# Exercise, 1983... the Possible and the Impossible - Part 3 

How much exercise is enough? I don't know. Nobody else knows either. They have their opinions, and I have mine. But of perhaps greatest importance than a difference of opinions is a difference of another sort, a difference in attitude. I have very little confidence in my opinions. I don't know the answers... my opinions are just that, opinions; based upon what I hope is a rational appraisal of my own experience. Which should be the attitude of everybody... but seldom is.

There are a few facts that are simply beyond dispute, even in the case of a highly controversial subject such as exercise... but you will never separate the facts from the fables by consulting the experts.
It is a fact that exercise can stimulate physical changes of great value. But it is also a fact that exercise can be dangerous, or counterproductive, or both. And it is a fact that the stated opinions of the present crop of experts in the field of exercise are so mutually contradictory that any time devoted to a review of the published literature is a waste of time at best... giving such literature the benefit of the doubt. Which benefit it does not deserve.

Paraphrasing something that a friend of mine said recently... "If you have a problem, just take it to an expert; whereupon, he will provide you with a solution that will make the problem look like a golden opportunity."
Certainly there are exceptions to that rule; but they are just that, exceptions... not the rule. Attempting to separate the facts from the fables in the field of exercise has taken a rather large part of my time and attention for more than forty years, and I am still trying.

Along the way, I have managed to produce benefits for myself and for at least a few other people; but I am now convinced that the same benefits could have been produced a lot faster... and that at least some of the related problems could have been avoided.

Now, in an attempt to determine the answers to several important but highly controversial questions in the field of exercise, I have started a research project that will be subject to reasonable dispute. Win, lose or draw, the results will be there for anybody to see. Literally to see... because the entire project is being videotaped.

One of the problems that we are attempting to solve is related to the question that I stated at the start... "how much exercise is enough?" which raises other questions. Such as... "enough for what?"

About thirty years ago, around the time that long workouts were first coming into style, a man whose name escapes my memory wrote something of great value; he said, or words to this effect, "Instead of trying to determine how much exercise we can tolerate, perhaps we should be trying to determine how little exercise we actually require."

Personally, I first became aware of the advantages of shorter workouts about twenty years ago; prior to that awakening I produced what most people considered to be very good results... now I never train more than two hours a week, and usually less than one hour a week, while producing even better results. At the moment I am trying to determine the minimum amount of exercise that is actually required... since, obviously, any exercise in excess of the required minimum amount is wasted effort, at best.

Approximately eight weeks ago, I started a long range research project in an attempt to answer that question... using three well known bodybuilders and my wife, Terri. In addition to my wife, Boyer Coe, Mike Mentzer and Ray Mentzer will be the first four subjects in a project that will be continued for a period of several years... a research project with a very important difference; the entire project is being videotaped, workout by workout, in great detail... so that, later, it will be possible to clearly show exactly what was done.

Boyer has already completed eight weeks of training on this project, and Terri has finished seven weeks of training... Mike and Ray will start their training within the next few days; later, other subjects will be added to the probject.

Boyer and Terri are training three times weekly, on Monday, Wednesday and Friday. Using the same schedule of exercises; the only difference being the amount of resistance used, which is maximal in both cases... the maximum amount
of resistance they can use while performing the required number of repetitions in good form. Working to a point of momentary muscular failure in all exercises; stopping only when it becomes impossible to perform another repetition.
During their Monday and Friday workouts, they perform only one set of eight different exercises; in the following order... ONE, forty repetitions in a Duo Squat Machine... TWO, ten repetitions on a Pullover Machine... THREE, ten repetitions on an Upright-press Machine... FOUR, ten repetitions of behind-neck pulldowns on a Torso-Arm machine... FIVE, fifteen repetitions on an Abdominal Machine... SIX, ten repetitions on a Multi-Triceps Machine... SEVEN, ten repetitions on a Multi-Biceps Machine... EIGHT, fifteen repetitions on a Low Back Machine.

A total of only eight sets, performing approximately one-hundred and twenty repetitions in the entire workout. A training time of approximately sixteen minutes during each of the two similar workouts; sixteen minutes on Monday, and another sixteen minutes on Friday. Thus, these two workouts total about thirty-two weekly minutes of training time.

Then, on Wednesday, they perform their long workout of the week... a workout consisting of twelve exercises and requiring a total training time of approximately twenty-four minutes. Thus, the weekly total of training time is less than one hour.

The Wednesday workouts are totally different from the Monday and Friday workouts, involving none of the same exercises but working the same muscles in a different manner; the first exercise on Wednesday is Calf Raises performed on a Multi-Exercise Machine, for fifteen repetitions... followed by, TWO, ten repetitions on a Leg Curl Machine... FOUR, ten repetitions of regular-grip chins on a Multi-Exercise Machine... FIVE, ten repetitions on a Decline-Press Machine... SIX, ten repetitions on a Rowing Machine... SEVEN, ten repetitions on a Decline-Fly Machine... EIGHT, ten repetitions on a 70 Degree Shoulder and Chest machine... NINE, ten repetitions on a 10 Degree Chest Machine... ELEVEN, fifteen repetitions on a Rotary Torso Machine; fifteen repetitions in each direction... TWELVE, fifteen shrugs on a Neck and Shoulder Machine.


Arthur Jones instructing Boyer Coe

Twelve exercises, approximately one-hundred and thirtyfive repetitions, a total training time of about twentyfour minutes.

In all exercises, the listed number of repetitions is the "guide number" of repetitions. When it becomes impossible to perform that number of repetitions in good form, then the amount of resistance is increased; but in practice, each exercise is continued to a point of momentary muscular failure, stopping only when it is impossible to continue. A total of fifteen or more repetitions may be performed even when the guide number calls for only ten repetitions; but only the repetitions that are performed in perfect form are counted for recording purposes... additional, partial repetitions are performed but are not counted.

Boyer and Terri will both continue to train on this exact program as long as they continue to produce a rapid rate of progress... and for about four weeks afterwards. So long as their strength is continuing to increase rapidly, then there is no reason to change the program; but eventually they will reach a point where their strength is no longer increasing rapidly... a point that can only be recognized after the fact. Thus, if they fail to make significant increases in strength for a period of four weeks, then it will be obvious that a change in their program is required for additional progress.

That point can never be determined in advance, but will be obvious in retrospect.

In Terri's case, we do not really know what her potential is, since she has never trained for a very long period of time on a regular basis; in the past her training has been of an on-again, off-again nature, primarily because we have spent so much time traveling in connection with business during the last three years. Thus, this will be our first opportunity to train her for a long enough period of time to actually determine her true potential.

But in Boyer's case we have an entirely different situation; since he has been training steadily for a period of more than twenty years... and we thus have a much better idea of his actual potential.

As a result of his many years of steady training, we have a very good picture of Boyer's potential... we know how heavy he has been in solid, muscular condition... we know how strong he has been... we know his previous measurements... and we have literally thousands of pictures that clearly show what he has looked like over a period of about twenty years. So, we have a subject of known potential.

And we also know what type of training he used in the past, and how long he trained each week; thus, we have a valid basis for comparison.

In the past, Boyer has always trained much more than one hour per week; although he has not trained nearly as much in recent years as he did at the time he started training. So... if we can return Boyer to his best previous level of muscular size and strength, while training him less than one hour per week, then that should be enough to clearly establish the point that long workouts are not required.

And... if we can produce a level of muscular size and strength that Boyer has never been able to reach in the past, while training him less than one hour per week, that should really settle a few arguments. Boyer is now thirty-six years old, and he may have reached his limit of genetic potential in the past, so it is impossible to even speculate on this latter possibility in a reasonable manner; but it certainly would be interesting if he did attain a new high in size and strength while training so briefly.

During his first eight weeks of training, following a total lack of exercise for approximately three months, Boyer has greatly increased his strength while maintaining his bodyweight at almost exactly the same level; which is clear proof that he has greatly increased his muscular mass while reducing his level of excess fatty tissue at about the same rate... he is much stronger, but no heavier, and thus far leaner, more muscular. Until he reaches what we consider to be the proper level of muscularity, he will continue on a very low-calorie diet, and his bodyweight should not change much if any during this period; but when he has removed all but an essential level of fatty tissue, his diet will be increased and his bodyweight will then begin to increase slowly.

Terri is also maintaining her bodyweight at about the same level, while rapidly increasing her strength... thus, she is also becoming leaner.

Mike and Ray Mentzer are already quite large, some people would say huge... particularly Ray, who weighs in excess of 250 pounds at the moment and probably has the largest muscular arms in the world, in excess of 20 inches, accurately measured, "cold". In spite of all the gross overstatements that have been published over the years on the subject of arm measurements, I have personally seen only two people with arms in excess of 20 inches, Sergio Oliva and Ray Mentzer.

So, it should be interesting to find out just what can be done with two subjects of this size also, subjects with far more than the average genetic potential for muscular size and strength... while training them in a very similar, brief fashion.

