

by Steve Holman and Jonathan Lawson Photography by Michael Neveux

o question about it, most of the biggest bodybuilders use volume training—20 or more sets per bodypart. But is all that work really necessary or even desirable? We think not, on both counts. In fact, if you analyze muscle contraction from a scientific standpoint, you'll see why much of that work is a waste of time and energy and how it can lead to steroid use. (We'll get to that in a moment and explain a better, faster way to train and gain big—no steroids necessary.)

Sure, doing loads of sets can work.

Take legendary bodybuilder Bill Pearl. He had one of the most massive physiques of all time back in the '50s and '60s, before steroids were even a blip on the bodybuilding radar screen. How did he build muscle size? He did 20 sets or more per bodypart, training each muscle group twice a week. (You don't have time for that? Keep reading!) The reason he had to do so much work is that he didn't like taking his sets to failure, much less beyond. With subfailure training, doing more sets is absolutely mandatory if you want to max out muscle mass.



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It has to do with the size principle of fiber recruitment. On any given set the low-threshold motor units fire first, the mediums fire second, and the high-threshold motor units go last. Near the end of a set, when the highs are activated, you're recruiting the fast-twitch fibers that have the most potential for growth. What happens if you stop a set early, before positive failure, the way Pearl liked to train? You reach only a few of those key growth fibers. How do you get at more of them? Simple: You do more sets.

On each additional subfailure set you get a slightly altered fiber recruitment pattern, so a few different fast-twitch fibers come into play—in other words, you get a little more growth stimulation. So you do all those extra reps up front just to get at a tiny bit more of the fast-twitch growth fibers. Not very efficient, is it? On the other hand, if you have a low pain threshold or an inadequate nervous system or you just like camping out in the gym so you can train for three hours at a shot, volume-style workouts are the way to go. (A lot of it has to do with personality.)

If you're like us and prefer to trigger mass as quickly as possible (we have jobs, for crying out loud!), you'll want to take the size principle of fiber recruitment to its logical conclusion: Train to failure and beyond so you get at as many growth fibers as possible in any one set—and you only have to do a few sets for maximum mass results. Regular *IRON MAN* readers know that the best way we've found so far to supercharge a set is with X Reps. To

review,

here's

how the technique works:

When you hit failure on a set, you've already activated more fast-twitch fibers than you would on a subfailure set; however, you still haven't pulled in the majority of them. Fatigue and nervous system exhaustion have stopped you short. That's what muscular failure is-a protective mechanism of Mother Nature. To get past it, you should move to the target muscle's strongest point on the stroke, the maxforce point, and grind out power partials. The sweet spot, as we like to call it, is usually below the midpoint but not all the way to the

finish position. Repping out with partials there keeps the fast-twitch fibers firing so you get extreme growth stimulation on any one extended set. It's super mass-training efficiency.

With that type of overload you obviously can't do a lot of sets, but you don't need to—because you stimulate so many more growth fibers in any one set. It's the intensity vs. duration argument: If you pace yourself, as if you were running a mile, you can go longer than if you sprint all out for 100 yards. Actually, the pace would be as if you were doing a whole bunch of half-speed sprints as opposed to a couple of all-out sprints.

As we said, pacing yourself over many sets—that is, duration—can work for building more muscle. Pearl and others have proven that, but who has time for all those sets?

If you know how to train and have the proper temperament for it, doing only a few all-out sets can work amazingly well. You just have to take some of your sets to failure and beyond

with X Reps and the new X-hybrid techniques, and you get the muscle-building job done faster and more efficiently (that's why we say a set with X Reps provides two to four times as much growth power as a standard set).

X Reps worked some mass-building magic for us in only one month the first time we tried them (see Jonathan's before and after shots on page 177)—and we didn't use steroids. In fact, training with excessive sets, too many that are close to positive failure, may

Bill Pearl.

be the very reason

so many bodybuilders have to resort to steroids—they need the drugs to help them recover from all that stress and overwork. Without them they'd burn out quickly. When you look at it from that perspective, you see that shorter, X-Rep-style workouts are the motivated drugfree bodybuilder's best route to maximum mass. Try them, and see for yourself.

Even with shorter, X-Rep-style workouts, however, you have to ramp down the intensity on a regular basis to keep gains coming at a furious pace. Let us explain.

Phase in Huge Gains

As we've said, it's usually your nervous system that craps out first on an eight-rep set to positive failure, and that occurs right when key fast-twitch fibers are beginning to get into the action. In other words, one set to positive failure doesn't



Too much volume and/or too much intensity can burn you out. Phase training is the way to keep overtraining at bay.

get the job done no matter how hard you push. That's why so many bodybuilders do set after set—to get at a few more of those key fibers as the volume mounts—but it's extremely inefficient.

If you add X-Rep power partials to a few sets, however, you leapfrog the gain-sapping nervous system exhaustion, forcing more key fast-twitch recruitment. When you do X Reps, one set has the power of many, so you can significantly reduce your workout time, leaving much more energy for growth. (By the way, X Reps also

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- •The ingenious yet easy-to-apply recovery method that can volumize muscle tissue and double or triple your current growth rate (see page 18).
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IRONMAN Training & Research Center member Mervin Petralba before Size Surge 2 (left) and 10 weeks later (right). "This program works!"

- •Why and how you should train less as you progress—that's right, less!—to jam pounds of shredded beef onto your frame (see page 3).
- •A meal-by-meal plug-in-and-grow diet that infuses your system with the exact macronutrient percentages for heightened testosterone production and startling muscle cell supersaturation (see page 48).
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have implications for growth hormone surge as well as ties to hyperplasia, or fiber splitting, which we explain at www

.X-Rep.com.)

Notwithstanding the benefits, there's a caveat to using such a powerful mass-building technique: cumulative nervous system drain. Sure, training beyond positive failure with X Reps is a faster, more efficient route to muscle mass than doing excessive sets, but you're tossing around dynamite. You want to avoid the gain-killing explosion that can be set off if you abuse X Reps' power.

Basically, if you use the technique on too many sets and/or for too many months at a time without a break, you could spin into an overtraining downward spiral (yes,

Motivation can be a double-edged sword. Yes. you have to train hard, but you also have to fight the urge to keep pushing to the limit continuously. **Periodic** mediumintensity phases are a must.

the same overtraining spiral that occurs with volume training). Don't let that happen. A good rule of thumb is to back off for a week after six to eight weeks of X-Rep workouts. You can use the same weights on all of your exercises; simply stop just short of failure on all work sets—and, obviously, no X Reps allowed. That will give your nervous system a chance to regenerate because the stress is reduced. Some trainees may even want to take four to six days off from the gym—yep, a complete layoff. (That's very hard for the extremely motivated to do, but it may be necessary if the massbuilding process is going to contin-

If you keep hammering away without a break, you'll eventually burn out. What does that mean?

Your muscle gains will stop dead in their tracks, and your size may even start to regress. Once that happens, it's a deep hole to try to dig out of.

Of course, the high-set approach also puts you in that peril. Doing so many sets takes a severe toll on your nervous system as well (unless you're really lazy and just going through the motions or you're on steroids), so no matter which approach you use, phase in a lowintensity, low-set week for the best gains possible. You won't lose any size and strength, and you'll probably come back bigger and stronger every time.

We use that approach when we train for our annual photo shoot. Last year, during our X-Rep experiment, we hammered hard on our reduced-volume X-Rep program [listed in The Ultimate Mass Work*out* e-book for five weeks. Then we backed off five days before our shoot, coasting in the gym so our muscles could supercompensate from the fiber-firing sessions. It worked. Our physiques looked better than ever thanks to short, power-packed X-Rep workouts followed by a brief phase of lowerintensity supercompensation.

This year we honed our system even more, ramping up the intensity with new X-Rep hybrid techniques like X/Pause, X-centric training, Double-X Overload and X Fades and then backing off about six days before the shoot. The result: We put on even more muscle with a harder, more shredded look. We ended up about 10 pounds heavier and just as ripped (some of our new photos are posted at www .BeyondX-Rep.com).

True, you have to train hard, but you've also gotta fight the urge to keep pushing to the limit continuously. Believe us, it works, big time. Try it, and then just set your phaser on "grow."

Editor's note: The above is adapted from material published in the *IM e-zine*. You can get an issue delivered to your e-mail box every week free: Visit www.X-Rep.com and click on X-Files. Go to any of the past installments, and click on the subscription link at the bottom.