

# Nautilus & Athletic Journal Articles

# Negative Accentuated Strength Training

In the previous chapter, I covered briefly the subject of negative strength. I mentioned several of the advantages and several of the problems connected with such a style of training. Very briefly, again, the advantages provided by the negative part of exercise are... 1) stretching, for the improvement of flexibility... 2) pre-stretching, for a high intensity of muscular contraction... 3) resistance in the position of full contraction, for full –range exercise... and 4) maximum application of resistance throughout a full range of possible movement, which results from the fact that it is impossible to throw a weight down.

The first three advantages of a negative style of training are, I think, rather obvious and easy to understand... without the back pressure of force pulling against a trainee at the start of an exercise movement, there would be no resistance in the position of full muscular contraction. Thus, without negative work, an exercise would be done for flexibility, high intensity work would be impossible, and full range exercise would be equally impossible.

The fourth advantage, however, may require a bit more of an explanation; although it is equally important, it may not be quite so obvious. While performing positive work during the lifting part of an exercise it is easily possible (and common practice) to throw the weight rather than lift it. If the upwards movement is started with a jerk, or if the movement is too fast (and it usually is)... the result will be that the muscles of a trainee is trying to work simply cannot keep pace with the movement of the weight. So he imposes a worthless and dangerous yank on the muscles at the start of the movement... and no benefit is derived for most of the mass of the muscles a trainee is trying to exercise.

If the weight being used is too heavy (and it usually is)... then it becomes impossible to lift the weight properly; so the trainee is forced to throw it instead of lifting it... the inevitable result being the least productive and most dangerous style of training, a style of training that will do very little except produce injuries. Now... make no mistake, the weight should be as heavy as possible; but not too heavy. It should be as heavy as a trainee can handle in good form; heavier than that and it will make good form impossible, and may produce injury... lighter than that, and a trainee is simply wasting time and burning up energy to no good purpose. So he should use as much weight as he possibly can in good form. And he should increase the weight as often and as much as he can, but do not ever increase the weight if a sacrifice in form is required to do so.

However, in the real world, it usually happens that a trainee will quickly start throwing the weight, instead of lifting it... usually under the totally mistaken impression that he is thus showing progress, since it then becomes possible to use more weight.

When a negative only style of training is practiced, however... then such throwing becomes impossible; a trainee can simply drop a weight, but he cannot throw it down.

In negative-only style of training, the weight is lifted for a trainee by somebody or something else... then the trainee slowly lowers the weight, performing only the negative (eccentric) part of the work. Jerking, yanking, heaving, throwing and too-fast movement are thus totally avoided... the idea is to lower the weight slowly, very slowly, but without ever quite stopping the downwards movement. At the start of a negative-only exercise a trainee should be able to stop the downwards movement if he tries... but he should not try. Then, after several repetitions (6 or 7), it should be impossible to stop the downwards movement no matter how hard he tries; but he should still be able to control it, able to maintain (but not stop) the slow, steady, smooth, downwards movement.

Then, after two or three more repetitions, a trainee should find it impossible to stop the downwards acceleration of the weight... the weight should be moving faster (not fast... simply faster than it was before), and this is when he should terminate the exercise.

If a trainee tries to go on after he finds it impossible to prevent downwards acceleration of the weight, he will suddenly find himself dropping the weight... which is neither necessary nor desirable, and could be dangerous in some exercises, the bench press for example.

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So, properly performed, negative-only exercise assures full range exercise for the muscles because the weight is never thrown, but always moved at a smooth, steady pace.

And that should recap the advantages of negative exercise... but there are a few problems as well; problems dealing with the practical application of negative exercise. These problems result from the fact that it is usually necessary to have somebody else lift the weight for a trainee so that he can perform only the lowering (negative) part of the exercise.

A few exercises can be performed in a negative-only fashion without help; chinning can be done by climbing into the top position with the legs so that the arms simply lower the trainee back down, and dips can be done in the same manner. Shoulder shrugs can be performed negative-only by using a bench situated just below the low point of the movement; the barbell is deadlifted from the bench while the shoulders are held in the top position of the exercise. Then after the back and legs are straight, the shoulders are slowly permitted to lower the weight. And, depending upon the availability of equipment, a few other exercises can be done in a negative-only fashion without help. But, in general, a trainee needs help; and finding such help is seldom easy; so, for most people, a totally negative program of exercises is certainly impractical.

When this problem first presented itself to us, we looked around for an answer... and the subject of this chapter, negative accentuated strength training, so far seems to be the best answer. Quite frankly, at this point in time, I do not know just how negative accentuated training compares to negative-only training; that is to say, I do not know which is better... or even if one actually is better. Until we have had the opportunity to conduct a large-scale comparison under good conditions and over a rather long period of time, it will remain impossible to say which is best in the sense that one style of training will produce better results than the other.

However, this is not meant to imply that I do not have an opinion at this point in time... I do; but it should be clearly understood that it is merely an opinion. I have personally trained with heavy resistance exercises of all existing kinds on a very irregular basis for a period of more than thirty-five years. This training fact really means little or nothing in itself, because such long experience can (and usually does) produce a very biased attitude; can produce a set in one's thinking, can convince him that he has nothing more to learn in regard to a particular subject. So, experience by itself means absolutely nothing; and in many cases has the result of preventing learning rather than helping it. However, it also seems to be true that little if anything of value is possible in the way of learning without experience. And it is certainly true that experience produces opinions. So, at this point in time, with no supporting evidence to base it on, my opinion is that negative accentuated training is probably as productive as negative-only training, and perhaps better in some ways.

In due course, we will conduct a careful research program in cooperation with a major university for the express purpose of comparing negative-only exercise to both negative accentuated exercise and normal exercise; but in the meantime, all I can give is an opinion... together with a few of the facts that have produced that opinion.

Negative accentuated training does not require helpers, and that one factor is an advantage of great importance. Second, it does not require as much resistance, which is also an important consideration since a negative-only style of training sometimes requires an impossible level of resistance; more resistance than can be loaded on the bar or machine. Third, it is possible to perform a much greater variety of exercises in a negative accentuated fashion.

Negative accentuated training is impossible with a barbell... not difficult, simply impossible. But several very good exercises can be performed on almost any type of exercise machine while using this style of training. With the conventional type machine, it is possible to perform leg presses, leg extensions, leg curls, bench presses, and standing presses... all in a negative accentuated fashion, and without help. With Nautilus machines all of the same five exercises can be performed plus curls, triceps curls, decline presses, pullovers, and hip extensions (on a Hip and Back machine).

And a trainee can do negative accentuated chins on any kind of a chinning bar, or machine that provides a chinning station. Negative accentuated dips are also possible, but not as easy to learn to do properly.

Negative accentuated exercise does not require more resistance than normal exercise... instead, it requires less resistance; but do not assume that it is thus easier; it is not... in fact, it is considerably harder than normal exercise. But the very fact that it requires less resistance is an advantage in at least two ways; in the first place, it is safer... and in the second

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place, it means that a trainee is far less likely to run out of available resistance, not liable to become stronger than the machine. But again... do not misunderstand that last statement; I did not mean to imply that a trainee will not become stronger, he certainly will become stronger, and quickly... but a negative accentuated style of training simply will not permit a trainee to use as much resistance as he can in some other ways, so the resistance available on most any exercise machine of any kind will probably be enough to provide him with all the weight he will ever be able to handle properly in this fashion.

Using the bench press as performed on an exercise machine as an example, I will now describe the proper style of performance for negative accentuated training.

If a trainee can, for example, bench press 200 pounds for ten repetitions in a normal manner, I recommend that for the negative accentuated training he use 140 pounds instead, approximately 70 percent of the weight he could lift normally.

Lift the weight in a normal fashion, but a bit more slowly than is probably done now... using both arms during the lifting (positive) part of the exercise. Then lower it slowly back down while using only one arm. Do not remove the nonworking hand from its grip, leave it in place but do not use it... permit one arm to do all the negative work by itself. Lower it slowly, taking approximately 8 seconds for the negative part of the exercise. Then lift it back to the top position with both arms again, using both arms equally for the lifting part of the movement. The lifting movement should be done considerably faster than the lower part... it should only take about two seconds for the lifting part.

A trainee can easily raise it a great deal faster than that, but he should not... because he will be throwing it rather than lifting it, which is not very productive and is dangerous.

So... raise the weight with two arms, then lower it slowly with the right arm only... then raise it again with both arms, but this time lower it with the left arm, slowly. And so on.

Up with two, down with one, up with two again, down with the other; and this should continue until a trainee finds it impossible to raise it again. Both arms work together and equally during the positive part of the exercise, but work alternately during the negative part.

If the weight is selected correctly, the first three or four repetitions will seem very light... will seem far too light; but a trainee should not kid himself; by the time he reaches the eighth lifting stroke the previously light weight is correct, he should reach a point of momentary muscular failure about the tenth repetition. After about nine lifting movements with a weight that seemed very light at the start, he should not be able to lift it up again.

When a trainee can lift it ten times in this fashion, then increase the resistance by approximately 5 percent. So a properly performed set of such an exercise should consist of approximately 8 to 10 lifting movements, plus 4 or 5 negative movements performed by the right arm only and an equal number performed by the left arm only.

Negative accentuated chinning is performed by lifting oneself with both arms and then lowering oneself with only one arm... at first it may be necessary for him to help himself a bit with the nonworking arm, but rather quickly he will find that one arm can handle the negative part of a chin without help from the other arm.

Leg presses are performed by lifting the weight with both legs and then lowering it back down while using only one leg. Leg extensions and leg curls are performed in the same way.

The same rules apply to any exercise that is possible in this style, and a trainee can use this style of training with any piece of equipment that provides a stable source of resistance; he obviously cannot perform negative accentuated training with a barbell for the simple reason that he cannot release the pressure against one side of a barbell while continuing to maintain it on the other side. So do not try.

In exercise, as in most things, *form* (or style of performance) may not be the only thing, but it is certainly a prerequisite for good results... good form with too little weight will do little or nothing of value; but too much weight without good form is even worse, and dangerous besides. And a negative accentuated style of training will give a trainee both good form and outstanding results. Try it and find out.