

Nautilus & Athletic Journal Articles

The Relationship of Strength to Functional Ability in Sports

Functional ability in sports is a product of five factors... but only one of these factors is actually productive. The other four factors are certainly important, but they are not productive... instead, they are supportive in nature.

Skill is simply the ability to make effective use of the force produced by the muscles. But no amount of skill will produce movement... only the muscles produce movement.

Favorable bodily proportions provide an athlete with an enormous advantage. But this advantage is of no value without the strength of his muscles.

Cardiovascular ability is also important... but only in the sense that it permits work; no amount of cardiovascular ability will perform work. Only the muscles perform work.

Neurological efficiency is another factor of great importance... but, again, only in the sense that it provides an athlete's muscles with an advantage and permits him to use a higher than average percentage of whatever muscles he has. But, in the end, it is the muscles that produce movement... the muscles that perform work... the muscles that provide energy... and, to a great degree, the muscles that protect an athlete from injury.

Yet... in the face of the previously mentioned simple facts, here we are in the last quarter of the twentieth century, and most people still believe the same old myths that existed centuries ago. In plain English, many coaches and many thousands of athletes are literally afraid of muscles... still fearing that building their muscles will somehow hurt their ability, slow them down, reduce their flexibility, or otherwise limit their performance.

No amount of muscle will help an athlete much if he lacks the skill to use it effectively... but no amount of muscle will hurt his skill either; instead, increasing his strength will always improve his functional ability, in any sport.

An athlete's muscles can be as strong as those of an elephant... but if his bodily proportions are bad for a particular sport, then he still will not be able to perform well. But he will, at least, perform better than he would have with weaker muscles.

A sprinter can have muscles like those of Hercules and still fall flat on his face after a 100-yard dash if his cardiovascular condition is bad... but he should not make the common mistake of assuming that he can have only one or the other, either great strength or good cardiovascular condition but not both. In fact, it is easily possible (and highly desirable) to have both.

One of the most outstanding muscular freaks that I ever saw was actually a fairly weak man... stronger than an average man, but certainly not as strong as one might guess from the size of his muscles. But his lack of strength is in no way related to the size of his muscles; as it happens, this particular individual is very low on the scale of neurological ability; he lacks the ability to utilize a large part of his actual muscular mass... a genetic problem that is not subject to improvement.

But even this man, weak as he is, is still far more capable than he would have been with smaller, weaker muscles.

Given this man's muscular size, plus favorable bodily proportions, great skill, outstanding neurological ability, and good cardiovascular condition... the result would be almost literally a superman. One day we will see such a specimen... and then, when the actual possibilities become evident to a large number of people, we will soon thereafter see quite a lot of such men.

If Dick Butkus had ever bothered to train his muscles (and he never did until it was too late to do him much good)... we would be looking at such a superman right now. Dick was probably the best in the world at his particular specialty... but not as a result of great strength; instead, he was a naturally strong man who also happened to have every possible advantage for a particular activity... great skill, ideal bodily proportions for a specific function, at least adequate

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cardiovascular ability for the same function, and outstanding neurological efficiency. Given these advantages he was the best in the world with absolutely nothing in the way of strength training. This might lead many people to believe that he did not need strength training, that it might even have hurt him in some fashion... when, in fact, Dick had far more to gain from such training than most have. He now realizes this after the fact, too late to be of any help.

This is certainly not meant to be an indictment of Dick Butkus, he was merely chosen as an example... any one of several hundred other such examples could have been used; and most people would recognize the names of all of them. As it happens, Dick is a close personal friend of mine and a business associate; but that does not change the fact that he utterly failed to realize the value of strength training during most of the nineteen years that he played football, from junior high school through his years with the pros. In this regards he was typical; like most outstanding athletes, he was a natural... a man who appeared to have everything. But who, in fact, was overlooking one of great importance; a factor that could have made him even better than he was – strength training... a factor that would have markedly improved his functional ability, while reducing chances of injury.

Dick, like thousands of other athletes, failed to realize the importance of strength training because nobody ever bothered to tell him about it... while a number of people did tell him all of the old myths, false beliefs, and outright lies that have helped to keep sports away from the actually great value of strength training until very recently.

But now all of that has changed, right? Now everybody understands the value of strength training, right? Wrong... dead wrong. Relatively few people have finally permitted themselves to be convinced, although hesitantly and even fearfully, that there might be some value to strength training in a few cases in some sports. While the vast majority of people connected with sports in any capacity remain almost literally scared to death of strength training, they are still convinced that increasing the strength of an athlete will somehow hurt his performance.

In the meantime, it has been clearly and repeatedly demonstrated hundreds of times, with no single exception I ever heard of and no exception I would believe unless I saw it myself, that proper strength training will markedly improve the performance of any athlete in any sport.

And the great athletes are the ones who have the most to gain from strength training... and are the most unlikely to use it; having been falsely convinced that it will hurt them.

Proper strength training may improve the functional ability of a clod by as much as 50 percent... but he will still be a clod, and will still be run over by untrained athletes who have all of the natural advantages that the clod lacks. But even a 2 percent improvement in the functional ability of a natural athlete may well be the difference between a good athlete and a world champion.

And just how much improvement can be produced by proper strength training? An impossible question, obviously. It depends upon the particular activity involved, the individual involved, and many other factors. But... in all cases, in all sports, there would be a measurable degree of improvement; to a level of performance that would never have been reached by that individual without proper strength training.

And what degree of protection against injury will be provided by proper strength training? Another impossible question, since too many factors are again involved. But it should be obvious that a strong limb is far less likely to be injured than a weak one is, and it is well established that strength training increases not only the size and strength of the muscles, but the connective tissues and even the bones.

One well-known sports doctor plainly states that 50 percent of all sports-connected injuries could be prevented by proper strength training; which is his opinion, an opinion that I can neither confirm nor deny... but it is certainly obvious that at least some injuries would be prevented, and since there were approximately 300,000 sports injuries last year that required surgical attention, then a reduction of even 10 percent would be an enormous step in the right direction.

The proper tool for that giant step is in existence right now, and is being used by thousands of people... while being ignored by millions of other people. Strength training is the tool. Use it. An athlete has everything to gain, and nothing to lose except problems, and while it certainly will not solve all of his problems, would it not be wise for him to settle for a solution to some of his problems?