

# **Nautilus Bulletin #1**

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## "Warming-Up" Properly

Muscles are literally incapable of performing at a level even closely approaching their momentary ability unless they are properly "warmed-up" in advance by the performance of lighter, exactly similar movements; in effect, you cannot warm-up properly for the performance of heavy bench presses by performing standing presses – you must perform several sets of bench presses with a resistance well below the weight you intend to employ for a maximum attempt.

That much, at least, is clear to practically everybody engaged in weight training; but it does not follow that warming-up procedures are properly understood by the majority of trainees. On the contrary, training progress is usually held well below an optimum rate by the practice of incorrect warm-up procedures.

Warming-up for competitive lifting is one thing – but warming-up for training purposes is an entirely different matter; and the correct procedures have very little in common when one is compared to the other. In a weightlifting contest, you are not concerned with trying to build size or strength as a result of the lifts performed that day; your only concern is an attempt to lift the maximum possible amount of weight for one repetition in good form – thus your warm-up must prepare your muscles for a maximum-possible single effort, while leaving them as fresh as possible.

But in training – where you are concerned with building as much size and/or strength as possible, as a direct result of the lifts performed that day –the correct warm-up procedure will be almost exactly opposite to that which you should employ on the day of a weightlifting competition; in this instance, each set of every exercise should be a maximum possible set – and should leave your muscles totally, if momentarily exhausted.

Quite obviously, if such training is done – as it certainly should be –then it will be literally impossible for you to lift as much for a single attempt as you could have done if you had warmed up with lighter, less than maximum-attempt sets. Thus many trainees avoid such a system of training –because it prevents them from attaining a maximum level of performance for one repetition during each workout; they feel that greater growth stimulation has been provided by one maximum repetition – and that the higher the resistance employed, the greater the growth stimulation.

However, in fact, quite the opposite is true; with such a system of training, only one set of each exercise will provide any growth stimulation at all – and that will usually be far less than maximum growth stimulation. And the other sets have been completely wasted; worse than that, they have exhausted part of the recovery ability while providing nothing in the way of growth stimulation.

If, instead, two or three sets of each exercise are employed, and if these sets employ a reasonable number of repetitions, and if each set of each exercise is carried to the point of absolute failure – then maximum growth stimulation will be provided, with minimum depletion of the recovery ability. You certainly will not be able to lift as much for a single attempt during your training workouts if this system of training is used – but you certainly will build the maximum possible degree of both muscular mass and strength; then, later, in a contest, your strength for a single attempt will be greater than it would have been as a result of any other type of training.

## The Arthur Jones Collection

I am not saying – and I do not mean to imply – that maximum attempts for a single repetition should never be attempted in training; on the contrary, they should be – but only on a very infrequent basis, and certainly never more often than once a week. For best results, such attempts should not be performed more frequently than once every two or three weeks – or even once a month.

In practice, best results are usually produced by the 10/8/6 system of repetitions and sets; in this system, a weight is selected that will permit not more than ten repetitions during the first set, and then the resistance is increased for the second set, to a point that will permit not more than eight repetitions, and in the third set the resistance is increased to an amount that will permit six repetitions. But in all cases, all possible repetitions are performed in each set – and the weight is increased at the time of the next workout if it was possible to perform the designated number of repetitions with the weight selected.

Thus, in practice, a subject usually will actually perform only about 8/6/4 repetitions –or possibly 7/5/3 repetitions; when he actually performs 10/8/6 repetitions, then the resistance is increased again.

For single attempts, however, a careful warm-up is extremely essential for several reasons – the most important ones concerning safety; if a maximum attempt is made with a "cold" muscle, greater danger of injury exists. Secondly, if the resistance being employed is at or very near the actual level of strength for one attempt, then such an attempt will always fail –because a cold muscle cannot perform much if any above and about 85% of its actual strength level.