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Charting Progress

Without becoming involved in almost endless detail, the subject of this chapter is perhaps the most difficult aspect of weight training to clearly explain – and without such a full explanation, some of the points involved may appear to contradict other points established earlier. However, in fact, no such contradiction exists – regardless of possible appearances.

When the actual progress of an individual trainee is carefully charted over a period of a few months, several rather surprising results will become immediately apparent; for example, while strength levels will increase in a series of gentle curves, increases in size of the involved body parts – and thus apparent increases in muscular mass – will result in a stair-step pattern.

A much clearer understanding of these separate – but interrelated – patterns of growth can be gained by a study of actual charts of human growth. And if this is done, it will be noted that strength increases seem to come in an almost straight, but slightly down-curving line – if such increases are viewed over a long period of time; but a closer view will reveal the fact that the line was actually curving back and forth to a slight degree.

And upon closely viewing increases in the size of the involved body parts, it will be immediately apparent that such increases came in sudden spurts followed by plateaus, in stair-step fashion.

And upon carefully comparing these two different factors of growth, on the same scale, it will be seen that strength increases curved upwards – increasing their rate of progress – immediately following an increase in size of the involved body part, and then gradually curved back into a reduced rate of increase.

From all available evidence, the cause/effect relationship involved seems to be perfectly clear; strength increases at a faster rate immediately after an increase in size makes such a strength increase possible – but then reduces its rate of progress as it nears the maximum strength level for a particular size.

Likewise, there seems to be no necessity for a size increase so long as the existing strength level is lower than that which is possible at the existing size.

Thus, in effect, size increases permit strength increases – and strength increases force size increases.

From the above, it might appear that this disproves a previously established point – the relationship between size and strength; but in fact, it is actually proof of the previously established point. I have never stated – nor have I meant to imply – that there was an absolutely rigid relationship between existing size and strength levels; on the contrary, an obvious range of variation is clearly demonstrable. And while this range is normally so slight that it can and should be totally disregarded, and while it is rigidly limited on the "upside" – there is literally no limit to this range on the "downside."

This is to say; once a muscle has attained the maximum possible level of strength for a particular size, it literally cannot increase in strength until and unless an increase in size is produced. However, even a moment of consideration will make it immediately apparent that the strength of a muscle can "decrease" literally to the point of nothing – without the necessity for any decrease in the size of the muscle.

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A sudden and violent sickness can reduce a man's strength almost to the point of zero – with little or no decrease in the size of his muscles; but if his strength is at its maximum level for a particular size, then nothing short of an increase in size can produce an increase in strength. And even then, an increase in size will not "produce" an increase in strength – it will merely make it possible.

In earlier chapters, rather than risking getting bogged down in far too much technical detail, I simply skipped any mention of quite a number of factors that are really of no importance – if they are understood, as they are; but in so doing, I have created a risk of appearing to contradict myself –while in fact, no such contradiction exists.

Additionally, quite a large amount of confusion exists in regard to many of these factors as a direct result of the extremely poor methods of measurement that are almost always employed. Since it is almost literally impossible to measure the actual existing strength level with anything approaching total accuracy, quite a number of people have based their conclusions upon measurements of no slightest significance or even accuracy.

But when accurate measurements are possible – using the methods detailed in an earlier chapter – then a careful comparison of such measurements will produce evidenced upon which significant conclusions can be based.

In a previous chapter, I pointed out the inadvisability of permitting a trainee to direct his attention into the importance of measurements; and that evidence still stands – but it does not follow that trainees should not constantly be aware of their progress insofar as strength is concerned.

On the contrary, such an awareness is almost an absolute requirement for good results from training – since an attempt should be made to improve upon previous performances during every workout.

Secondly, a constant awareness of the actual progress of a trainee is an essential requirement for the person directing that training; without such an awareness on the part of the coach, an individual trainee can – and many trainees will – produce little or nothing in the way of training progress. In most such cases, a failure to progress properly will be a direct result of insufficient intensity of effort. But – regardless of the causative factor – the coach needs to be made aware of such training failure as soon as possible after it occurs. Properly charting the progress of all trainees will provide such an awareness.

While almost any number of possibilities exist for charting purposes, it is usually better to employ a system of charting that will provide the required information in a minimum amount of time and without involving unnecessary detail. In the author's view, such a system should totally disregard measurements except in isolated instances – and should be based entirely upon performances; as the ability increases, the measurements will keep pace.

Because of the general unavailability of accurate strength testing methods, progress should be charted on a basis of performances of sets of a particular number of repetitions – eight, ten, fifteen, twenty, or almost any possible number of repetitions except one repetition.

For most purposes, the ideal number seems to be ten repetitions; but regardless of the number selected for charting purposes, sets involving any other number of repetitions should be disregarded entirely – at least if any degree of accuracy is desired.