My First Half-Century in the Iron Game

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About a hundred miles from where I live, in Ocala, Florida, NASA has its launch facilities for the Space Shuttles on Cape Canaveral, and on a clear day (or night) we can see the spaceships as they start their climb towards Earth orbit. The most recent launch of a shuttle, which was intended to visit a Russian Space Station, was delayed for several days by bad weather; but there have been other delays caused by things that might be hard to believe. One recent delay was caused by damage done to the shuttle by Woodpeckers, birds that pecked a lot of holes in the covering that is designed to protect the shuttle from the heat produced by air friction when the craft returns to Earth from orbit.

And just why in the hell, you might ask, would Woodpeckers want to peck holes in the covering of a spacecraft? But that is a question that nobody can answer; and if you can provide a solution to that problem I am sure NASA would be more than glad to reward you.

Why, for that matter, do Woodpeckers peck tens of millions of holes in telephone and power poles every year? Provide a solution to that annual multi-million-dollar problem and your fortune is made.

And while on the subject of Woodpeckers, and if you are interested in hearing more lies from your friends, ask them if they ever heard a Woodpecker pecking wood; and if they say "yes" then you have just heard another lie. Nobody ever heard a Woodpecker pecking wood, and they never will unless Woodpeckers change their ways; what you hear is a sonic boom created by the fact that a Woodpecker's head is moving at a speed of about 1,300 miles per hour when its beak hits its target, about twice the speed of sound. Likewise, when you "crack" a whip, the sound you hear is a sonic boom created when the tufts on the end of the whip exceed the speed of sound.

So what? Well, in fact, the speed of a Woodpecker's head raises some very interesting questions; because, when the beak moving at that speed comes to an almost instantaneous stop as it hits the target, it creates an impact force of about 1,000 Gs, meaning that a force of one ounce would then produce an impact force of 1,000 ounces, or more than 62 pounds. Given that force of impact, you might expect the bird's brain to be liquefied and sprayed out of its nostrils like fluid coming out of a Flit gun. But that does not happen.

Why not? Because, located inside its skull and designed to protect the bird's brain from high levels of impact force, a Woodpecker has what is probably the best shock absorber in existence; without which, the first peck would be the last.

Given that people are also exposed to impact forces, nature has provided us with shock absorbers, without which your first run would be your last. Standing still, with your weight equally divided on both legs, and if you weigh 200 pounds, then the force on each leg is 100 pounds; but jogging in place at a relatively slow pace increases the force on each leg by a factor of about six; because even such slow jogging produces about 3 Gs of impact force, bringing your momentary weight up to 600 pounds, all of which is imposed upon one leg. Stand still on your bathroom scale and note your weight, and then start jogging in place on the scale while watching the needle that indicates the weight, and the result may surprise you. While you are in the air the weight will be zero, but as each foot comes down it will jump up to about 600 pounds.

If people had shock absorbers that were as good as those located in the skull of a Woodpecker, then it would be very difficult to hurt yourself; you could probably jump out of an airplane with no parachute and then get up and walk away with no injury. But, unfortunately, that is not the case; to that extent, at least, a Woodpecker is better designed than we are.

I do not know what the current figures are, but about twenty years ago an average of about 63,000 football players injured their knees every year to an extent that surgery was required; almost all of which injuries were results of impact forces produced by sudden movements or sudden stops. Impact forces result from a sudden change in speed of movement, and so a sudden start can be just as bad as a sudden stop.

Football and competitive weightlifting require both sudden starts and sudden stops, with very high levels of resulting impact forces, and frequent injuries are an inevitable result. But such sudden changes in speed of movement have no place in proper exercise, serve no worthwhile purpose and produce only one result: injuries.

Getting out of a damaged airplane in flight became a real problem with the introduction of jet fighters and the solution to that problem was provided by so-called "ejection seats" using an explosive charge that would blow the pilot out of the airplane so fast that he would not be hit by the tail of the airplane; but that solution to one problem created another problem, because a high percentage of pilots who "punched out" of a jet in flight suffered injuries from the high level of impact forces that were required. So if you fly jet fighters, play football, or engage in competitive weightlifting, or a long list of other activities, you are at risk of serious injury from impact forces; but properly-performed exercise, even with very heavy weights, holds no such risk, will in fact go a long way in the direction of improving your structural strength by increasing the cross-section of your bones as well as your muscles, thereby making them capable of withstanding a higher level of force with no resulting injury.

Yet, in practice, we have a long list of self-proclaimed "experts" telling people to use things like power cleans and jump squats, neither of which have any benefit in the way of increasing your functional strength but do impose very high levels of dangerous impact forces on your body to no good purpose. So-called "Plyometrics" is another very dangerous activity that is being widely touted by people who are simply stupid. When somebody suggests moving suddenly during exercise, smile and walk away, because you are talking to a fool. But remember, it is not the speed of movement that is dangerous, it is a sudden change in speed of movement.

As you start to lift a weight you should increase the force of muscular contraction gradually and fairly slowly, and when the force of muscular contraction is high enough to start upwards movement of the weight you should produce only enough force to continue the upwards movement at a fairly slow speed. Yes, you may be able to raise more weight by jerking, but doing so does not "lift" a weight, instead you are "throwing" the weight, and thereby producing potentially dangerous levels of impact force. Fast movement during exercise does not produce fast muscles, it produces only injuries. If in doubt about the proper speed of movement, try moving slower; the results will be far better and you will be a hell of a lot less likely to hurt yourself.

Lifting 50 pounds of weight properly, and safely, will do far more for increasing your strength and muscular size than "throwing" 400 pounds of weight. And just how much weight can you lift once? Who cares? Trying to find out may result in an injury that could easily have been avoided. Concern yourself instead with how much weight you can lift properly for several repetitions performed at a relatively slow speed.

In several previous chapters I have mentioned muscular friction and have attempted to describe its effects; but if you are seeking more information on that subject then don't bother reading the scientific literature, because, in general, the scientists are not even aware of muscular friction, and damned sure do not understand it in spite of the fact that it is actually quite simple. Having read hundreds of supposedly scientific books and tens of thousands of articles from similar sources, I have come across only one mention of friction in muscles. In a chapter devoted to "Physiology of Muscular Contraction," in a book titled "Human Design, molecular, cellular, and systemic physiology," by William S. Beck, the author said, on page 717, "Maximum efficiency is realized only when the muscle contracts at moderate speed." Then, on page 718, he said "If contraction is very rapid, too much energy is wasted in overcoming friction."

If anybody out there has ever run across any other mention of muscular friction in the scientific literature then I would certainly appreciate it if you would bring it to my attention.

In addition to all of the research that I have funded out of my own pocket, I have spent more than $6,000,000.00 of my own money in order to establish two schools that teach medical professionals the proper utilization of MedX medical machines in clinical applications for the rehabilitation of lumbar-spinal pathology, cervical-spinal pathology and knee pathology; schools that are operated by the medical school in Gainesville, Florida, and San Diego, California. The courses provided to medical professionals by these two schools are operated by the two medical schools mentioned above, with no input from me in regard to just what is taught or how it is presented. Having the right tool for any job is not enough, you must also know how to use that tool properly; having provided the right tools, I have left it up to the medical schools to instruct people in regard to proper utilization. No other company that I ever heard of has made a similar investment.