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Intensity of Effort

Thirty years ago, it was noted that, "...the foreman of a crew of manual laborers will almost always be the strongest man in the crew – and he is the strongest because he is the foreman, rather than being the foreman because he is the strongest."

Yet, in almost all cases, the foreman performs far less work than any of the other men in the crew. A paradox? No – on the contrary, simple proof of the effectiveness of heavy exercise for the production of muscular size and strength. The foreman works only when the combined efforts of the other men in the crew cannot produce the desired result – he helps to lift the heavier than normal load; thus his exercise is brief and infrequent, but intense and irregular – and those are the exact requirements for producing the best results in the way of muscular size and strength.

Twenty years ago, the author noted an even more striking example of clear proof of the same theory; the relative sizes of the two arms of an individual that has been training with weights for a period of time long enough to produce marked results. In almost all cases, the left arm of a right-handed weight trainee will be larger than his right arm – usually to a marked degree.

Why? Simply because the left arm of a right-handed man must work harder to perform its share of an equally divided workload; it does not work more, nor differently – it works harder, with a greater intensity of effort. And it responds by growing larger than the right arm.

A right-handed man lacks some degree of "feel" in his left arm – his balance and muscular control are both less efficient in his left arm, and this remains true to at least some degree regardless of the length of time that he has been training both of his arms in an apparently identical manner.

The left arm works harder, so it responds to this increased intensity of effort by growing larger – and in tests of strength that do not involve balance or muscular coordination, the left arm will almost always be stronger as well as larger.

But when I have pointed this out to individual weight trainees – as I have done on repeated occasions – the response had almost always been along exactly the same line; "...well, in that case, I'll do an extra set of curls for my right arm – then it grow larger too."

Having missed the entire point, they assumed that "more" exercise was required – when in fact, this situation is clear proof that all that is required is "harder" exercise.

Intensity of effort is almost the entire answer in itself; lacking the proper intensity of effort, little or nothing in the way of results will be produced by any amount of exercise –At least not in the way of muscular size or strength increases. But given the proper intensity of effort, then very little in the way of exercise is required for the production of best possible results.

And although this has been pointed out repeatedly; to almost literally all of the several million weight trainees in this country, it still remains a largely misunderstood point; the usual practice is to do more individual exercises and more "sets" of each exercise, in the mistaken belief that such an increase in the amount of exercise will also produce an increase in the intensity of effort – which it obviously will not.

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In fact, in almost all cases, the exactly opposite effect results; because it is difficult to perform seemingly endless sets of exercise while continuing to exert the maximum momentary level of intensity in each set –and as a result, the workout quickly degenerates into a form of rather hard manual labor.

But such workouts do product results – if continued long enough; another apparent paradox? Perhaps, to some people – but no actual paradox exists in this case either; the results that are produced are a direct result of only one or two sets out of each workout – regardless of the actual number of sets that are being performed. The other sets are literally wasted effort; worse than that, the additional sets beyond the minimum number required actually retard the progress that would have been produced if the workout had been greatly shortened.

"Best results will always be produced by the minimum amount of exercise that imposes the maximum amount of growth stimulation." And any other exercise that is added to the training routine will actually retard progress – in many cases reducing it by as much as ninety percent (90%), and if carried to extremes, additional exercise will result in losses in both strength and muscular size.

But just what is the minimum amount of exercise that will impose the maximum amount of growth stimulation? And that, of course, is the problem. A problem that will probably never be solved to the complete satisfaction of everybody concerned, and the problem that has led to the presently existing great confusion on the subject of just how much exercise is best.

But while it is perfectly true that the exact answer to that question remains unavailable, it is not true that no information on the subject exists; on the contrary, a great deal of very well proven information has been available for many years – and the last few years of research have given us at least a "practical" answer, if perhaps not a perfect one.

Fairly recently, new and rather surprising discoveries were made in connection with the actual mode of functioning involved in muscular contraction; and these true but largely misunderstood disclosures quickly led to the proliferation of theories which produced several forms of so-called "static exercise." One of these – isometric contraction – made the proposition that no actual exercise was required for the production of the maximum possible degree of muscular size and strength; all that was required – according to this theory – was the application of a high percentile of the existing strength level against an unmoving resistance, in a number of various positions.

In theory, the results should have been nothing short of spectacular – but in fact, the results were anything but spectacular; a spectacular failure, perhaps.

Yet the theory behind such exercise is basically sound – as far as it goes; unfortunately; the conclusions that were drawn from the facts that provided the basis of that theory ignored several other well established facts. A "cold" muscle is literally incapable of working within its existing level of reserve strength – and unless an imposed workload is heavy enough to force the involved muscles to work well inside their momentarily existing reserve levels of strength, then very little in the way of results will be produced.

Before it is even capable of anything approaching a maximum effort, a muscle must be properly "warmed-up" by the performance of several repetitions of a movement that is much lighter than its existing level of strength is capable of handling. If not, the muscle will "fail" at a point far below its actual strength level – but such effort, even if carried to the point of muscular failure, will not provide much in the way of growth stimulation; because it is not heavy enough to force the muscles to work inside their existing levels of strength reserve.

Thus, with static exercise, a man can repeatedly work to the point of muscular failure – while producing little or nothing in the way of worthwhile results.

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But this does not mean that the theory behind such static exercise is totally worthless; on the contrary, some aspects of this type of exercise are worthy of great consideration, and should be included in any sort of training program. Maximum efforts should be made against an unmoving resistance – in every set of almost every exercise; but only after the maximum possible number of full movements have been performed, when the muscles are so exhausted from the immediately preceding repetitions that they are momentarily incapable of moving the resistance – in spite of a one-hundred percent (100%) effort.

Then – and only then – should such maximum efforts be made; and they should be made because – without them – it is literally impossible to induce maximum growth stimulation.

It is simply impossible to build muscular size or strength by performing that which you are already capable of easily doing; you must constantly attempt the momentarily impossible, and such attempts should involve maximum possible efforts – but only after the muscles have been properly "warmed-up", and only after they have been worked to the point of momentary exhaustion immediately before the maximum possible effort leading to a failure is attempted.