

Ironman Articles

1970-1974

The Facts Are...

The fact is ... weight training is more productive than any other type of exercise.

But why?

Because it is **HARDER** than any other type of exercise – the intensity of effort is greater. Or, at least, it should be.

Running will produce more muscular growth than walking – simply and only because the intensity of effort involved in running is far greater than it is in walking.

But it should also be noted – indeed, **MUST BE CLEARLY UNDERSTOOD** – that you can stand almost any amount of walking, but that you certainly can **NOT** stand much running. **AND** – the faster you run, the less running you can stand.

The lesson should be clear to an idiot – but in fact it seems to have been missed by almost everybody; among whom we must surely include at least a few that are not idiots – but who follow the advice of idiots, listen to idiots, and train in a fashion that can only be accurately described as idiotic.

There are really only two important factors in exercise – one is good, the other is bad.

“Intensity of effort” is **GOOD** – anything that increases the intensity of an exercise will greatly improve it.

“Amount of exercise” is **BAD** – it is the amount of exercise that exhausts your recovery ability and makes growth impossible, or even produces losses in size and strength.

While it is perfectly true that you can “stand” a very great amount of exercise – **IF THE INTENSITY IS LOW** – it is also true that such exercise will **NEVER** produce much if anything in the way of worthwhile results.

AND – it is equally true that you can **NOT** stand much exercise if the intensity is high.

THUS – since the intensity must be high in order to stimulate growth, and since the amount of exercise must be very little in order to permit growth, it obviously follows that you should train very **HARD** and very **BRIEFLY**.

At a rate of two-miles-per-hour, you can walk a distance of twenty miles without even getting tired – but doing so will do little or nothing to promote muscular growth.

However, if you double the intensity by increasing your speed to four miles per hour – then you will find that even four miles of walking becomes harder than twenty miles at the lower speed.

Thus it should be obvious that doubling the intensity requires you to reduce the amount by about eighty per cent.

And if you step up the speed to eight-miles-per-hour, then it is likely that one mile will be about all you want.

AGAIN – raising the intensity **REQUIRES** a lowering of the amount. And if you raise the intensity a little, then you must reduce the amount by a lot.

Insofar as its effect on the recovery ability is concerned, there is a geometrical relationship involved in exercise; if you double the intensity, you can not compensate by cutting the amount in half – instead, you must reduce the amount of exercise greatly in order to permit a small increase in intensity.

Almost every single one of the training schedules published in the muscle magazines during the last twenty years have been outright hogwash. The writer always urges you to train as hard as possible, and then lists a workout schedule that makes hard training impossible. So the poor kids read this garbage, look at the pictures of their hero – the supposed author – try to follow a similar routine, and end up with a case of nervous exhaustion, **AND NO MUSCLES**.

So most of them quit in disgust – wrongly convinced that exercise is of no value, for them at least.

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And a few stick it out, with little or nothing to show for their efforts apart from a constantly dragged-out feeling and no energy for a normal life.

But a VERY FEW do show something in the way of results for their work – EVENTUALLY, these few do finally manage to produce a degree of muscular size that should come from three or four months of proper exercise, but it takes them THREE OR FOUR YEARS to do it.

BUT ABSOLUTELY NONE OF THEM DO ANYTHING EVEN CLOSELY RELATED TO THE WORKOUTS THAT THEY READ ABOUT.

Simply because – such workouts are IMPOSSIBLE. Not DIFFICULT – outright IMPOSSIBLE. Almost any one of the workouts listed in almost any copy of any magazine published during the last twenty years would kill an adult gorilla.

AND – even if you could live through such a workout, which you certainly could NOT, it absolutely would not build muscle. Instead, it would produce muscular losses – and FAST. You would quickly grow weaker instead of becoming stronger.

But, since the few trainees who do stick it out usually make the same old stupid mistake of equating “more” with “better” – and since they are encouraged in such beliefs by what they read in muscle magazines – an inevitable result is this; since “training hard” and “training a lot” are mutually exclusive factors the poor foolish bodybuilder is literally FORCED to reduce the intensity of his workouts in order to continue training as much as he thinks he has to.

There is literally no choice in the matter, you can NOT train hard and train a lot at the same time. SUCH IS SIMPLY IMPOSSIBLE.

I learned that lesson very clearly more than twenty years ago – but, I am quick to admit, it had to be forced on me by personal experience, sad experience.

Having reached what I then considered the absolute top limit of my own personal physical potential, I discovered – literally by accident – that the secret to greater growth was to train LESS.

And, when I reduced my workouts by exactly half, I suddenly found myself growing again – growing fast, quickly reaching a size and strength that I previously thought was impossible for me.

Later, having reached a much-higher sticking point, I again reduced my workouts, this time cutting my weekly training to an amount that I had previously used in each of three weekly workouts – and when training only a third as much as I did earlier, I quickly started growing again.

For me, that was the turning point that started my thinking on the path of a logical approach to exercise. The cause and effect relationship indicated by my personal training experience was perfectly clear; as I became stronger, it was necessary to reduce the amount of training in order to produce continued progress – because, the stronger I became, the more strain I imposed on my recovery ability.

But most trainees never seem to learn that lesson from their own experiences. Instead, as they grow stronger and impose greater loads on their recovery ability they gradually reduce the intensity of their workouts when they should be reducing the amount of training. REMEMBER – you can NOT have both. You can have intensity OR a large amount of exercise, BUT NOT BOTH.

Having learned that lesson very firmly a great number of years ago, I then started looking for ways to increase the intensity factor, the good factor, the productive factor, the growth-stimulating factor – and every time I did find a way to increase the intensity, I immediately encountered additional proof that another REDUCTION in the amount of training was then required.

The development of Nautilus Machines and training systems was based on a clear awareness that it was highly desirable to increase the intensity of exercise – and the proper use of Nautilus Machines has merely confirmed the fact that a great amount of training is neither necessary nor desirable.

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And, again – there was really no choice in the matter; since the Nautilus Machines do raise the intensity of exercise to a level that is utterly impossible to attain in any other manner, it was NECESSARY to reduce the amount of training. At first we produced what we considered to be very good results by performing only three sets – then we found that we got even better results from only two sets – and now we seldom if ever perform more than one set of each exercise in a workout, and our results are far better than they previously were.

And now, within the last few months, we have discovered a system of training that promises to reduce the required amount of training even more, while raising the intensity of exercise to a point that was previously impossible – NEGATIVE EXERCISE.

But in order to be sure that most readers will clearly understand the factors involved, it is first necessary to clarify a few points – simple points, but important points ...

INTENSITY OF EXERCISE has absolutely nothing to do with the amount of weight being used – instead it is determined by the “percentage of momentarily-possible effort.”

For example: if you could curl 100 pounds, but you curl only 50 pounds – then the intensity is low.

But if you can only curl 51 pounds and you curl 50 – then the intensity is high.

During a normal set of curls with a barbell, the intensity varies repetition by repetition. If you are capable of performing nine repetitions of the barbell curl with 100 pounds, then a set would proceed much as follows ...

During the first repetition you are fresh and strong, and at that moment you might be capable of producing 150 pounds of force. And since the barbell weighs only 100 pounds, you can curl it rather easily. During the first repetition you might produce 105 pounds of force – but since you could have produced 150 pounds if you had tried, the repetition will feel easy and the intensity will be low.

But the act of performing that first repetition will weaken you; will reduce your momentary strength – so your MOMENTARY ability during the second repetition will be less than it was during the first repetition. It might be 145 pounds, MOMENTARILY – and again you actually produce only the required 105 pounds that is needed to curl the 100-pound barbell at a particular speed.

So again you are working well below your momentary “limit” – and you are still able to curl the barbell easily, but not quite so easily as you could the first time. The intensity is still low, but it is higher than it was during the first repetition.

The weight of the barbell remains the same, the distance of movement remains the same, the speed of movement (and thus the “power”) remains the same, the form remains the same, the amount of work remains the same – EVERYTHING remains the same, everything EXCEPT INTENSITY, which is higher during the second repetition.

And so on through the next several repetitions; nothing changes during the third, fourth, fifth, sixth, seventh, eighth and ninth repetitions – nothing EXCEPT INTENSITY, which constantly increases.

By the time you reach the ninth repetition, you have reduced your MOMENTARY strength to a point where you are capable of producing only about 101 pounds of force – barely enough to move the barbell upwards.

That ninth repetition will “feel” much heavier than the first one did – but in fact it is no heavier than it was at the start of the set; you have merely weakened yourself by performing several repetitions.

During the first repetition the intensity was only about 60 per cent and during the second repetition about 65 per cent, and during the third about 70 per cent – and so on – so that by the time you reach the ninth repetition you are working at a level of intensity very close to 100 per cent.

NOTE – the figures and percentages mentioned in the preceding few paragraphs are NOT intended to be exact. Instead, they are used arbitrarily merely to make the point clear. END OF NOTE.

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Muscular injuries – or injuries to muscular attachments – result when the pulling force exerted exceeds the breaking strength of some part of the muscular structure.

For example: if you are capable of producing 150 pounds of force in a curl and if the “breaking strength” of your biceps attachments is only 125 pounds – then you are sure to injure yourself if you perform a maximum-possible curl.

You literally **MUST** injure yourself under such conditions – the attachments will break under a load of 125 pounds or more, and you are exceeding that limit by 25 pounds. Injury must result.

But even if you were clearly aware that exactly such a condition existed in your own arms, this would be no reason to reduce the intensity of your workouts. Because, in a properly performed workout, even though you were working at or very near 100 per cent intensity during the last one or two repetitions – the actual load imposed on your weak point would always be well below the danger level.

It is **NOT** the intensity that produces injuries – instead, injuries result from the actual level of applied force. And during a properly performed set of any exercise, the actual level of applied force is very nearly exactly the same in every repetition – and is always well below the danger level.

Yet, in spite of the obvious, unavoidable, undeniable, simple logic of the above statement – most trainees avoid the last one or two “hard” repetitions under the totally mistaken notion that they are thus avoiding the “dangerous” repetitions.

When, in fact they are merely avoiding the **MOST PRODUCTIVE** repetitions, the only repetitions in the entire set that are of any value insofar as growth stimulation is concerned.

And the simple truth of the matter is that it is literally **IMPOSSIBLE** to hurt yourself in a “last” repetition of a set of eight or ten properly performed movements – by that point in the set you are no longer strong enough to hurt yourself. So long, at least, as you maintain good form.

If you start “cheating” – jerking the weight, yanking on the weight, making sudden movements – then it is possible to hurt yourself on any repetition. Because, jerking imposes a greatly magnified pulling force that certainly can injure you.

REMEMBER – injuries result when a muscle produces a pulling force that exceeds the breaking strength of some part of the muscular structure.

So it is only common sense to avoid even the possibility of such an occurrence – and it can be avoided, easily avoided, while making no slightest compromise in the productivity of your training.

Simply use an amount of weight that will permit you to perform at least seven or eight repetitions in **PERFECT** form – and then do as many as you can in **PERFECT FORM**. Increase the weight when you are able to perform ten or more repetitions in perfect form.

In this fashion you will probably be able to train for years and reach the absolute peak that your individual potential will permit – without ever suffering an injury of any kind.

REMEMBER – you **MUST** have maximum-possible intensity to stimulate maximum-possible growth; but it is not necessary to train in a dangerous fashion in order to attain maximum-possible intensity.

Power lifters and Olympic lifters suffer rather frequent injuries because they must produce maximum-possible pulling forces while their muscles are fresh and strong – but that is the price they must pay for the practice of maximum-attempt lifts, a price that is neither necessary nor desirable for anybody except competitive lifters.

And just what does all of this have to do with an understanding of negative exercise? Quite a lot. Because, if you fail to understand the above simple points, then you will probably fail to understand the obvious advantages of negative exercise.

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A muscle is capable of contracting against a certain maximum force – but once having contracted, it can then resist an even higher force and can “hold” its contracted position against a force that it could not move in a positive direction – and it can “delay the movement” of a force that it can not “hold.”

Thus it is obvious that we have three distinct “levels” of strength – a positive strength level – a “holding” strength level – and a negative strength level.

When performing normal exercises you are always limited to performances within your weakest strength level, the positive strength level – because, obviously, you can NOT lift more than you can lift.

But with negative exercises you are working within your strongest level, the negative level – a level so high that it is impossible for you to move the weight in a positive direction or even impossible to “hold” it.

But wouldn't that be awfully dangerous?

NO – because you do not start the set with an impossibly high amount of weight. Instead you start with a weight that you can use for at least a few positive repetitions – perhaps two or three. But you do NOT actually perform these positive movements; instead, you permit the weight to gradually overpower your muscles and pull you into an extended position.

During the first three or four repetitions you could reverse the movement if you so desired and could actually move the weight in a positive direction – BUT DON'T.

Then, during the next three or four repetitions you might not be able to reverse the movement even if you tried – but you could stop the movement and “hold” the weight if you tried – BUT DON'T.

Finally, after six or eight repetitions you will no longer be strong enough to even stop the weight – but at that point you should try to stop it. Try as hard as possible to stop it – and by so doing you will be working at a level of intensity that is utterly IMPOSSIBLE to reach during normal exercises.

In effect – when you can reverse the movement, don't try – and when you can “hold” the weight, don't try; try to stop the movement only after it becomes impossible to do so.

Then after two or three repetitions during which you are trying to stop the movement and failing – you will find yourself losing control; the weight will start dropping rapidly in spite of your best efforts to slow it down – that is the end of a proper set, call it quits.

So a properly performed set might consist of four repetitions that you could have reversed if you had tried, plus another four that you could have held if you had tried – and two or three repetitions that you could not hold even though you were trying your best to do so.

EMG measurements – actual measurements of the electrical activity that occurs in a muscle during any form of work – clearly indicate that the level of intensity is far HIGHER in NEGATIVE work than it is in positive work.

So it should thus be obvious that negative work raises the GOOD FACTOR of exercise – gives you a higher intensity than anything even possible with positive work, and thus stimulates more and faster growth.

But what about the BAD FACTOR, the amount of work? What happens to it in negative exercises?

Negative exercise REDUCES the amount of work – on a gross scale. So it is thus obvious that this may well prove to be the best of all possible worlds insofar as exercise is concerned – since we have MORE of the GOOD factor, and LESS of the BAD factor.

And what do tests indicate? Just what you would expect if you have clearly understood the above; by comparison to “positive only” exercise, “negative only” exercise is far more productive.

I have just read a research report from Europe that detailed an experiment where “negative only” exercise was compared to “positive only” exercise, and both were compared to a control group of subjects that did nothing. The results were conclusive – “negative only” exercise was far superior.

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ALSO – during the last couple of months, we have been conducting our own experiments. Using Casey Viator and another top bodybuilder for test subjects we have been using a “negative only” workout – with a normal workout each three weeks for the purpose of testing progress.

Both subjects have produced growth at a rate faster than they were previously producing from a normal workout schedule – their strength and muscular size increased in a manner that can only be described as dramatic. And remember – both of these subjects are already very near their previous top levels of strength and muscular size, and far beyond the average top level of muscular size.

And, after seeing the results that negative-only workouts were producing in Casey and the other trainee, I decided to try it myself – on myself.

So, on November 21, 1972, I started training again after a near-total layoff of nearly three and a half years. I said “near-total” only because I have not in fact TOTALLY avoided training – but in fact, I might as well have done so, because I certainly have not done anywhere near enough to build or even maintain strength or size. One set on one exercise a month being about the most I have done during the last three plus years – and for many months in a row I have done no training at all.

When I started training my weight was at the lowest point that it has been since I was a kid, fifty pounds below what it once was – and my arms were as small as they ever get, larger than average by a couple of inches but nothing to compare to those of Casey.

And what happened?

Well, I am writing this on Saturday night, just after my sixth workout – and my arms have already grown (“cold”) by a full 1/8 inch, seven-eighths of an inch, as a result of the first five workouts.

I will not train again until next Tuesday, which will complete two full weeks since I started – and, by that time, I am reasonably sure that my arms will have grown at least a full inch as a result of six very brief workouts.

As a test of my starting strength I performed two normal exercises at the start of my training – one set of STRICT barbell curls with my back and buttocks solidly against a post and absolutely no cheating – and one set of STRICT behind-neck presses, seated.

Next Tuesday, at the end of the first two weeks, I will repeat these tests in order to judge my strength increases, if any.

The remainder of the first workout consisted of only one set of each of four exercises...

1 set, 7 reps, Nautilus Pullover-type Torso Machine, NEGATIVE ONLY.

1 set, 7 reps Nautilus Torso-Arm Machine, to chest, NEGATIVE ONLY.

1 set, 8 reps, Nautilus Triceps Machine, NEGATIVE ONLY.

1 set 5 reps, barbell curls, NEGATIVE ONLY.

That was the entire workout, a total of six sets – two “test sets,” and four negative-only sets. And it made me brutally sore.

On the following Thursday, two days after the first workout, I performed a second workout as follows...

1 set, about 10 reps, Nautilus Pullover.

1 set, about 10 reps, Nautilus Torso-Arm, to chest.

1 set, about 10 reps, Barbell curls.

1 set, about 10 reps, Nautilus Triceps Machine.

1 set, about 10 reps, Nautilus Curling Machine.

A total of only five sets – all of them negative-only.

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Then on the following Saturday, during the third workout, it went as follows...

- 1 set, about 10 reps, Nautilus Pullover.
- 1 set, about 10 reps, Nautilus Torso-Arm, to chest.
- 1 set, about 10 reps, Nautilus Behind-neck Torso Machine.
- 1 set, about 10 reps, Nautilus Torso-Arm Machine, to neck.
- 1 set, about 10 reps, Nautilus Triceps Machine.
- 1 set, about 10 reps, Barbell curls.
- 1 set, about 10 reps, Nautilus Curling Machine.

A total of 7 sets – negative-only.

By that time I was just about over the soreness and had learned what my existing strength level was so that it was possible to estimate the required resistance better. So on the following Monday, I decided to step up the “amount” of training and see what happened ...

- 1 set, about 10 reps, Nautilus Pullover.
- 1 set, about 10 reps, Nautilus Torso-Arm, to chest.
- 1 set, about 10 reps, Nautilus Behind-neck Torso Machine.
- 1 set, about 10 reps, Nautilus Torso-Arm Machine, to neck.
- 1 set, about 10 reps, Barbell curls.
- Then 3 sets of about the same reps on the Nautilus Curling Machine.

A total of eleven sets – negative-only.

The result was “overtraining” – my arms felt tired and “worked” for more than two days; so I waited an extra day, permitting a period of 72 hours to pass between workouts, and trained again on Thursday ...

- 1 set, about 10 reps, Nautilus Pullover.
- 1 set, about 10 reps, Nautilus Torso-Arm, to chest.
- 1 set, about 10 reps, Nautilus Triceps Machine.
- 1 set, about 10 reps, Barbell curls.
- 1 set, about 10 reps, Parallel dips.
- 1 set, about 10 reps, Nautilus Curl Machine.
- 1 set, about 10 reps, “triceps push-downs” on Torso-Arm Machine.

A total of 9 sets – negative-only.

Then tonight, Saturday, eleven days after the first workout, I performed the sixth workout ...

- 1 set, about 10 reps, Nautilus Pullover.
- 1 set, about 10 reps, Nautilus Torso-Arm Machine, to neck.
- 1 set, about 10 reps, Bench presses with parallel-grip bar.
- 1 set, 7 reps – NORMAL NEGATIVE AND POSITIVE, barbell curls, STRICT.
- 1 set, about 10 reps, Nautilus Triceps Machine.
- 1 set, about 10 reps, Nautilus Curling Machine.
- 1 set, about 10 reps, Parallel dips.
- 1 set, about 10 reps, Barbell wrist-curls.

A total of ten sets – nine of them being negative-only, and one of them being a set of regular, but STRICT, barbell curls as an intermediate strength test. I used the starting strength-test weight, and got the same number of reps with it – but remember, the first time, eleven days earlier, I did the test curls when I was fresh, and this time I had already done at least two very hard exercises that involved the biceps.

Thus in a period of eleven days, during six workouts, I performed a total of only forty-eight (48) sets – all but three of them being negative-only.

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And what about results? Well, actual final results won't be available until next Tuesday – but in the meantime, I have added 7/8 of an inch to my “cold” arm measurement while my weight has remained almost unchanged, up only about a pound. But I am NOT trying to gain weight – instead, I am eating almost nothing and would actually like to lose weight.

AND – my lats are growing like mad, my deltoids have increased in size so much that Casey commented on it, my skin tone is far better, and I am obviously stronger since I can handle a lot more weight than I could at the start.

And how does this rate of progress compare to what I have done in the past? I don't really know, yet – but it won't take long to find out.

Eighteen years ago, at a bodyweight of 205 in hard muscular condition with little or nothing in the way of visible fat anywhere on my body, I had a 17 1/8 inch arm – accurately measured, which means about 21 inches the way most people “measure” their arms today.

But three and a half years ago, when I trained steadily for over four months – which amount of time is more than enough for me to get into top condition – I could not get my arm above 15.75 inches no matter what I did, at a bodyweight of about 180, which seemed to be about as heavy as I could get without getting fat.

The passing of fifteen years had made that sort of difference in my potential, I was no longer capable of reaching the muscular size that I once was – but remember, I was no “spring chicken” even 18 years ago.

And the passing of another three and a half years since I last trained has certainly done nothing to improve my potential; so – if I can again reach the “top” size that I reached three and a half years ago, then I will be doing quite well for an old man – and if I can do so quicker than I did last time around, and as a result of less training, and at a lighter bodyweight, then it should be obvious that the system of training is better.

But we will see, and when we do see, then I will print the results – the true results, certified by many witnesses.

But it isn't all milk and honey; the bad part about such a style of training is that you can't do it very well without help – you have to have at least two people to perform the “positive” part of the work for you, to lift the weight so that you can “lower” it.

You can do “chins” by climbing up on a chair and then lowering yourself from the top position – and you can do parallel dips in the same fashion – and a few other such exercises, behind-neck chins, pushups, hand-stand pushups, etc. But the variety is limited.

AND – you can “throw” the weight up and slowly lower it down, but that is a bit dangerous. AND – you can curl a dumbbell “up” with two hands and then lower it with one hand, etc. But in this case you are still doing at least some positive work.

If you have Nautilus Machines, you are a bit better off – because, you can use a weight that is quite light and imposes no large amount of positive resistance, and then raise it with two hands – but will be about right for the one-handed lowering.

In fact, that is what we have Casey and the other trainee doing at the moment – because, after about six weeks, we simply ran out of helpers; nobody was willing to continue working themselves into the ground doing the positive work so that they could have the advantage of an “easy” workout.

I am so favorably impressed by the overall results – and the speed of these results – from the negative-only exercises that we are in the process of preparing a training manual on the subject, a book designed to fully explain and illustrate all of the information presently available to us, and a book that will carefully outline several full workouts that make use of the negative-only principles while training with Nautilus equipment or conventional equipment or both. When this book is ready – which will be a few months in the future – it will be announced in Ironman.

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This book on negative-only exercises will NOT be sold – it will be offered free as a good-will gesture to anybody interested in the field of weight training. The book will be written and illustrated by the Nautilus staff in DeLand, Florida, and published by the publisher of Ironman magazine – and since there will be no charge made, the costs of printing and mailing will be paid by Nautilus. However, since it will be distributed free, only a limited number of copies can be printed – so I would suggest that interested parties submit their names and addresses as soon as possible. Simply send your name and address to Peary Rader, Ironman, Alliance, Nebraska 69301 – and state that you would like a free copy of the negative-only book when it is ready.

If you are a subscriber to Ironman, or if you are a customer of Nautilus, it is not necessary to request a copy – copies will be mailed to all subscribers and customers without a request.

And what effect do I see in the future from this information on negative-only exercise? Well, I can see several obvious effects ...

Such training will permit even higher intensity of training than that which was even possible in the past, so it will probably require an additional reduction in the amount of training. I say “probably” because I am really not sure just what effect a lot of such training would have. Because – while it raises the intensity – it also greatly reduces the amount of work involved in workouts; thus it simultaneously creates the demand for a reduction in training while creating the very reduction that it calls for.

If properly performed, I think that negative-only training will result in muscular size and strength that was impossible in the past – and I think that results of a large magnitude will be produced rapidly, in a matter of weeks instead of years.

But my past experience with bodybuilders leads me to expect that many of them will again make the same old mistake of doing far too much training, and I don't yet have enough knowledge or experience to anticipate the results of such overtraining.

I also expect to see many examples of underweight and older trainees who have failed to produce much if any results from other styles of training who will suddenly experience rapid gains for perhaps the first time in their experience – if they will practice a very limited amount of such training not more than three times weekly.

And I expect to encounter a literal barrage of screams and howls of outrage from some quarters – from people who will feel themselves threatened by this knowledge of negative-only exercises, who will consider themselves placed in danger by the simple facts, which facts they will do everything possible to hide or deny.

Why? Because such people are in the business of selling exercise machines that do NOT have negative resistance that can NOT have negative resistance. During the last few months these people have pointed with pride to the fact that their machines provide positive-only exercise – and they have been claiming that negative resistance was bad, of no value, counter productive, dangerous, to be avoided, etc. But the simple fact is that negative resistance has already and clearly proven itself to be of far more value than positive resistance – so it just happens that their claims are not true. So rather naturally, they will scream their heads off.

But since we already know the truth, and can prove it – we are in the advantageous position of being able to make good use of the real facts immediately; without being placed in the position of having to try to deny the facts for a few years because it would be bothersome to admit these facts.

So while some people will do everything possible to deny the truth, we will proceed in a logical direction while making good use of very valuable information – which state of affairs will assure that we will continue to maintain the lead that we have so clearly established already.

Which, to me, is an amusing situation – because it was the people who tried to deny these facts that caused us to investigate them in the first place. If these people had not started knocking negative resistance, then it is unlikely that I would have started investigating it so soon, and the facts might have stayed hidden for years. So they brought the truth upon themselves, and if it now turns out they are unable to survive in the light of the truth – then they have only themselves to thank for turning that light on.

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And what effect does this information have on presently existing exercise equipment – how does it change the value of Nautilus Machines or barbells? It improves the value of both Nautilus Machines and barbells – because it provides a better means of using any equipment that provides negative resistance.

And how does it affect the “speed limiting” machines? It knocks the props right out from under their claims – it utterly destroys their whole theory.

But the greatest value of this new style of training will probably be seen in the field of active sport – because, now, with negative-only workouts, active athletes like football players and basketball players can have the advantages of strength training without paying the price of overloading their recovery ability. For the first time in the history of exercise it now appears that active athletes will be able to continue full-scale strength training both “in” and “out” of season – because negative-only workouts don’t leave the trainee exhausted and too tired for his normal sports-connected training. Thus, active athletes can have their cake and eat it too – can have the rewards without paying the price.

The only word of warning that I would offer for active athletes would be to start negative-only training very carefully – because, if not, then the resulting muscular soreness might well cripple them for a week or so.

But if negative-only workouts are started with very “light” weight and with only two or three such exercises, and if a careful break-in period of at least two weeks is allowed – then the soreness can be avoided in large part. And, once over this initial soreness, it will not return so long as regular training continues. But if you make the mistake of jumping straight into a full, heavy negative-only workout – then I promise you muscular soreness that you will have to experience to believe. So don’t say that you weren’t warned.

NOTE – I started this article two days ago, a day before my sixth workout, continued it the next day, the day of my sixth workout, and am now finishing it a day later, one day after my sixth workout and twelve days after I started training again. My arms have now grown exactly fifteen sixteenths of an inch and they still feel a bit “worked” from the workout last night – so I am fairly sure I will produce the hoped-for full inch of growth from the first two weeks and six workouts.

During these six workouts I have had a training partner named Tim Cook, a young man of 27 who has not trained in years and who never had much in the way of muscular size at any time. He has performed exactly the same workouts that I have – and his growth has been almost as good as mine; in fact, we have a small bet – and it is not yet certain just who will win. As of last night, I was ahead – and I have grown since then – but he is growing from each workout, growing a measurable amount, and I was not very far ahead of him last night.

FINAL NOTE – it is now Sunday afternoon, about twenty hours after my sixth workout, and my upper arms have grown exactly a full inch, “cold” measurements in both cases – so it now appears that I will add more than an inch from the first six workouts and two weeks of training, since I still have more than forty-eight hours of rest to go before the first two weeks are completed, another two days in which to grow.