial fall.

To a degree, our attempt at self diagnosis was correct. The rotator cuff muscles had been stretched. To correct this problem, my training partner began using an array of dumbbell rotation movements to strengthen, and thereby stabilize his rotator cuff. Once he had strengthened the area considerably, he returned to a normal strength training program. After a month or so, his shoulder dislocated once again, while performing a overhead press, causing even greater damage.

What our diagnosis could not determine was that, along with the overstretching of the rotator cuff muscles, my training partner had suffered damage to the bony prominences on the head of the humerus. These raised points had been considerably reduced in size, and could no longer function to prevent the humeral head from moving too far out of the shoulder joint. Only with the medical expertise of a professional could such a determination be made.

If an injury is harsh enough to cause you to stop training, either by sharp pain or prolonged discomfort, it's severe enough to seek proper diagnosis. You've nothing to lose by seeking a medical opinion. If the injury proves to be a minor strain, then a few days of rest will be all that's necessary to return to your previous best. But if you've caused excessive damage to your body, you will need to know that. Any attempt to ignore or "work through" physical harm will only cause greater pain and injury.

As a trainee seeking a medical opinion, you must attempt to find a professional with some level of training experience or understanding. Obviously, in cases of an injury causing great pain, emergency medical assistance required, and the need for a trainingknowledgeable provider will have to wait for follow-up care. But, in any case, to provide you with a full understanding of your injury and its repercussions, the medical professional must possess a moderate appreciation of strengthtraining practices and methods. If you're in any doubt as to the ability of your care provider to understand your needs as a training practitioner, don't be afraid to voice these concerns, or seek further medical advice

It's vital that you, as a patient, be an active participant in your diagnosis and injury recovery. This requires what I refer to as "full disclosure" with your doctor or rehabilitation specialist. You must do your utmost to explain to him or her the level of activity you participate in, what movement you were performing when the injury occurred, its relative difficulty for you, etc. If you were using poor form, cheating a dangerous rep, then your doctor needs to know. If, on the other hand, you were using strict form, using a weight that was fully under your control, and something totally unexpected happened, this also has a direct bearing on a full diagnosis.

Anything that you hold back, or fail to explain fully, can affect the quality of your diagnosis. Remember, most people don't participate in serious strength training; so express your previous training experience to assist your care provider in determining if any longterm injury abuse has occurred.

Rehabilitation

Following a full diagnosis of your injury, the second step is rehabilitation. This is the healing step on your road back to strength training. Dependent on the severity of your injury, this process can be extensive or a minor concern. Whatever the result, you need to exercise patience more now than ever. As a strength trainee, it's very probable that you have an almost addictive need or desire to train. You must curtail your internal drive to rush back to peak training, as such an action would only cause more damage.

doctor Your and/or recoverv specialist will provide you with a program and time line to follow. You need to be an informed consumer of the care being provided to you. Be equally concerned with how you perform your rehabilitation program properly, and why this program is formatted as it is. If satisfied vou're with the not provided. information be more persistent. If the practices of your diagnosis and/or rehabilitation seem counter to what you know of safe and proper training, or your symptoms, ask questions. While it's very dangerous for a non-trained person to attempt self treatment, it's equally dangerous for an injured person to be treated by a poorly trained professional.

Not all medical care providers are created equal. Unfortunately, the realities of insurance programs often demand that we as patients take what we can get, regardless of the quality of the care provided. Do the best you can with the care you can afford. Hopefully, if you're dealing with a caring medical recovery facility, and broach your concerns in a considerate manner, together you can find an acceptable path to recovery.

Once again, full disclosure is very important at this stage. What a typical person considers full recovery may vary considerably from what *you* consider it to be. Remember, the average person has no interest in pressing several hundred pounds overhead in a few months. Your desire to get back to a 400-pound squat may be beyond the goals of your rehab specialist. Explain your long-term desires for your recovery. What do you want out of your body in the future? How possible are your goals given your injury? These are questions you need to work with your care provider to address.

Whatever restrictions are placed on you during the rehab stage, if they are explained in a reasonable fashion to you, stick to them. If you allow your passion for strength training to get ahead of your rational mind, you may quickly return to the pain and suffering you experienced not long ago. As frustrating as it is to watch hard earned strength and muscle atrophy, you must be patient.

In the meantime, apply the same zeal and perfectionism which you give to your normal training, to your rehab. If you rest assiduously for your squat, do so for the strain in your lumbar. If you never miss a scheduled workout, don't ever miss a rehab session. In the meantime, you should discuss your long-term training realities with your medical professional. What can you do now? Which movements are out on a temporary basis? What movements are out for good?

Recovery

Following a full rehabilitation, the third step in injury recovery is recovery itself. This is the point at which you return to the gym, ready to reapply yourself to your passion for muscle and strength. Now you will have to come to grips with the long-term training restrictions which your injury may place on you. You may need to find suitable exercise replacements, which address the same muscle areas, but which don't re-injure you.

Returning to the example of my training partner, his rehab specialist told him that the overhead press was out, for good. As good a movement as the overhead press is, for him it was an unacceptable risk. Instead, he performed a high-incline bench press. His pushing musculature was being worked without risking re-injury.

In the recovery phase, you must still temper your training passion, at least temporarily. Returning to previous weights too soon is not good for your training future. Start slowly, and with lighter weights. It will be hard to reduce the poundages and gradually work back, but you will work back without reinjuring yourself.

Any new movements which you've added in place of unacceptable exercises will need to be mastered for form and speed. And old lifts will also have to be re-learned in some cases. A deadlift before major back surgery may not feel the same as after. You may find new limitations in your pre-injury range of motion. Adapt.

Don't force your body to act as it did prior to your injury. In many ways, your body may no longer be the same. A shoulder which has been surgically tightened and altered, for example, is not the same one it was before. Bone and muscle structures have changed. Treat these new joints as training neophytes, by working back slowly.

Now that you've returned to your training, take the time to consider the practices which may have led up to your injury previously. If you used shoddy form in the past, or accelerated through your reps, take a different tact now. Take the time to reconsider your training methods so as to do your best to injuryproof your routine and body. Slow down the reps, use strict form on sound movements, move through the range of motion which is appropriate for you. Remember, training is intended to be a life-time activity. What you do with your "trick" elbow now may cause twenty to thirty years of pain and suffering down the road.

Don't be afraid to use your rehabilitation specialist as a resource in redesigning your training regimen. You may not completely see eye to eye regarding proper training, but an educated opinion can only benefit you. Considering the value of an outside opinion, even if you choose not to take the advice, will expand your training knowledge.

Whatever your history of injury, don't forget, human bodies can live healthy, pain-free lives for many years, or they can suffer with aches and limitations for the same period of time. If you suffer pain, it's a signal that some kind of damage has occurred. This, by definition, is an injury. Taking the proper action now—by way of (1) diagnosis, (2) rehabilitation and (3) recovery—can, in most cases, make great strides in reducing or completely removing the pain. Such action is definitely to your benefit. Remember it's your body to save or destroy.

"COMMON SENSE" PERIODIZATION

By Bob Whelan

eriodization means "to divide into periods," when defined by most dictionaries. That's also the way that I view this term as it applies to strength training. I'm a big believer that some form of change in a routine every three or four months or so is as good mentally as it is physically. In addition to this, as noted in some previous articles, I like to have a day or two each month when I mix things up a little bit. The change keeps enthusiasm high, helps you through sticking points, bolsters your motivation, and reenergizes your training.

I want to be very clear on one thing. When I use the word "periodization"—I actually call it "common sense periodization"—I'm not advocating the orthodox definition used by the NSCA and some other organizations. I find that definition illogical. I don't believe in a "hypertrophy phase" as being separate from a "strength-building" phase. There are also other aspects of the orthodox definition that I don't agree with, but rather than get into all of that I'd rather just focus on my definition.

If you love strength training, as I do, then "common sense" periodization is great. You can try many training methods and find what works best for you, or just what you enjoy best. You may find that several methods work well for you, as I have. Personally, I look forward to the change after about every four months. Even though many strength-training methods absolutely do work, at least for some people, what determines what works *for you* is often in your head—it's the "enjoyment factor." This factor should be strongly considered when you choose a training mode or method. You should enjoy training. You will not stick with something, or do well at it, if you dislike it. Find a method that you like. There are many schools of thought in this field, and several of them are good. The problem is that many people, especially beginners, get confused and need to label the type of training they do. Forget the labels. There are also manv dogmatic writers and organizations who think you're scum unless you train exactly like they do. Ignore these people.

Many people label me as a "highintensity training" (HIT) advocate; in fact. I've even used this description of myself, so I don't mind the label. But I also do many things that are not standard "party line" HIT. I spend a good part of the year doing lower reps. In some articles I've even coined my training as "lower-rep HIT." But this is just for part of the year. With my clients we still do the higher reps too, such as 20- and even 30-rep squats, fifties days, etc. I occasionally do singles (myself), but rarely with clients. The best way to describe my type of training is "natural, hard and progressive."

An illustration

I sometimes do multiple work sets, but never more than 3. In fact, I've spent most of my training life doing 3 work sets per exercise, but my friendship with Drew Israel influenced me to try one-set-to-failure (for work sets). For the last few years I've used the one-setto-failure approach a lot, and experienced great results.

I'll be 45 this summer, and I'm at alltime personal best strength levels in most exercises. I recently got 360 for 9, followed by 390 for 5 and 410 for 3 on the Hammer Incline Press. (I usually do just one work set, but felt so strong that workout that I wanted to test myself.) About three years ago when I visited Drew in New York ("Training and Eating in The Big Apple," in issue #45), I barely got a single rep with 400 pounds, and that was a PR at the time. Additionally, I recently got 255 for 10 on the Nautilus Power Plus Military Press. 300 for 9 on the Hammer Iso Row and 555 for 12 on the Hammer Iso Leg Press. All PR's. I'm a lot stronger than I was a few years ago, and probably ever. Isn't this stuff great? In fact, one-set-to-failure is so great, it can make you feel almost guilty because it takes so little time. I'm convinced that the one-set-to-failure training has helped me a lot.

If you use one-set-to-failure training you will burn fewer calories than you would with multiple-set work, so you must either make up for this by consuming fewer calories, or by doing more cardiovascular exercise. Keep this in mind if you notice your bodyfat creeping up when you switch to one-set training.

I still use 2 or 3 work sets for most of my clients on most exercises. One-setto-failure works better for experienced trainees with a solid training foundation, who *truly* understand what it means to go to failure. Many newcomers don't understand this, have no training base, and end their sets 1 or 2 reps prematurely.

You can experiment with your number of sets in the common sense periodization format. Do 2 or 3 work sets per exercise for four months, and then try just a single work set to failure per exercise for four months. Take good notes and trust your own instincts.

Machines or free weights?

I don't consider machines to be superior to free weights. I spent most of my training life using free weights almost exclusively, but now it's the opposite. I mainly use the fine machines from Hammer Strength and the "Tru-Line" from Southern Xercise, as do my clients. (There are, however, many poor and even dangerous machines on the any piece market.) But with of equipment, it's how you use the device that counts. My heavy use of machines now is mainly a business decision. It makes my job a lot easier because I change plates and spot people all day. Machines also reduce my liability and the chance of injury for my clients, some of whom have little experience when they start.

If you've access to both the *good* machines and free weights, common sense periodization is a way to enable you to use both. For example, do the Hammer Incline Press for four months then do free-weights incline presses for four months.

Free weights are not "more manly," and neither are machines "for wimps," as some people have written. Anyone who has used the Tru-Squat can attest to that. Machines and free weights are both good. Dr. Ken, Drew Israel, Dan Riley, Ken Mannie and others are huge machine advocates. Use what you like, and ignore the critics.

Odd-object lifting

Odd objects are also something to consider using to add variety. I don't do this type of training on a regular basis (at every training session) but as a change of pace every few weeks. My clients are usually hammered after the (regular equipment) workout, so the finishers would be like swatting a fly with a sledgehammer, and lead to overtraining if done on a regular basis. We will, for example, do the sandbag carry or farmer's walk as a "finisher" after all the barbell and machine work is done, but not to replace any of it.

I'm not an advocate of training exclusively with odd objects (to replace machines or barbells) for an entire periodization cycle, or even for just one entire workout. Everything old is not always good or better. A sandbag curl is not nearly as good as a barbell curl. You can't hold onto a sandbag well, and even though it may toughen your hands, it will not work your biceps as well because you can't hold onto enough weight. Don't make the mistake of sacrificing major muscle groups in the name of "grip work." It's usually better to do the grip work separately.

There are many modern devices that are a definite improvement over what they had 50 or 60 years ago. Do you think that John Grimek would have done free-style leg presses with weights balancing on his shoes, like in the old Mark Berry poster, if he could have used a Hammer Leg Press instead? C'mon now! John wasn't a fool.

Though odd object may be trendy in very limited circles, odd objects are inferior to a barbell or Hammer Strength/Southern Xercise type machines for use on an ongoing basis where progression is monitored. Additionally, if you're only training *vourself*, that's one thing, but when you're responsible for the well-being of others—who are entrusting you with their bodies—vou must use a safer mode than anvils and barrels, etc. The sandbag carry or farmer's walk, however, as a finisher for the young or well conditioned trainee (or athlete) is a fine addition to a workout.

Rep speed

Even speed of motion can be experimented with. We use an 8-second

rep speed workout once in a while as a change of pace, and it's brutal. Dick Conner does the same thing at The Pit. Dick notes, and I agree, "Slow training is definitely *not* for wimps. Anyone who says it is, has never tried it as I use it."

The problem I have with slow training is not the actual training, but the dogmatic individuals who represent this philosophy. Many in this camp also put no emphasis on progression, and are virtually nothing but glorified "toners." Slow training can be a great change of pace and even a permanent way to train if you like, as long as you make *progression* a top priority, as Drew Israel does.

Summary

Don't get caught up in the trends or the philosophical catfights. Many methods work. Life is too short, so enjoy your training and *experiment* (sensibly, of course). Consider changing your rep ranges, exercises and various modes and methods every four months or so, while sticking to the basic core HARDGAINER-type philosophy. The only definition or label you need is "natural, hard and progressive."

"Maximum" Bob Whelan runs Whelan Strength Training in Washington, DC.

The methods promoted in HARDGAINER will pack on muscle and strength for all who conscientiously and diligently put them into practice. But the practical application demands great resolve, dedication, effort and persistence. We provide the training advice you need, but only you alone can provide the resolve, dedication, effort and persistence.

Rise to the challenge, and then you'll reap the wonderful rewards!

INFORMATION OVERLOAD!

By Bill Piche

ou must go slow. You must go fast. Supplements are good. Supplements are bad. Do 20-rep squats; no, do heavy singles. You must bulk. You must keep your bodyfat as low as possible. Cycle your training. Split your training into phases. Time your sets with a stopwatch. What program are you using: Heavy Duty, Hardgainer, SuperSlowTM, Periodization...? Talk about information overload! It's a wonder most new trainees don't just grab a beer, a bag of chips, and become a couch potato watching TV!

What's a trainee to do? Maybe there's more in common among the various groups touting different lifting methods than most people realize? How about looking at the common denominators that exist in the groups, rather than argue over differences? These common denominators would be part of the foundation of common sense. In this article, we'll find some of the commonalties among the various groups and programs.

Add the iron!

I don't think I've read any of the advocates of various training programs state: "Keep the weight the same at all times—adding weight to the bar isn't important." To get stronger, and bigger, you must add iron to the bar! It's called progression. It doesn't matter if you do singles, 20's, SuperSlow, a pseudo-scientific plasmatic cycle, or measure the time under load. If you aren't adding iron consistently over a significant period of time, don't expect much. This is a common denominator.

The big movements

I don't think you'll find exercises like triceps kickbacks, concentration curls and

sissy squats as a common denominator. What you will find as a common denominator is using the big compound exercises that involve a lot of muscle in one movement. Deadlifts, presses, bench presses, and yes, the O-lifts involve a great deal of muscle. How about squats? The choir sings in unison with this exercise. It's a great one.

Hard training!

To progress, you should go to the gym and not break а sweat Don't push yourself...ever. How many groups do you hear singing this tune? Everyone, and I mean everyone, seems to understand that to get bigger and stronger you must put in some hard training. The differences lie in the details of what constitutes "hard training." However, the bottom line is that hard training is necessary to force the body to change and adapt by getting bigger and stronger. Yet another common denominator is found.

Technique

You must use good technique. Most will agree that even if you're lifting a rock, barbell, or using a machine, proper technique needs to be used. A breakdown in technique is one of the major contributors to injury regardless of the rep speed, rep range or lift performed. Many coaches and trainers don't emphasize it enough in my opinion, but they certainly don't advocate out-of-control technique.

Overtraining

One of the most ridiculous statements I've ever read was in an article by a pro bodybuilder, or should I say ghostwriter, who stated, "There's no such thing as overtraining, only undereating." A common denominator among all the groups is that "overtraining" does in fact exist. What leads to overtraining is often argued in terms of volume and frequency, not whether it exists.

Lifting belts

I believe the majority agrees that a lifting belt isn't necessary in the quest to become bigger and stronger. Some lifters would rather die first than give up their belt. Some powerlifters state that a belt makes it "safer" to lift. In my opinion, this is hardly the case. watch an Olympic-lifting If vou competition, you'll rarely find the lifters wearing any belt at all. A lifting belt really isn't needed to become bigger and stronger. One more tick mark under the category of common ground.

Nutrition

Eat like a bird! Chips and soda to feed the body! Candy, cookies, and creme puffs are the ticket to building muscle. Nobody advocates such nonsense. The common opinion is that good food is needed to build muscle. You must provide the fuel. The arguments are about quantities, types, and percentages. Another one in the common ground category; you must provide the fuel in the form of good food to build muscle and might.

Supplements

How many groups do you see arguing over what's the best supplement? Can you picture Fred Hahn and Dave Maurice battling over what creatine to use? Not likely! Could this be one of the common denominators? The common denominator is you don't need supplements. They aren't necessary, period. So, who are the people touting supplements and training information? They sell the supplements! And, often the "training articles" in their magazines are nothing but supplement ads in disguise. Definitely, these articles are only good for floor protection when training a puppy.

Sleep

Everyone agrees that sleep is an important ingredient to build strength and muscle. You won't find anyone arguing that sleep doesn't matter in the muscle growth equation. Yet another common denominator: you must get enough quality sleep.

Avoid injury

There's certainly no group that advocates getting injured! I'm sure avoiding injury is a common denominator. Yet, I'm sometimes puzzled why injury prevention isn't given as much attention as it deserves in articles and books. Maybe some coaches and trainers are afraid their "methods" will be questioned? Maybe their egos are too big to admit they made a mistake? I don't know. But, I'm certain they advocate injury avoidance. I do know that if you get injured, you can be sure that the person at fault can be found in your closest mirror.

The final word

There certainly can be information overload when it comes to training. Too many trainees get caught up in the intricate details and lose sight of the basics. There are basic common denominators shared by all the different "methods," "programs" and "groups." These are essentially the basic elements for becoming bigger and stronger. To summarize:

- 1. You must strive to continually add iron to the bar, and do it consistently.
- 2. Use the big movements that involve a lot of muscle, e.g., squats, deadlifts, presses.
- 3. Train hard!
- 4. Use excellent technique, whether you're using a barbell, rock or machine.
- 5. Avoid overtraining.
- 6. You don't need a lifting belt.
- 7. You must fuel your body with enough good food to grow bigger and stronger.
- 8. Supplements aren't needed.
- 9. Get plenty of sleep.
- 10. Avoid injury.

FINDING YOUR OPTIMAL PROGRAM

By Ari Finander

any people, even after years of training, are still searching for the "perfect workout": one that will give them the most gains (mass, strength, etc.), the fewest injuries, and the best "look" in the least amount of time. Most successful lifters have learned that the "perfect workout" does not exist. Being successful does not mean being the biggest or the strongest. It means getting the most out of lifting in terms of enjoyment and health benefits.

For many reading this, the end result of your time and effort in the gym matters most, but for others, it's the journey to that end result that matters most. Yet another group will say it's both the journey *and* the results. Whichever group you belong to, there's no true "perfect workout." There's no optimal routine. Your needs change as your body changes, and are often different from one year to the next, or even one season to the next.

My goal in this article is to take you through general workout design and objectives in order to improve your lifting experience and results. What's here applies to beginning, intermediate and even advanced trainees. I'm hoping that as a result of looking into the suggestions here that you'll be able to enjoy weight training as a life-long healthful activity. Below I'll discuss the main variables involved in developing a training routine.

Where to train?

One of the first questions when starting out, or even after many years, is do I sign up or renew my gym membership? For me, the answer was no. I prefer to be able to concentrate on my lifting with no lines, no socialization, and no one getting in my way. I'm an antisocial fellow when I'm into my workout. I'll answer questions when asked, but I hate having to find polite ways to extricate myself from training conversations in the gym before I lose the warmth in my muscles and joints and have to warm up all over again. On the other hand, my wife can't stand training at home. She'd rather not train at all or simply go for walks. She absolutely loves the gym. Not that she really talks to anyone there. She likes to get in do her work and get out. For her, working out at home is like pulling teeth. We both find excuses to miss our workouts if we don't work out in the environment we like.

There will be people out there that tell you that you must join a gym or you must have a training partner. Both are false. There are very few "musts" when it comes to tailoring a workout to your needs. In the end, you can set yourself up with a nice home gym that's safe and every bit as functional and effective as a commercial gym, for the price it would cost for a few years gym access. However, you can always join a gym as well, or even alternate depending on how you feel during a given time in your life.

For beginners it's probably a good idea to purchase a short access to a gym and try it out. You may even want to do that for more than one facility after each short-term membership expires. If you enjoy it, by all means, stick with it! Anything that adds enjoyment to lifting is something that will help you maintain consistency in your training over the long haul. However, if you find that you don't like the gym, or absolutely can't stand it, then invest in a home gym. If it turns out you want to return to the gym later, you still can, and you can even resell the equipment if you wish.

Training frequency

Your next step will be to determine how to schedule your workouts. Twice a week is a

good rule of thumb. More than this and you're pushing it with regards to overtraining the small stabilizer muscles that are involved in just about every movement, and which get an indirect training effect every workout. You can always cut back to once-a-week during periods where your recovery is hampered by life stresses. The real issue is which days to schedule your workouts on.

There are two basic schools on scheduling workouts: days of the week or intervals. Working out on certain days each week is very good in terms of establishing a routine of training. You know which days you'll have to train on, and can make sure to schedule things so that there won't be conflicts with your training on those days. Also, you can schedule these training days so that they don't conflict with work or school commitments. The days are set, so there are no surprises, and few excuses. The main drawback occurs with recovery. Your body doesn't know which day of the week it is. If you need to take an extra rest day to be fully recovered, it will impact on the next break between workouts by narrowing it. This can sometimes throw the whole routine out of sync and cause you to miss workouts, or worse yet cause you to take an unnecessary "break" from training to "reevaluate" your training regimen. If this is what's been happening to you, the optimal workout for you is not based on fixed-daysof-the-week training.

Alternatively, you can have a fixed recovery interval between workouts—a fixed number of days before you complete the next workout. For shift workers, it could even be a fixed number of hours (e.g., 72 and 96). If you need to take an extra day of rest before your next workout, it doesn't mess things up, because you simply revert to the normal interval after that workout and keep moving along. The drawback with this sort of routine is that it lacks some of the structure of the fixed-days-of-the-week type of plan. If you easily find an excuse for missing a workout, or delaying it for days, then this is not the sort of regimen for you. In all likelihood you'll end up missing workouts, or worse yet take an unnecessary "break" from lifting to "reevaluate" your training.

Program design

The next steps in creating your "perfect" workout require some experience. If you're an absolute beginner, it's vital that you stick with a certain program for at least a month to six weeks before you draw any conclusions about altering your training. Indeed, refining your training is something that's a life-long process—our needs change over time.

The first order of business is deciding what exercises to use and how to organize them. If you're just starting out, you'll need to try out different things. There's no reason why you can't make gains to the best of your potential in the trial periods. As with most other things in life, the key is consistency. Trial periods can be as short as two weeks or as long as a year, and they can be modified as they go along. However, from start to finish the trial should remain relatively intact. A good time frame to make some observations from is about twelve weeks. This number isn't pulled out of thin air, but based on my own experience and that of others that I speak with.

In selecting exercises, decide on which core movements vou will use. Each core movement will generally focus on one of three areas: back, legs and hips, and upperbody pressing musculature. Core movements should hit as many muscles as possible. Think of training your body as a whole, or as sections of muscles with common functions. Don't get stuck in the rut of trying to pick an exercise to train every muscle individually. It simply won't produce good results, and will make your workouts drag on forever with countless sets of unproductive isolation-type movements Compound, multi-ioint movements should be where you select your core movements from. A great place to get ideas and descriptions of these types of exercises is in the INSIDER'S TELL-ALL HANDBOOK ON WEIGHT-TRAINING TECHNIQUE by Stuart McRobert.

Next you must decide how to integrate these core exercises into a workout schedule. For instance, if you've decided on a twice-aweek total-body routine, you'll want to put each of the core movements into both weekly workouts. Most people I've had contact with tend to find this too much stress, either on their recovery abilities or their joints. I just barely fit into this "too much" category, so I've experimented and found a slightly modified solution that works for my joints and also provides variety in the workouts.

I take my three core exercises for the first workout day, and choose another set of core exercises for the second workout day of the week. For example, on Saturday I'll perform shoulder presses (upper-body pressing), pullups (back), and deadlifts (legs and hips) as my core movements, while on Wednesday I'll perform dumbbell incline presses (upperbody pressing), prone rows (back), and squats (legs and hips).

For many this still proves too much and another modification is required where one trains the total body three times every two weeks. For example, Monday and Friday of week one followed by Wednesday of week two, then repeating from Monday again in the third week. Some find that they are able to train the same core movements at each of these sessions, while others prefer to alternate different core movements between the workouts as in the method described in the previous paragraph.

There's yet another popular method of training, where an individual trains all their upper-body movements on one day, then all their lower-body exercises on the next workout day. This can either spread the three core moves out over the two weekly workouts, or place more exercises or sets of each core movement into the chosen split days. For example, on Monday one would perform pullups, one-arm dumbbell rows, shoulder presses and bench presses. On Friday the movements would be squats and deadlifts or stiff-legged deadlifts. Alternately, Monday could consist of just one-arm rows and bench presses but with more sets of each movement, or even just one top set for each.

Any of these methods will work just as well when used with a set interval schedule of training (where there's a fixed number of rest days between workouts regardless of the day of the week). In the end, it's a good idea to experiment with each of these methods for 6-12 weeks. For some, cutting back from two total-body workouts per week to an upper-body/lower-body split routine will feel like they're not training their body hard enough. This is why a twelve-week trial period is needed. By the end of it you'll be able to see the results (or lack of results) after giving the method a fair go. Many people have been pleasantly surprised by the strength and mass increases they've observed at the end of a trial where they've cut back on their work, and so decide to stav with the different method. Alternatively, some have found that by going from a split routine to a twice-weekly total body routine has boosted their gains significantly.

It's important to try different things, within reason, and for long enough to see results that can be viewed objectively. (This is just one of the many reasons why you should keep a training journal.)

Next, you'll need to decide on what repetition range you'll use. This usually requires several trial periods to pin down the right numbers. There are several general repetition ranges, with none set in stone. For the most part, you have low (4–6 reps), medium (6–8 reps), moderate (8–15 reps) and high (15–20 reps). Finding what works for you is a matter of experimenting with differing ranges. Also, you may find that different body areas respond better to different repetition ranges (for example, many people find that high reps work best for lower-body work, while the medium range works best for the upper body).

After this you'll need to decide on the number of work sets. In general, between one and three work sets will do the job (one is my personal preference). Work sets are distinct from warmup sets, which should be progressively heavier as you go from the first warmup set towards your work set(s).

Finally, you'll need to decide how to perform your work sets. Will you go to failure at every workout? Will you cycle the poundages so that you go to failure only during the final workouts of a twelve-week series? Will you continue to increase the poundages being used for as long as possible and use microloads to stretch a training period out even further? These are all things you'll need to decide on beforehand. If you start an experiment, then change the variables while in progress, your results are worthless. If you don't take an experiment to its conclusion, you don't get usable results. If you alter multiple variables between training experiments, you can't be certain which variable really caused any observed changes; or, if you observed no changes, did the two or more variables you changed cancel each other out?

Rational experimentation

Before you start a training experiment, you must make a commitment to stick with it for a set length of time that you decide upon before starting. You must also be consistent. This is also true for training in general. Consistency is what enables you to change your body. Working out for two weeks then scrapping everything and moving onto something else will never let you see the results of anything you try. The body doesn't produce significant adaptations in the short term. You'll also be risking injury by switching things constantly and training in a stop/start fashion.

However, there are three reasons to stop a training experiment once it begins, or to make changes during the course of it. First, if you get injured, stop the training cycle and rest. Let your body heal. A few weeks or months now are *nothing* over the course of a lifetime of lifting. However, if you force the issue, try to train through or around an injury, or don't give yourself sufficient healing time,

you'll possibly end up with an injury that will make a difference to your training life (not to mention costing you even more time). Second, if you start to feel pain during an exercise, either change to a different movement, or drop it entirely. Third, if you become significantly overtrained—I say "significantly" because people will often just feel a bit worn out and want an excuse to switch to a new routine.

As long as you stick with an experiment, be consistent, and progress in the amount of weight handled, you'll make significant gains even on routines that aren't the best for you. After you've finished an experiment and have evaluated your results, take a week or two off, and rest. If you've been training for twelve weeks and not missing workouts, it's a good idea to let your body have a bit of extra rest before beginning another experiment, so that the two don't conflict.

Let's be realistic. What I've outlined here is a good way to evaluate different training regimens. But how many of us have the patience to change one variable at a time for a period of twelve weeks before making any changes? We want the answers yesterday, because today is squat day! Also, as I mentioned in the section about deciding core exercises, training should be thought of as applying to the entire body, not to individual parts. So should a training program be looked at in its entirety rather than as a patchwork of individual variables.

If you start out with something so bad that you make little or no gains from it, then changing one variable and pushing on for another twelve weeks is not going to make that much of a difference. Scrap it all and go back to the drawing board. If after twelve weeks there's still no joy, try something different again. Sometimes, being less than scientific is the best way to get to where you need to be. Once you find a productive routine, then start the individual variable experimentation.

As you go through an experiment, make notes. Write down how you feel about the

workout and how you feel in general. In the end, if you dread going to the gym or loading up the bar, your ability to be consistent will deteriorate. Even if the workout you've come up with lets your body adapt at the fastest pace possible for you, it isn't the perfect workout if you don't enjoy it. Training is something that must be enjoyed if you're to stick with it. It's as much psychological as it is physical. If you don't enjoy any particular training method, then make a note of it, and move onto a different method. Seeing results will help you to maintain consistency, but if you despise what you're doing in order to see those results, you'll likely not be able to maintain that consistency very long.

Write down any aches and pains during the experiment, even if you don't attribute them to the workout. You may find that a non-training-related injury poisons the results of an experiment. You may also find that when you look back over your notes of past experiments (when you used different exercises) that you experienced pain only when you included two exercises in the same routine, or only when you used a different variation of an exercise.

An illustration

Here are some examples of how I came to the current methods of training I use now, and the experiment I'm currently working on. As a beginner, I used the following routine:

Day One

- 1. Squat: 1 work set x 8 reps
- 2. Chinup: 1 x maximum reps
- 3. Dumbbell shoulder press: 1 x 8
- 4. External rotation (lying L-fly): 1 x 20 (each arm)
- 5. Crunch situp: 1 x 20

Day Two

Rest

Day Three

Front lunge: 1 x 16 (8 reps per leg)
Pulldown: 1 x 8

- 3. Dumbbell bench press :1x 8
- 4. Barbell curl: 1x8
- 5. Triceps pressdown: 1 x 8

Day Four

Rest

Day Five

- 1. Bent-legged deadlift: 1 x 8
- 2. Seated row: 1 x 8
- 3. Barbell bench press: 1 x 8
- 4. Lying L-fly: 1x 20 (each arm)
- 5. Crunch situp: 1 x 20

Day Six

Rest

Day Seven

Repeat Day One, and so forth.

As a beginner, this was fine for a while. I trained all out every session, and I experienced gains in both strength and size, and the variety in the workouts kept me from getting bored. However, there were problems. I began to dislike having to do so many total reps per workout. When you add in all the warmup sets, the total number of reps per workout gets pretty big. I need to concentrate very hard, as I tend to become injured easily if I move the weights around with little or no regard to form. Eventually I learned that using lower reps enabled me to concentrate more, enjoy training more, and thus gain more.

Beyond this, as I grew stronger, I became overtrained. What had worked so well for me before, was overtraining me now that my needs had changed through time and training. I also began to get joint pains and aches from not focussing on a few exercises enough to let my body really learn the movements. It took me quite a while to refine my workouts. A lot of the refinement had to do with coping with some pretty nasty injuries. In fact, the refinement from these injuries is still going on. It's taken me years to get to where I am now:

Day One

1. Squat: 5 x 5 going from set one with 50% of my workout weight to set 5, with 100% of my workout weight for that day.

20-rep squats were both difficult to maintain concentration with and did not stimulate me psychologically enough to want to get into the gym to do them.

2. Bench press: 5 x 5

For those of you who read my last article, it's taken me over a year to even be able to experiment with the bench press again. Since experimenting, I've discovered a great multitude of little technique adjustments that make all the difference to my being able to train this favorite movement pain free.

- 3. One arm dumbbell row: 5 x 5
- 4. Alternate hammer curl: 3 x 8 Barbell curls produced elbow and wrist pain. Hammer curls don't produce either, and allow me to use more weight.
- 5. Barbell side bend: 3 x 8 Using the barbell allowed me to keep the weight closer to my sides, and forced me to slow down my repetitions in order to keep the bar balanced.
- 6. Lying L-fly: 3 x 8

All sets are listed, including warmups, with the final set being the work set.

The commentary in italics indicates things I've learned over time while tailoring my workouts to fit my needs.

After Day One I rest 2–4 days, depending on where I am in a cycle. I cycle poundages over time now, rather than train all out all the time; and I extend cycles for as long as I can keep adding small weight increments.

Day Two

1. Sumo deadlift 5 x 5

I was unable to deadlift without pain for quite some time. It took me nearly two years to become pain free with this movement and resume deadlifting again. I had to take a long layoff from lower-body work (due to an accident that was not training related) and modify my stance and the height from which I was deadlifting. (My 1-inch hole plates lowered my barbell several inches, causing me to to sink too deep to begin the lift.)

- 2. Pullup: 5 x 5
- 3. Standing shoulder press: 5 x 5 Shoulder pressing is my main upper-body pressing movement, and has been since I was able to do heavy upper-body pressing movements following my shoulder injury discussed in my last article.
- 4. Alternate hammer curl: 3 x 8
- 5. Crunch situp: 3 x 8 Higher-rep crunches produced little in the way of results and were mentally boring, making workouts a chore.
- 6. Standing L-fly: 3 x 8 I added this exercise just a few weeks ago, on a trial basis, to evaluate its effects.

Following Day Two, I again rest 2–4 days before training again.

Over the years I've incorporated a number of changes in form for each movement, as I learned more about applying weight-training technique and my body's abilities and needs.

"Why should I bother doing another experiment?" you ask. Because it takes a long time to find out what your body and, just as importantly, your mind, respond best to. Also, in order to determine the true effects of a change in your training program, you must change only one thing at a time and then try that change out for long enough to see results. Changing one thing at a time, for twelve weeks before changing anything else, will take a while, as there are multiple training variables concerned, and your responses change as you develop and age. Hence experimenting is not something that you do once as a beginner and end up with a routine to last you for life, but rather something that will go on for the length of your training life to find out the most productive and enjoyable training methods for you as your body changes through time.

QUESTIONS & ANSWERS

By Rich Rydin & Dave Maurice

What's the best training and nutrition plan regarding hard-gainer mass-gaining strategies? How do I get enough food to gain muscle without getting fat?

Training

1) Pick 3–6 major movements. These include squats, deadlifts, chins, dips, benches, rows, leg presses, overhead presses, shrugs, and variants on these movements. Be certain that in those 3-6 movements you include at least one and at most two each of:

a) squat, deadlift, or leg press

- b) bench press, dip, or overhead press
- c) chin or row

While it may not work a large percentage of your muscle mass, a movement for the abdominals is suggested.

2) Follow almost any protocol suggested in this magazine. The key is progressively adding resistance. Read our column in issue #56 for some additional pointers on this.

Diet

1) Drink enough water so that you have five good sized and clear urinations per day. Make sure that your last two urinations before sleep meet this standard.

2) Eat two servings of fruit and three servings of vegetables daily, plus one serving of either for every 20 pounds you weigh over 100 pounds (one serving for every 9 kilos you weigh over 45 kilos), every day.

3) Get 0.8 grams of protein for every pound of bodyweight, every day.

4) Get a minimum of 50 grams of fat, predominantly from sources such as olive oil, fatty fish, and seeds, every day.

5) Keep a food diary for a week, and use the average caloric intake as your current maintenance caloric requirement. To this add 100 calories, and make it a point to consume that amount daily for a week. After a week, add another 100 calories to your daily intake, and maintain this for a week. Continue this process until you can detect an increase in bodyfat. This is probably best done by purchasing an inexpensive caliper and taking skin fold measurements. Don't bother with the charts that are typically included; just be consistent in where and how you measure the skin folds. An increasing skin fold means increasing bodyfat.

6) When you find the intake at which you start to gain fat, then maintain that caloric intake until you can detect a decrease in bodyfat by the same method. Remember, as you add muscle you increase your caloric requirements, so what was too many calories will become too few calories if your program is working.

7) Repeat the process of bumping up your calories. Using this pattern you're unlikely to gain much bodyfat, reducing the problems of bulking followed by dieting.

Q&A

Please suggest a routine for an ultra hard gainer trying to lose 20 pounds of fat.

If you're an ultra hard gainer, putting on muscle should be your highest priority. Muscle is the one thing you can add to your body that will cause it to use more calories. Unfortunately we can't add brain tissue (the brain is the other great user of energy). So your routine should center around squats, deadlifts and other major movements, and you should seek to become as strong as possible on them. In other words, the best routine you could use to gain muscle is the best routine for you now.

To reduce your bodyfat while on this lifting regimen, transform your diet. Get the protein, essential fatty acids, water and produce your body requires, and eliminate junk foods, refined grains, sodas and alcohol. Read Lyle McDonald's column for more detail. Since you're an ultra hard gainer, you probably should not reduce your caloric intake. Build the muscle, refine your diet, and most of all, be patient.

Q&A

How do you maintain progress or minimize losses when incapacitated due to injury or illness?

Get healthy again first. You have a lifetime of lifting to enjoy, so don't get stressed about dropping a few pounds on your personal max during an injury or illness time out. Try putting the energy spent worrying about the lost gym days into getting healthy again. If you've attained specific strength levels before, why should it suddenly become impossible to repeat the feat after you're healthy again?

One thing you should be careful about is gaining an excessive amount of bodyfat during the timeout. This baggage represents a double whammy upon your return to the gym, and can cause psychological feelings of loss which may be more difficult to deal with than simply dropping 30 pounds on the squat.

Q&A

How long should one wait between sets for different exercises?

One shouldn't wait between sets or exercises in the gym. When one set is completed, then you should be doing whatever is necessary for you to be ready to perform your next set or exercise. That might include changing weights, putting away the weights you've just used and setting up for your next movement, spotting your partner, getting a drink of water, or even stretching.

Q&A

When I squat or leg press it always works my hamstrings and glutes more than my quads. How can I hit my quads harder?

You may be rounding your back or leaning forward. Work on improving the flexibility of your hamstrings and calves, following the guidelines given in our article in issue #30 and our column in issue #59. Make sure your leg muscles are warm via some low to moderate exertion, and then stretch these groups prior to squatting.

Q&A

How do you achieve balanced developed around joints?

Work all muscle groups about a particular joint in a consistent manner. We discussed this subject at some length in an article in issue #30, and Chuck Clark devoted an article to this topic in issue #48. We suggest that you read those two articles and incorporate the suggestions found there.

Q&A

My digestive system will not tolerate solid food every few hours, so I have to rely on a lot of liquid food. But this results in several bathroom visits during the night. How can I get the nutrition I need without messing up my sleep?

We suggest that you seek the counsel of a physician. When we read that your digestive system will not tolerate solid food every few hours, we suspected that either you have a physical problem which merits medical attention, or that you have developed some psychosomatic response. In either case, this is outside the bounds of healthy human variation.

Can training be organized to help control high blood pressure? Is weight lifting compatible with high blood pressure?

Weight training is not a recognized cause of high blood pressure, but during training blood pressure does increase, and dramatically so during high exertion. Individuals who have high blood pressure should see their physician to determine the cause of that particular condition, and thereby establish what's permissible and what's not recommended prior to commencing a physical exercise regimen of any kind.

One piece of advice that's sometimes not passed on to those with high pressure is that proper breathing during each repetition is critical. Leave your mouth open during each set, and your body will handle the breathing without conscious effort on your part.

Q&A

How can the metabolism be "stimulated" or "raised," and who should seek such a thing?

For most of us, metabolism, or the rate at which energy is used by the body, scales very well with the amount of lean body mass we carry. There's a very slow reduction with age—3% per decade—on a per pound basis, and any variations between the sexes is inconsequential. For at least 99% of us, our bodyfat levels can be correlated very well with how much lean body mass we have, how active we are, and how much we eat.

Probably the only people who should seek to raise their metabolism (on a per pound of lean body mass basis) are those who have managed to disturb their body's natural usage by some form of starvation diet. The rest of us who read this magazine are working to gain lean body mass, and we should see our caloric requirements rise accordingly.

Which one exercise is "best" for forearm development?

Our pick would be the wrist roller variant described by Joe Begin in issue #44. It's more effective than conventional wrist rolling, and is safer and more effective than wrist curls.

Q&A

How can you test chest and back strength to ensure that there's not a muscle imbalance?

There are two easy methods of testing that everybody should be able to do. One is to simply compare strength levels for chest and back movements. You should be able to perform dumbbell rows using a 'bell equal to 40% or better of your bench weight, for equal reps. The second is simply to take a look at your shoulders. If they are naturally pulled forward, you need to work on strengthening the muscles between the shoulder blades with dumbbell rows and rearward shrugs, and stretching your pecs.

Q&A

Is it possible to gain muscle while at the same time diet to lose fat?

For those who have not yet gained much muscle this is not unusual, but the more advanced you get, or the leaner you get, the more difficult it becomes. The more advanced you get, the harder it is to add new muscle, and it's made more difficult while consuming just enough calories to maintain your lean body mass. The leaner you are, the more difficult it is to drop bodyfat, and if you keep your food intake at a low enough level to make fat loss possible, it's very hard to add muscle.

If you have a fair amount of bodyfat and have not yet made much progress with the weights, you should follow a basic productive lifting regimen, focussing on getting very strong in the big movements. Simply refine your diet, cutting out soda, refined grains, packaged foods, and drink lots of water. In most cases this will put you well on the way to the body you seek.

If you're fairly strong already and want to trim bodyfat, the above plan will still work for you, but it will be a slow process. More than likely you will find it less frustrating to concentrate on one goal at a time. At all times you should focus on gaining strength in your big lifts, but follow the plan for adjusting caloric intake which we described earlier in this column.

Building muscle tissue is the best longterm solution to weight control, for a very simple reason. Muscle tissue requires energy to maintain it, while adipose tissue stores energy. It's usually much easier to determine whether you need additional food intake to maintain muscle mass than it is to determine if you need less caloric intake to keep fat deposits under control. One reason for this is that the feedback loops have quite different time constants for these two situations. It's generally easier to monitor the effects of any corrective actions on your diet by using as short a feedback loop as possible. People tend to tire quickly of dietary "programs," and any disruption such as a trip out of town or a holiday binge can interfere with your experiment. By taking the approach of ensuring that you provide sufficient calories to maintain your muscle tissue, you should find it's easier to monitor and make corrective actions than waiting to see if you've put on a few more pounds of blubber over the winter

Q&A

I've developed varicose veins below my knees which are very painful. Can you give me any tips which will enable me to carry on training?

You should consult with your physician, as varicose veins can be indicative of more serious problems. There are dietary and even activity modifications which can improve your condition. Be sure to involve your doctor in a discussion about the specifics, and to ask a lot of questions. Don't play the role of the passive patient that accepts a diagnosis and prescription without gaining a full understanding. Good luck.

Q&A

Are 15-rep squats just as effective as 20-rep squat? My back holds up better on the former even though I use more weight for comparable intensity?

They can be. The magic isn't in the rep count, but in the quality of your performance and in the effort delivered. But we have to question what you mean about your back not holding up, and we don't want to give you an excuse to quit early.

Doing 20-rep squats properly can be a very uncomfortable experience. In fact, most people look for an excuse to quit early. The most common one is "my lower back is aching." Now, of course, you don't want to get injured. Nothing is worth that. But no matter how good you get at this, no matter how strong you get at this, your lower back is going to ache near the end of the set. In fact, it's quite common for people who get good at this to have their backs ache near the end of the set, and yet it's their quads that ache for the next couple of days. The reason the back aches is the near-isometric the muscles there must maintain: it's a biochemical effect, not the result of injury. Usually this starts at right around 13-15 reps, so it isn't surprising to have somebody ask if they can stop at 15 reps.

On the other hand, it would be rather foolish of you to ignore your lower back. You never want to push through pain unless you know that the pain is not from injury. If you're like most people who haven't productively done 20-rep squats, you can't tell what ache is normal and what ache is indicative of injury. So here's what you can do to learn for yourself what the normal ache of 20-rep squats feels like, and to develop the ability to cope with that ache.

Go ahead and put the bar away early the first time you try 20-rep squats, when your back starts to ache. When your back feels normal again, a few minutes later, you'll know that you quit early. Next time, push a couple reps beyond where you stopped the first time. Repeat. Eventually you'll be able to complete the set, getting all 20 reps and more. By first learning what's normal, you will be better able to tell later if something abnormal takes place. There are those who ignore all pain and end up with a lot of it, so if you don't know how to tell what's damaging, and what's simply normal suffering, try this progressive approach.

Be progressive in learning to push to your limit; you don't need to do it on the first day. It's probably safer for you to slowly work up to it, as you will be less prone to losing form and control as you develop your discipline (see our column in issue #56).

Any of the conditions which are bad for squats in general will be magnified during 20-rep squats, because the set lasts so long. If your hamstrings are too tight. you'll have difficulty maintaining proper back position as you squat (see our column in issue #59 for details). Tight calves, too heavy a weight, descending too fast, and an improper stance can all result in rounding your back in an effort to reach full depth. Tired quads from the first 15 reps, and fear, can make people try to complete the rep without bending their knees all the way, so they use their backs to finish lowering the weight. Tight pecs will start you with a rounded upper back. and if you fail to keep the chest high for every rep, it will be hard on your back.

The list goes on, but the solution to any of these is to correct the problem, not to avoid 20-rep squats simply because the problem becomes noticeable as a result of the longer set duration.

While we're on the topic, here's something that people tend to do when they

try to get past the "back ache" problem. They will hesitate to lower themselves properly. In a way this is almost funny. On every other rep they lower themselves to their bottom position, and nothing very traumatic happens. So why hesitate? If they aren't able to come back up, so what? They should have got the catch bars in place, and maybe they've even got their partners there to help them off the bottom—so go for it!

After failing at the bottom a couple of times, and realizing that it's really no more traumatic than failing at the bottom in any other movement, some people will find yet another way to end the discomfort-they will lower the bar to the pins and proclaim they have failed. You can recognize this method of quitting by noticing how the hips will seem to lose tension on the way down, just a couple inches above the bottom. In a legitimate failure, the spotter will be able to help you get through the sticking point, and in fact you might get a couple of these "maybe" reps in the squat, before you reach the point when you and your partner together can't raise the weight.

Parts of this answer appeared in a different form at http://www. cyberpump.com/hitstuff/tothelimit2. html. We thank the webmaster at Cyberpump for allowing us to use this material here.

Please send questions for answering in this column to HARDGAINER Q&A, P.O. Box 20390, CY-2151 Nicosia, Cyprus.

We're receiving more questions than we can answer in this column. As much as possible we will combine similar questions, or simply answer questions we consider representative. Many subjects have already been covered in previous issues of this column. Those of you with internet access can visit the HARDGAINER web site at www.hardgainer.com where back issues of this column are being posted.

THE STEEL TIP A Newsletter for Strength and Fitness

By Dr. Ken E. Leistner

Those ubiquitous lifting belts

A competitive powerlifter benefits from the wide, thick belt he or she wears while making a maximum squat attempt because that belt can help to increase the intra-abdominal pressure, thus providing added support to the vertebral column. The Olympic-style weightlifter might benefit from a belt while holding a heavy jerk overhead, with the belt serving to give some support and reminding him to maintain proper back and hip position. But a bodybuilder wearing a belt?

A lifting belt is a part of almost everyone's gym attire. There's longstanding belief that the typical belt gives support to the low back region during a workout, and that you would have to be foolish to squat, deadlift, press or do any other "heavy" movement without one. This, like most gym myths, is far from the truth. To truly give support to the lumbar spine, the belts would have to be cinched quite tightly. certainly to the point of discomfort, something which is done by competitive powerlifters. If you watch these individuals, however, it's quickly apparent that they loosen or unhitch the belt between sets because if it's tight enough to actually lend support, then it's certainly too tight to breathe comfortably or move the torso in a normal manner. Also, the support that's gained, as noted in the opening paragraph, comes from what might be seen by the lay person as the production of a column of air which helps to support the front of the spine, not the musculature of the low back.

In most cases, the use of a lifting belt serves no purpose other than to accentuate one's V-shaped taper. Few bodybuilders wear them tightly enough to serve any real supportive purpose, as indicated by their ability to wear them throughout the entire workout without altering their tightness. In most instances, the belt inhibits proper breathing or body motion, limiting exercise effectiveness, especially in many movements in which stress on the low back/abdominal region is minimal.

The greatest disadvantage of wearing a belt is the inhibition of strength development in many of the torso-supporting muscles. The slight support given by a thin, gym-type belt in squats for instance, isn't enough to prevent injury if one loses proper lifting position, but will inhibit the development of many of the fixators and synergistic muscles, leading to a condition where these all important muscles are not as strong as they should be. This is a condition of weakness that can lead to eventual injury to the low back or oblique region, injury serious enough to lose training time.

For most bodybuilders, the belt is an unnecessary part of the lifting uniform, one that serves to help a bit in demonstrating strength and that sought after "barn-door lat" look, but does little to help you build strength.

Common sense and those "new" training programs

Despite the recent influx of Soviet influenced approaches to powerlifting training, common sense will dictate the optimal number of times that one should squat, deadlift, bench press or train per week. Most lifters are more than willing to abdicate the responsibility of their own judgement to a "higher authority," believing that there is one, or perhaps a few routines that hold the answer to a state championship or an Elite ranking. As soon as POWERLIFTING USA, MUSCLE & FITNESS, OF IRON MAN magazines reach the newsstands, they are scrutinized for a training program that will tell the lifter what they should do and how they should do it. You would think that the lifters who are reading this information, and immediately changing their routines would, after some reasonable length of time, know better; but their lack of consistent, long-term progress on almost any type of routine makes them easy targets for anyone presenting an article that either sounds as if it has validity, or has been endorsed by a "name" lifter.

Most lifters are average lifters by each definition. despite individual's perception that they have something within them that will allow them to stand above the crowd. Standing above any crowd is relative, for a male or female with a 400pound squat is beyond the imagination of the man or woman in the street, yet that lifter may see him/herself as a "pitiful" competitor when making comparisons to Ed Coan. Dave Jacoby, or any of our other champions. This perceived "weakness" or inability to achieve a goal—which may, in reality, be far beyond any physical or psychological possibility-can serve as a worthwhile motivating factor, but more commonly results in the creation of unnecessary frustration which leads to a quest, perhaps monthly for some, for the routine that will unleash supposed hidden powers.

After two or three years of training, most lifters, if they were critically honest, perceptive, and truly aware of their own training, as opposed to their training mates' perception of their training, would have a very good idea of what was and was not working for them. In most cases, a lack of progress in any particular lift or assistance movement stems not from an "unscientific approach to training," but an inability to train hard enough, or consistent overtraining, or a combination of both. As simple as it sounds, this will never be acceptable to the vast majority of serious trainees because of its simplicity, and the obvious implication that one is not governing their own training efficaciously. It's more acceptable to seek out a pseudo-scientific answer for what usually is a lack of common sense.

For every lifter who makes great progress with one of the "new" Russian-type programs, six will get stale, become injured, or make as much or as little progress as they had on previous programs. For those who do well, the underlying reason will be more closely related to the fact that the program caused them to work harder, at a higher level of intensity, and/or with more opportunity for recovery that a previously used program. For those who don't do well, it will be due to a continuation of the usual factors that had brought previous failures.

A close look at the newly published programs reveals that they call for basic movements using easilv available equipment, and that one must train hard and consistently. Of course, the authors have said a heck of a lot more, cloaking this "new" approach in a shroud of technical explanation, but the bottom line is that those who come to the program with the need for harder work than they were previously doing will probably do well, at least until they are overtrained on the routine. The many more who will do no better and no worse than they had previously done will do so for the myriad physical and psychological reasons that have always held them back.

Before jumping on the bandwagon of "Lifting Science," look to yourself. Does your distaste for certain exercises prevent you from working as hard as you really need to in order to make progress which is consistent with your genetic and physical abilities? Are you one of those lifters who wants more than anything to win a national title, but just can't seem to find the time or energy to plan sensible meals ahead of time and get adequate rest? Do the problems of school, employment or interpersonal relationships constantly provide distractions or emotional valleys that prevent you from focusing properly on each and every set you do in the gym? Do you have an underlying fear of actually lifting that weight which has dominated your thoughts for so many months or years? Is your lack of confidence such, despite a state title and enough trophies to fill the average living room, that you'll always defer to someone with a reputation as a knowledgeable trainer, and alter your programs accordingly?

Most lifters have the potential to go far beyond their current plateaus. Most have a very good understanding of their own lifting needs and requirements for progress, but find themselves swayed by training partners, local "experts," and the authors who are published monthly. When one of my patients recently asked me about training "tips" to increase his 500-pound bench press, done drug-free at a bodyweight of approximately 260 pounds, the best advice I could give him was to "continue to do what you're doing."

Although some of his training ideas corresponded closely with mine, some did not. However, considering that this man had obviously progressed to the point that he was able to complete a lift that must be close to his maximum potential in the bench press, and he was both successful and comfortable with what he was doing, and because he had never been injured while training this lift, Ifelt that there was no reason to have him alter his approach.

For years he has used the same bench press scheme of sets and reps, and assistance exercises—essentially since he began his training. Every muscle that's involved in this lift is as fully developed as I imagine he will be able to develop them, and his bodyfat percentage is reasonable for a man of his size. Tips from me? In this case, common sense would dictate that this fellow continue on his course until he has reached his limits, something he may have already done. As long as he was not obviously overtraining the lift, the "answer" to his training query was a reliance on his own knowledge of self, perhaps the most forgotten aspect of modern training.

More advice for improving the grip

I believe that hand and forearm training is a neglected aspect of most lifters' programs, and one that brings about limitations when training every one of the lifts and assistance exercises. In addition to the suggestions made in Volume 1, Number 2 of THE STEEL TIP, I have further recommendations for improving one's ability to hold onto those limit deadlifts.

Every home should provide the opportunity to hang from an overhead bar or pipe. Older homes usually have a few pipes that are secure enough to hold the weight of a man or woman who weighs in excess of 200 pounds, and the many "doorway chinning bars" can be secured with additional braces. As easily as a child's climbing apparatus is placed in a backyard, one can substitute a bar that's suitable to hang from.

If possible, put the bar inside the house, and make it a point to hang from it, for a minimum of 30 seconds to one minute every time you walk by it. If placed in a part of the house that receives a lot of foot traffic, this may cause a problem, but the bar should be approached at least a half dozen times per day, grasped, and hung from while completely straightening the arms (which may require that you flex the legs). At least once per day, hang for five consecutive minutes. This is not as easy as it sounds, especially if you are in a heavier weight class, or if your bar is more than one and one half inches in diameter, which it should be. In fact, if two bars can be erected, one should be at least two inches or more in diameter, and should be hung from three times per week, again for up to five minutes.

Most lifters will have to increase their "hang time" progressively, beginning with 30 seconds and adding 5–10 seconds every other day, until they can hang for five consecutive minutes. Once a five minute hang becomes comfortable, strap weight onto the body via a belt that hangs from the shoulders or waist. When you can hang for five minutes while attached to 100 pounds of additional resistance, your grip will have improved. The "incidental" moments of hanging when passing the overhead bar during the course of the usual day or evening should not be forgotten, as the consistency in training serves a valuable purpose.

The wrist roller exercise, with a pipe cut from 2-3 inches stock, with the elbows tucked in close to the body, and the upper arms perpendicular to the floor, should be done two or three days per week, with heavy weight. I keep a three-inch diameter pipe by the side of my bed, and make sure that I roll it in a forward and posterior manner at least once daily, in addition to my regularly scheduled forearm and hand workouts. I justify this by noting that my profession requires that my hands and forearms be very strong and resilient, but I also enjoy knowing that there are very few jars that Icannot open! These two very simple exercises can add appreciably to one's ability to hold onto those heavy deadlifts, and add to the poundages used in every other exercise.

Working the synergists

One reader of THE STEEL TIP writes: "A frequent criticism of Nautilus machines is that they don't work the synergistic muscles involved in balancing, etc., I'd like to see your views on this."

This is a criticism leveled at all machines, with "free weights" advocates claiming that the muscles needed to balance a barbell and stabilize the joints during any particular lift don't receive stimulation when using machines. This claim is at once true and false.

Assuming that the trainee performs any particular exercise properly and at high levels of intensity, any machine, barbell, dumbbell or other means of providing resistance will in fact stimulate those muscles needed to move the resistance through a range of motion. However, the guided resistance of a machine does not require the same effort to control the weight on any particular movement, thus, there's some truth that the fixators and other stabilizing muscles might, dependent upon the movement and the machine design, receive some degree of decreased work.

The important question is, "Will the use of machines hinder your progress and increases in strength levels in the three competitive lifts?" If one trains intensively on the lifts, a necessity if one plans to do them competitively, and learns the skills of the lifts while utilizing heavy weights, assistance work can be done with Nautilus or any other machine without hampering progress. In fact, progress may be boosted due to the relative degree of decreased work on the major joints that machine work will provide.

There's no way that one can train exclusively on machines and then attempt to bench press or deadlift a heavy barbell. In fact, this initially gave machines a "bad rap" in the competitive lifting community. Well known record holders jumped on the Nautilus bandwagon, trained for а "reasonable" period of time on the machines, and then attempted to squat. bench press or deadlift without having done the lifts or handled a heavy barbell in perhaps two months. Others used a barbell. doing one or two sets of 10-12 reps, and then attempted a heavy triple or single, without success. This should have been totally expected, as the physical and psychological skills of making very heavy attempts need to be practiced. Just as a very big, strong, and fast individual may not be a competent football player due to a lack of football skills, one can become extremely strong and not be able to demonstrate that strength via the three lifts, especially if the three lifts have not been performed while handling very heavy weights.

To be continued in the next issue. \blacksquare

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FROM THE GRASSROOTS Overcoming deadlifting obstacles

By Nancy Strasser

hen I first started to deadlift (about a year ago), I found it to be a great "ego" exercise—one where I could lift reasonably large weights, without a lot of concern for "technique." (After all, deadlifting is not brain surgery, it's something we do all the time at work and at home.) I got a big surprise, though, when I began an abbreviated training program, and dropped my five-sets three-times-aweek routine-the weights I could lift started going up fast, and the deadlift no longer seemed so simple. I began encountering a myriad of problems that hadn't occurred with the lower weights. One by one, I had to overcome those obstacles, to continue making progress on the lift. So, for those readers new to the deadlift, I offer my suggestions for overcoming the common "beginners" obstacles.

Obstacle #1: Too much back

To begin with I could really feel it in my low back for days after lifting. But because I was a novice at the deadlift, and not yet using enough load to be causing back soreness, I knew I was doing something wrong. I didn't significantly improve on the deadlift until I stopped thinking of it as a back exercise and started treating it as a leg exercise (one which happens to work the back as well). But even then, I had trouble putting the theory into practice. I was very careful at my initial setup, to keep the hips above the knees and the shoulders above the hips, but as the set progressed I would still put most of the stress on my back.

Finally, I broke the code after seeing a video of another lifter, whose form was

degrading toward the end of a 20-rep set, and then a video of myself (with form degrading after the very first rep). The problem occurred, not when raising the weight, but when lowering it. There's a natural tendency to lower the weight by leaning forward, instead of bending at both the hips and the knees. This alone puts extra stress on the back; but it also sets up a pattern of rapidly-degrading form, because it doesn't return the lifter to the correct starting position.

I overcame this tendency by treating each rep as a single. I now return to my setup position on every rep—consciously pausing at the bottom to re-set, before lifting again. This puts the load in the right place, poised for a lift using the legs more than the back. And it helps establish my groove, to ensure that I lower the weight the same way that I raised it.

Obstacle #2: Grip failure

Once I got my form in order, and could feel my legs doing some work, I faced another obstacle: I couldn't hold the bar long enough to come anywhere close to muscle failure in the legs. My hands would ache, my calluses would tear, and my enthusiasm for completing a 15-rep set would peter out by the tenth rep. So, rather than return to using gloves, or learn how to use those complicated-looking wrist straps, I set out to improve my grip.

As many hard gainers already know, grip work is extremely gratifying, since the improvement from an untrained grip to even a modestly-trained grip is dramatic! And incorporating specific grip work into my routines (particularly the farmer's walk with dumbbells, and hanging for time from a chinup bar) definitely helped my deadlift. Further improvements occurred, when I switched my grip technique from bothhands-pronated to an alternating grip—one hand pronated and the other supinated. Since this grip is asymmetrical, I alternate which hand is pronated, from one workout to the next. I've also found the hook grip—fingers closed over the thumbs—to be useful, particularly for stiff-legged deadlifts.

Obstacle #3: Exhaustion

A 15–20 rep set of any exercise will raise my heart and breathing rates; and with a heavy exercise like the deadlift, I would get too exhausted and breathless to continue a set past 15. The solution to this problem turned out to be very simple: breathing only when necessary. This is supposed to be deadlifting, not some kind of cardio trauma test. It's not necessary to hold that bar at the top of the lift, while gasping for an extra breath.

I now take as many breaths as I want between reps. I set the bar down when taking an extra breath, and even stand up between reps if necessary. This not only forestalls the breathless exhaustion, but provides some relief to extend my grip endurance, as well.

Obstacle #4: Mental mistakes

Once I'd conquered the physical hurdles to productive deadlifting, I found a whole separate category of obstacles—the mental mistakes that could ruin a set of deadlifts as surely as muscle failure could. If I became distracted or discouraged on the first or second rep, the entire set might be doomed to an early cut-off.

Distractions were easy to minimize, if I just took the time to turn up the radio, take the phone off the hook, and lock the spouse in the garage. I would also take a moment to verify the bar was properly loaded, determine which hand should be pronated, and pull up my socks far enough to protect my shins. Then I could start the set with the

knowledge that nothing short of an earthquake was going to distract me.

But even without any distractions, there was no guarantee that I wouldn't get discouraged early into the set by questioning my choice of rep schemes, doubting if I'd really taken enough recovery time, wondering how I ever expected to complete this workout if I'd barely managed a lesser weight last week, and re-negotiating my 15rep target down to something perhaps more manageable. These kinds of obstacles could only be overcome by mental counter-tactics during the set-not just convincing myself that I was strong enough to lift the bar, but that I was tough enough to finish the set. This was hard work, not heroics; and the mental tactics had to be tailored accordingly.

At the opposite end of the spectrum from discouragement was overconfidence. Whenever I completed a particularly good set of deadlifts, I confidently raised the weight for the very next workout. This is not necessarily a mistake for all lifters, but it was a mistake for me, because it killed all my momentum for weeks to come. An increase of a mere few pounds might drop me back to half my target reps-this is enough to demolish that new-found confidence, until I could work back up to my target reps. Psychologically, I found it was much better to stay at a given weight for several workouts, to build up the confident feeling that attaining my target reps wasn't just a one-time fluke.

Summary

All lifters will have their own individual "beginners" obstacles to discover, face, and conquer. Surmounting those obstacles will not make them into champion-class powerlifters overnight (at least, it didn't work that way for me). But it will clear the way for the more meaningful challenge of deadlifting: increasing weight on the bar and/or the number of reps, and allowing for truly productive workouts with this extremely beneficial exercise.

SHOULDER PAIN

By Gregory Steiner, DC

bad shoulder is a guarantee of painful training, assuming training is even possible—as anyone who has suffered through it will testify. In my clinic I've perhaps treated more shoulder injuries and related syndromes than anything else among the weight training community, and more often than not, these rips, tears and tender spots have the capacity of becoming permanent monkeys on the back, so to speak.

Rob, a big guy who owns a gym in Ireland, came to my clinic for a typical thing: "Something's wrong with my bench."

"What," I asked.

"I can't bench press! It hurts too much. In fact, so does behind-the-neck pressing, and curling; and I can't even rack the bar to squat without my shoulders hurting."

What was his problem? I had to figure it out. "How long have you had it," I asked.

His answer, "I don't know," is all too typical among patients with the problem Rob had. Rob had injured his rotator cuff, and he was suffering on account of several mistakes he had made.

The first mistake was his choice of exercises. Actually, Rob is very conscientious about his exercise form, but it was the behind-the-neck presses that caused the first injury. Better to have used the military press because it does not strain the structures of the shoulder like the behind-neck version does.

He also did the overstretching version of pullups for a time—where some people advocate relaxing the shoulders while at the dead hang position. Error number two.

He kept benching and benching, even when his strength dropped due to his inability to stabilize the bar. At times the "strange feeling" caused him to squirm on the bench to try to recruit other muscles to enable him to complete the lift. This misjudgment made matters worse.

He finally came in for evaluation after his curling was affected, and racking the squat bar caused him pain as well. By then his condition was chronic.

Shoulder problems all too commonly, and needlessly, afflict weight trainers—and usually deal with the rotator cuff, sometimes the acromioclavicular joint at the far end of the collar bone and shoulder, or less often the sternoclavicular joint where the collar bone joins the chest.

We'll look at the cuff, and if I can't persuade you not to ruin yours in the first place, I'll try to tell you when to seek care, and what to do if a cuff problem is already one of your weight-lifting war wounds.

How does it feel, this rotator cuff injury, and what is a rotator cuff? Answering in reverse order, the rotator cuff is a set of muscles that, in most anatomical positions, rotate the shoulder outward, as though you were doing a backhand in tennis, or going to backslap a fool who teaches you methods of exercising that will damage you. Baseball pitchers put a huge stress on these muscles at the top of their wind up, when the arm is far cocked back.

There are four muscles here: the SITS muscles, i.e., supraspinatus, infraspinatus, teres minor and subscapularis. All of these are connected to the shoulder blade and attach to the back part of the upper arm. Think of them like rubber bands, or perhaps tent ropes, each pulling at a different angle, countering the pecs and lats, all in a dynamic and hopefully balanced equilibrium. It's often the lack of balanced equilibrium that predisposes an individual to an injury in the first place. What are the symptoms you should know? The obvious is that bench pressing probably hurts—somewhere "in there," maybe deep, that's hard to put a finger on. Doing behind-the-neck anything hurts as well. Remember, any type of behind-neck work is a risky proposition even for healthy shoulders—why not just use in-front-ofthe-head presses and chins in the first place? What's the benefit of "greater isolation" if you end up not being able to do the motion at all?

Another symptom is that you might find yourself squirming a lot when you try to rack the bar in the squat, and your arm might feel "dead" after so doing. Curls can hurt in the shoulder as well. Somewhere in your overhead pressing you might feel an extremely painful "catch" that's somewhat alleviated by twisting the arm this way and that. At times, just holding a dumbbell at your side, and slightly relaxing the shoulder so the 'bell drops an inch, hurts too.

A big test is to lie on your back as though you were "crucified," bend your elbow 90 degrees so that your fist points to the ceiling, then using your elbow as the pivot point, lower your fist to the floor at your side, then up by your head. Probably one or both of these motions will at best be stiff, and at worst be nearly impossible. Another test is to try and cross your arm in front of your face with your elbow at your mouth—elbow high, hand low. Finally, see how it is to reach back for your wallet and try and raise your hand up your back.

So, do you have a shoulder problem?

Any of these symptoms might mean a cuff tightness or tear, and there may be

other damaged tissue as well. The usual admonition is this—anyone can have these things for a few days from time to time, but if they persist or are severe, *there's a serious problem*.

The fundamental and basic rules apply. And let's use these words as they are really meant! "Fundamental and basic" should perhaps be translated "indispensable!" and not "too ordinary to bother with," just as with other fundamentals such as eating, breathing and training correctly.

The basic prescription consists of rest even if it means giving up a favorite exercise for a time—ice, trigger point work and then rehabilitative and preventative exercise such as the L-fly and supine circumductions (big circles done with a *very light* dumbbell while lying on a bench on your back). And, get professional intervention if the problem does not get better as defined by returning strength, greater *natural* (no "body English") range of motion, and finally, less pain.

The small muscles of the rotator cuff can cause endless low-grade pain, or just put a total halt to certain exercises. Both are nearly always preventable *if* you have the mentality and actual courage to do what you must, and avoid what you know full well you shouldn't do!

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FORUM

Edited by Stuart McRobert

Another of "the deceivers"

In the previous issue I referred to Larry Scott, Bob Gadja and Sergio Oliva as just three of the many men who were behind the deception which caused untold frustration and disappointment for the training masses. But those three played only a small role in deceiving me, relative to the havoc Arnold Schwarzenegger reeked. Sure he inspired millions, but at the same time he misled millions; and his "instruction" robbed millions of some of the best training years of their lives. The ensuing desperation even drove many people to turn to steroids in an effort to make the pseudo training advice work.

Below is an unsolicited letter from a reader that probably expresses the sentiments of many of the deceived millions. Though we know the score now, endless gullible newcomers to bodybuilding don't, and they are going to tread the same well-worn path of deception and dishonesty that millions of people already have. – Stuart McRobert

I recently had the opportunity to meet Arnold Schwarzenegger and have a copy of his NEW ENCYCLOPEDIA OF MODERN BODYBUILDING signed. He appeared at the large bookstore where I work.

My initial reaction was one of excitement. Everyone who lifts weights has been exposed to Arnold and influenced by him in some way. In books, photographs, magazines and the documentary film "Pumping Iron," his physique and his accomplishments have reached legendary status in the bodybuilding world.

Ten years ago I was a naive high school student laboring under the false belief that the closer my training was to the workouts used by the mainstream, the closer I would come to looking like Arnold, Franco or Lou. I'm embarrassed to admit that in those days I actually read the original ENCYCLOPEDIA cover to cover several times. At that time I probably would have given my right arm to have a copy of the ENCYCLOPEDIA signed by the Austrian Oak. It's not my intent to disparage the achievements of Arnold or his book. It was a source of inspiration in my early training days and contains some useful information. Unfortunately, most of the information about training programs includes completely unrealistic information about sets, number of exercises and training frequency that would be harmful to typical trainees.

Several HARDGAINER authors have written about the potential pitfalls of using gifted bodybuilders and lifters as sources of inspiration. The danger is that in one's desire to emulate their achievements, one is tempted to copy their training methods. I'm no exception; if it was good enough for Mr. Olympia, it was certainly good enough for me.

Stuart McRobert wrote about this issue with great clarity in the article "Idols and Models" that appeared in the September 1990 issue of IRONMAN magazine.

It has taken years of studying HARDGAINER magazine to fully grasp the simplicity of productive, practical weight training. Here's a key example of the shift in thinking that's required if one is to optimize one's progress: The mantra of mainstream instruction is "more is better." This philosophy is the exact opposite of what constitutes proper training advice for the typical trainee. The HARDGAINER mantra could be summarized as "less is more." In other words, one has to find out what the smallest amount of weighttraining exercise is that will stimulate gains, and stick to that.

Brief intensive workouts using a few big movements to cover the body's main structures is the core of a proper program. One or two little exercises per workout will cover the smaller areas like obliques and calves. Performing some form of aerobic work several times a week, and stretching consistently, completes the package. Enough rest and nutrition will ensure that your efforts in the gym will not be wasted.

Attractive gimmicks and the "perfect routine" have repeatedly seduced me, only to bitterly discover they were a waste of valuable training time and energy.

Everyone has to learn for himself the unavoidable truth that the effective methods of training are the ones you can use over the long term, and which will allow you to stay free of injuries.

The proper methods appear to be simplistic to trainees conditioned by double split routines, triple drop sets, and pre-exhaustion training. Of course, the irony is that HARDGAINER methods are effective precisely because they *are* simple and straightforward.

In summary, one must apply maximum effort to a minimum amount of resistance exercise while satisfying all the out-ofgym factors. This is about all one needs to follow, to make consistent and considerable progress in their training.

In case anyone was wondering if I got a copy of the NEW ENCYCLOPEDIA OF MODERN BODYBUILDING signed, I will tell you what I did: I skipped the book signing and ordered a copy of BEYOND BRAWN instead.

- Michael Phelps

A sorry state of affairs

Since starting Newcastle University, England, I've recently begun training seriously. I enrolled in the university gym and trained the HARDGAINER way.

When it came to the Easter vacation I went home and decided to join the local

gym in order to continue my training. They offered me a free trial for a week, and I jumped at the opportunity.

At my first session I was guided around the "health and fitness suite" by one of the personal trainers. After spending half an hour on various machines I asked when I could start on the real weights. The answer-when I'd been a member for at least a month! Until then I'd have to use the machines A personal trainer had to follow me about the whole time, which was supposed to be helpful. He showed me how to perform exercises, such as the pulldown, where he encouraged me to really rock my head forwards and bring the bar down on the back of my neck. Even I know that this is poor instruction.

I went to this gym once more before I decided to stop wasting my time. I was very disappointed.

Many modern gyms seem obsessed with personal training, and use it as an excuse to charge sky-high fees. I understand that these "personal trainers" don't need any qualifications, at least in England. I know a man who has worked as a personal trainer at two of the largest gyms in the area. He laughs about what easy money it was, especially private customers who could pay £30 per hour for his "expert" tuition. His qualifications in this field did not extend beyond the leaflets given out by the management.

Now I'm back at Newcastle I can train the way that I want in the university gym, but I'm at a loss over where to train in the holidays.

Even the university gym is disappointing, as there's no power rack. There are, however, rows and rows of expensive, fancy-looking machines!

Over the last month it has been illustrated to me why most gyms are little more than a joke, and a very lucrative one for those involved.

Jonathan Smith

British Grip Championships

The ninth British Grip Championships will take place on Saturday July 31, 1999 in Stafford, England. There will be four events: two-hands pinch lift, one-hand vertical bar lift, Weaver stick lift to rear and the one-hand deadlift using an Olympic bar. There will be three categories of competition: open, intermediate and novice.

For further information, contact David Horne, 16 West Close, Stafford ST16 3TG, England, tel. 01785 601903.

From The Pit

Finding out how much exercise you need and not how much your body can stand is still the biggest problem most weight trainees have failed to understand.

In the last week two HARDGAINER readers have been in touch with me. Both were doing workouts that "would kill a horse" if done in the way "you must" in order to gain strength and size. On top of that they were doing way too much cardio work. One of them said that his workout takes him two hours to complete.

If you're a hard gainer, then working out for two hours will wear you out.

The strongest man in the history of The Pit is Kelvin Hayes. Kelvin has been drug tested many times, both lie detector and urine. Plus I've watched his gains over the years and it's evident to me that he has never used drugs.

Though Kelvin is not a hard gainer, if he trained the way of the two HARDGAINER readers who contacted me, then he would probably think he was a hard gainer. Kelvin has a 804 squat, 500 bench press and 695 deadlift.

At this stage, Kelvin never does cardio work. He could do a little, but very little, as it would cost him strength. Twenty minutes twice a week would be a max. But he does none.

How does Kelvin train? Over the years that I've seen him lift, he has had two basic movements for his upper body, and they are the bench press and a high incline. At times he has done other work, but his down-to-business movements are the bench and high incline, done with 8 reps and a couple of work sets. He also does deadlifts, squats and leg presses. Other than that, nothing else is even worth the mention. And remember, this is the amount of exercise that does the job for Kelvin. This is already *less* than most hard gainers use. If Kelvin can get the job done with so little exercise (but done hard), then hard gainers don't need more exercise.

About fifteen years ago I trained a teenager called Dan Turpen. Dan was very gifted, with great muscle shape, good looks, and tougher than nails. Dan would work as hard as anyone I'd ever seen. I made it my business to see he worked hard, and I would have a good man training with him when I could, to get the best out of Dan. One such man was Jeff Sellers, Strength Coach at The University of Evansville. Jeff told me, "Every time I worked with Dan I got sick," such was the intensity Dan worked with.

Anyway, Dan went on to win the Teenage Mr. USA and along the way he attracted some writers and people from the bodybuilding scene. One such writer asked me about Dan's program at the time. When I gave him the program—an abbreviated one, of course—the writer looked at it with horror, and proceeded to tell me he would put in the magazine that Dan was working out three days on and one off, which was nothing but a lie.

- Dick Conner

THE ROUND TABLE

Here are further excerpts from The Round Table at www.hardgainer.com

Twenty-rep squats

Most of the people on TRT support 20-rep squats. What's the advantage of these over a 5 x 5 rep scheme, other than the cardiovascular aspect?

Response #1

Twenty-rep squats build power by stringing together 20 singles, if your stabilizers don't cry "uncle" first; 20-rep squats ensure the leg press machine's popularity; 20-rep squats stretch the will; 20-rep squats leave cool looking sweat and spit drops on your training log; 20-rep squats build muscle the old-fashioned way.

Response #2

Twenty-rep squats are extremely good for stimulating muscle growth. The 5 x 5 scheme is good for working on strength. Many people alternate them. You can keep a 20-rep cycle going for a long, long time if you don't go too fast on adding weight, but eventually you'll burn out. If you're not into cycling, that's often a good time to switch to a 5 x 5 scheme for a while.

Hard gainer vs no gainer

When I started training, the term "hard gainer" really didn't mean anything. I didn't have all of the great information that we have spreading around now. I only had hogwash out of a number of glossy magazines. I struggled for the first three years to put on any noticeable amount of muscle. I never experienced that surge of gains that beginners talk about. The first three years of my training produced 15-20 pounds of muscle. Many beginners claim that kind of growth the first six months to a year. So I was in the far depths of depression for a long time because I thought that I would never be able to get much bigger than I currently was.

Then I started noticing the articles in IRONMAN by Stuart, and how he catered to guys that were struggling, such as myself. Following a similar routine that Stuart had published, I watched my strength gains and bodyweight soar. Training twice or so a week, and concentrating on deadlifting and dips and other movements of the like, I got big and strong real fast. From the 170 pound range up to 215 before I knew it. And I was only training three or four exercises per session for one or two sets. It was like magic.

If you want to be bigger and stronger more than anything in the world, then nothing will stop you from accomplishing that. How far you get does depend on your genes. But how long it takes you to get there depends on your mindset.

The term "hard gainer" means that your training and eating habits are going to be very different from a guy who can train almost every day and grow. It doesn't mean you can't be big and strong. It means that you'll have to take a different path and work harder than him to attain size. Don't look at it as a hindrance, but as a guideline to help you find your way.

INSPIRING QUOTES Perspective

"Most of us miss out on life's big prizes the Pulitzer, Oscars, Tonys, Emmys. But we're all eligible for life's small pleasures—a pat on the back, a kiss behind the ear, a four-pound bass, a full moon, an empty parking space, a crackling fire, a great meal, a glorious sunset, hot soup, cold beer. Don't fret about copping life's grand awards. Enjoy its tiny delights. There are plenty for all of us."

- Anonymous

Attitude

"When we accept tough jobs as a challenge to our ability, and wade into them with joy and enthusiasm, miracles can happen." – Arland Gilbert

Obstacles

"For a long time it seemed to me that real life was about to begin, but there was always some obstacle in the way. Something had to be got through first, some unfinished business; time still to be served, a debt to be paid. Then life would begin. At last it dawned on me that these obstacles were my life."

- Bette Howland

Final page nos