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Muscular Potential and Heredity

"Potential" – in this sense, the ability to build muscular size and strength – can only be judged in retrospect and then only with a limited degree of certainty; after all who can say "what might have been?"

Nevertheless, the potential muscular size of the average individual is far beyond existing average muscular size; in effect, almost any healthy man can build muscular size and strength to such a degree that most medical doctors would refuse to believe accurate "before" and "after" measurements and photographs. And at least a fair percentage of apparently average men can build literally huge muscular size.

In earlier chapters I have mentioned the relationship between muscular size and strength, and have noted that producing maximum-possible degrees of strength will also produce maximum-possible muscular size; but since this is a point of very great importance – and a point that is generally misunderstood by almost everybody in the weight-training world – I will go into a bit more detail in an effort to make this relationship perfectly clear.

Most weight-trainees are convinced that muscular size has little or no relationship to strength – and at first glance it might appear that there is quite a lot of evidence to support that belief; for example – (1) some men with 14 inch arms can curl or press more than other men with 16 inch arms – (2) almost all champion weight-lifters lack the muscular size of advanced bodybuilders, yet they are much stronger in spite of their smaller muscular mass – (3) many of the men with really outstanding degrees of muscular size are actually not very strong, certainly not as strong as they look.

Most of the above points can be answered in one short sentence, "... there is no valid basis for comparing the strength of one individual to that of another individual."

Let us examine the points one at a time; first, assuming an equal length of the muscular structures, a 16 inch arm contains approximately twice as much muscular mass as a 14 inch arm – and if everything else is equal, then the larger arm will be capable of producing approximately twice as much power as the smaller one. But it does not follow that the larger arm will be able to "demonstrate" twice as much power – or lift twice as much weight; if the 14 inch arm is favored (it would be a favor in this case) with very short forearms – and the 16 inch arm is burdened with very long forearms – then the weight is being moved a greater distance in a curl by the larger arm, and more power (and thus more muscular size) will be required to move it the greater distance.

And the length of the forearms is not the only such "leverage factor" – additionally, such things as attachment-points and angles-of-insertion are involved; factors which have the effect of increasing or decreasing "measurable strength."

And even if you are comparing a man's 14 inch arm to the same man's arm at a later date – after it has increased to 16 inches – the leverage factors will still not be exactly the same; as the size of an arm increases, the angles-of-insertion change – always unfavorable. This happens because a muscle can add significant size only by becoming thicker – and because muscles produce power in a basically reciprocal fashion, exerting a pull in approximately straight lines; obviously then, as part of the mass of a muscle moves "out" due to an increase in the thickness of the muscle, the displaced portion of the muscle will no longer be pulling in the previous direction-of-pull – and as the direction-of-pull changes, the efficiency ratio is reduced, particularly in the strongest ranges of movement.

The Arthur Jones Collection

An increase in measurable strength will be produced in some cases – in some positions; but in general, displacement of the angle-of-pull resulting from an increase in muscular mass will produce a decrease in efficiency.

In effect, if a man increased his arm from 14 inches to 16 inches, then his curling ability would not increase in exact proportion to his gain in muscular size; even though the muscles were twice as large as they were previously, and could produce twice as much power, the curling strength would not be doubled as well – because some of the increased power would be wasted as a result of changed angles-of-pull.

Two, champion weight lifters may well be champions primarily because they have far better than average leverage factors helping them – and if so, they may not need much in the way of actual muscular bulk to lift heavy weights; and, of course, weight-lifting is an art requiring far more than strength – form, style, and other factors are equally important.

Also, the muscular mass itself may be very efficient in such individuals –since such efficiency is an individual thing.

Three, a bodybuilder with literally huge muscular size may also be primarily a result of his leverage factors – bad leverage factors; in such a case, an actually great mass of muscle would be required to lift only an average amount of weight.

Once this is understood, then the implications become obvious – a bodybuilder seeking to increase his muscular size should strive to increase strength, knowing that increases in strength will produce at least proportionate increases in muscular size; and weight-lifters should strive to increase the size of the muscular structures involved in their sport, realizing that their strength will be increased as a result, if perhaps not in exact proportion. Such things as the length of bones, attachment points, etc. are determined by heredity; and by and large they cannot be altered –at least not to your advantage (my left triceps worked much better before it was ripped loose from the original attachment point).

It is at least possible that such individual differences have resulted in the gradual "drifting apart" of weight-lifters and bodybuilders – since it is only natural for a man with huge muscular size to resent the fact that a much smaller man can outperform him in strength demonstrations; and equally natural for the smaller man to look upon the bodybuilder's muscles as "useless."

But in so doing, by drawing apart, both factions have suffered – to at least a large degree because the training styles have gradually become almost two distinct practices; while neither the bodybuilders nor the weight-lifters realized that both should be training in an almost identical fashion – apart from training for style and form.

Some people can rather easily build great muscular size – some others can build great strength – and a few can build remarkable degrees of both; but the style of training should be almost identical in all cases, regardless of individual differences in potential, and no matter what the goals may be.

You cannot change your potential – but is probably greater than you think. And it might be of some interest to a few people to learn that recent evidence indicates that the best age (on the average) for making muscular size-strength gains is thirty-two.

Perhaps it isn't "too late" after all.