

The Murray/Karpovich Correspondence

Following the publication of an earlier version of the preceding article in the *Journal of Strength & Conditioning Research* (Volume 17(2) 2003: 213-220), Jim Murray sent us the following letters related to his famous collaboration with Dr. Karpovich. Because the letters provide unusual insight into the evolution of strength training for athletes, we decided to share these excerpts with our readers.

February 18, 2003

Dear Terry and Jan,

Jim Lorimer sent me a copy of the Karpovich paper that you wrote and I found it fascinating. There are few people who write well and also compile solid information. I'm pleased that you gave Fraysher Ferguson the credit he was due for arranging the meeting at Springfield College.

I can't remember what year it was that I met Dr. Karpovich the last time. I had the unpleasant task of closing a Johnson & Johnson plant at Chicopee. It had been too antiquated to be maintained. While I was there, however, I had the good fortune to attend a Karpovich memorial lecture at Springfield and at that time he was in good health and as humorous as ever. He was an excellent speaker and was able to be very funny as he provided information.

The first time I met the Karpoviches was at Columbia University and he told me to meet him at Josephine Rathbone's apartment in New York. I thought to myself, "How 'bout that old rascal. He has a girlfriend in the city." (Shades of Bob Hoffman!) Later, of course, I learned that Mrs. Karpovich was the renowned physical educator Josephine Rathbone, who published under her maiden name. Later they visited us at Morrisville, and they gave us bread and salt—a Russian custom upon entering a new home.

As you reported, I thought I was doing him a favor by letting him in on a book that I wanted to write. I had written a book, *Weight Lifting and Progressive Resistance Exercise* for A.S. Barnes & Company's "Sports Library" series, which had exceeded all the publisher's expectations, and Prentice Hall was interested in my doing one for them. I had briefly mentioned DeLorme's approach for strengthening the quadriceps and other remedial exercises and had also reported on Karpovich's work on speed of muscular contraction and



Jim Murray, Josephine Rathbone and Peter Karpovich on the front porch of Jim Murray's home in 1968. Photo courtesy Jim Murray

on the incidence of injuries in weightlifting. I had also mentioned such outstanding athletes as Bob Richards, Henry Wittenberg, Walter Barnes, Dick Cleveland, Frank Stranahan, Bob Feller, Ralph Kiner, Parry O'Brien and Jack Kelly, none of whom were "muscle bound."

I had planned to ask John Terpak to co-author the book for Prentice Hall, but the publisher wanted someone who had credentials in physical education. I suggested three possibilities: C. H. McCloy, Dick Ganslen, and Peter Karpovich. Prentice Hall knew of Dr. Karpovich and I contacted him. What a wonderful choice! My blind luck was working for me that time! I was also lucky again to have Dr. Karpovich be compatible. When we met, after a day-long meeting, Dr. Karpovich agreed to work with me.

As you quoted me, "Looking back, I'm as proud of the fact that Dr. Karpovich was willing to work with me as of anything I've done in my seventy years." Now we could update that to seventy-seven years. I was saddened to learn that Dr. Karpovich had committed suicide. I hadn't contacted him since our chance meeting when I was closing Chicopee and I hadn't known that he had been in poor health. The last time that I met him he was fine, vigorous, and continuing to mentor his students.

The roster of old-timers is getting shorter, so many of them turning up in the obituary columns—Vic Boff, George Eiferman, Al Berger, and on and on. The current crop of bodybuilders and weightlifters probably don't know who these Iron Men were.

With best regards,
Jim Murray

Excerpts from The Murray/Karpovich Correspondence

September, 18, 1958

Dear Jim:

I am full of good intentions but the devil sometimes twists them. I was so sure that I could go to the DuPont Laboratory in August or September, but as yet I could not find a single day on which I can leave Springfield. I am writing this letter to indicate that it is not just a matter of forgetfulness on my part.

I sent a letter to Prentice Hall with your suggestion on advertising our book in "Strength and Health." The letter was supposed to go to Mickey Finn but we addressed it to Tom Collins so we had to send a follow up letter. I haven't heard from them as yet. Probably "both of them" are mad.

Since our coaches are back on the campus, I will discuss your suggestions regarding weight training for shot putters and see what will happen. I have sent suggestions to our Track and Field Events coach.

Peter V. Karpovich, M.D.

April 14, 1961

Dear Doctor Karpovich,

Re: Pitman's article on weight training in junior high schools, the boys exercised twice a week for six months. A possible explanation for improved running time would be that the boys were appreciably stronger and therefore could run with less total effort. I'm sure that there is a point of diminishing returns where added strength will not do this, but it seems reasonable to have this result with previously untrained (any kind of training) subjects. I can't understand, though, why the controls became slower. I also doubt that Pitman had the most effective program, though it did produce results. . .

My meeting with Phil Rasch has opened an interesting correspondence. He sent me his article on endurance training, which is intended for his and Morehouse's book when they revise it. I think the principal of "circuit training" could be developed effectively for various sports, for military training, and for other uses.

He also sent me a copy of Klein's article on the deep squat exercise. I'm glad we included the material on pp. 118 & 119 of *Weight Training* . . . about the possible danger of full knee bends, though I'm still not sure Klein is right. It's one thing to demonstrate a fact that knees exercised with full bends have less stability than unexercised knees and another to show that this instability is harmful.... Football players don't seem to be very good subjects, unless we could find really large numbers who have done a lot of deep squatting exercises and then found that these players had significantly higher incidence of knee injuries than non-squatters. As far as non-football players are concerned, I wonder about the significance of the stretched ligaments and tendons. Are these strong, flexible legs any more likely to be injured than less strong legs that are unaccustomed to full flexion of the joint? What happens to an unstretched tendon when it receives the trauma that would sprain a stretched one? Might it not stretch too, or perhaps even tear? Is there any difference between the flexibility of knees and the flexibility of spines or other joints as acquired by acrobats? Is this increased range of motion dangerous too? I guess I'll write to Klein and see if he has considered these things. In the meantime, I think he's right that we can strengthen legs without fully flexing the knees, and the use of a "stopper" as described in *Weight Training* ... is a good way to do it.

Jim Murray

Undated**Dear Doctor Karpovich,**

I know John Ziegler well; you will remember that I obtained the data from him that you included in our book. In fact, I was one of the subjects included in his data. In addition to the test of effects on blood pressure, Doctor Ziegler also thought testosterone injections would increase lifters' strength, and he tested this theory on a number of the [York] men—but not on me! (Maybe some day I'll be interested in goat glands, but not yet.) He is a nice fellow, a pleasant companion, an interesting conversationalist . . . but I think it is very important to him to be associated with Hoffman so that he can go on trips with the weightlifters as team physician. I am enclosing a copy of "the most important article" Bob Hoffman ever wrote, which reveals all that is worth knowing—short of spending \$5.00 for the real, inside information about isometric and isotonic exercises. I'm also enclosing an advertisement which is self-explanatory.

Now, I am not closing my mind to the possibilities of isometric exercises, but I am looking for something that I can't find "holes" in without half trying, and something about practical weight training that hasn't been known and practiced for years. If Ziegler can assure you that the "isometric" exercises are really something different from short range partial lifting simulations with overload, and that they were practiced instead of—not in addition to—other weight lifting exercise, I will be impressed. But I will want to test results myself with some of the men who lift at our club. Ziegler is talking about a couple of men "tested" under uncontrolled conditions. I would accept empiric results myself, but would have to be convinced the results were due to something specific and that they might not have been produced anyway, by hard standard training. We can't rule out the effect of suggestion in these weight lifters, either.

For years, lifters have been using very short range partial movements as part of their training, employing weights far heavier than they could lift in the full movement. This is valuable in making progress, but I have never known of anyone using this kind of routine exclusively. The kind of thing I mean is to take a weight from shoulder high stands that is 50-100 lbs. more than the man can press, and then try to press it, making a very slight movement against overload. Also, suspending weights at a height near arms' length overhead and then

pushing them up an inch or so. There have been many variations on these exercises and others, which seem to be helpful. *[Ed Note: At the time this letter was written, only a few people on the "inside" knew that the primary reason for the dramatic increase in the strength and muscular development of Bill March, Tony Garcy and Louis Riecke was their use of the anabolic steroid methandrostenolone (Dianabol) given to them, with Bob Hoffman's knowledge, by Dr. John Ziegler.]*

I hope we will be able to get together again in the not too distant future, since it is so hard to debate by letter. In the meantime, I must try to devise isometric exercises for the men at my gym to pacify them and save them the money the more gullible ones will otherwise spend on the products of Hoffman's super selling genius. I believe I have finally convinced them they will get as much benefit from steaks as from his overpriced soybeans and seaweed but this new thing has them very excited.

Jim Murray**October 30, 1961****Dear Doctor Karpovich**

I guess you saw the issue of *Sports Illustrated* dealing with the "new" isometric exercises, which mentions your comments. The thing that troubles me about these various reports is that the effect of isometric contractions either is not isolated, or the testing itself is questionable. As I wrote you before, I think testing against a dynamometer is itself so much like an isometric contraction that an effect of "practice" may enter into the tests. I hope it won't be too long before we'll have a chance to get together and talk, because I'm afraid I'm not making myself clear as to why I feel the scientific studies have not been definitive.

Of course, the shortcomings of the "physical culture" studies are fairly obvious, the most important being failure to isolate the effect from other training. You will see where various champions are now doing isometric exercises . . . but almost invariably they were champions before they did these particular exercises. The salesmen of "isometric" courses and equipment point to the rather sensational improvement of Louis Reicke, but I think many different factors may have been involved in his improvement. . .

I wonder if there really is any different physiologic effect? The isometric contraction is really a strong

effort against resistance that can't be overcome, as is the partial movement against a great overload. Another similar type of exercise that has been done by lifters is to have assistants help get the weight into the final "lifted" position, and then "un-lift" it, working to impede the "falling" of the weight as it is lowered. . .

Sometime ago I read that the people at the School of Aerospace Medicine Laboratory, Brooks Air Force Base, San Antonio, were concerned about the problem of creating a condition like invalidism in space travelers, because of their necessary immobilization and weightlessness. So, I wrote and suggested that they provide for the space man an exercise bar attached to elastic strands for resistance, in order to maintain muscle tone and aid venous return of blood to the heart despite weightlessness and inactivity. I diagrammed how these strands could be attached to the space man's "couch" so that he could extend his arms against resistance and so he could hold the bar across his shoulders and work his legs against resistance. I also suggested that if lack of room would make these movements impossible, some degree of muscle work could be obtained by doing isometric efforts such as trying to extend the feet through the "floor" while simultaneously trying to push the hands through the "roof." I asked for comments on those suggestions, but haven't heard from them as yet.

Jim Murray

February 19, 1962

Dear Doctor Karpovich:

I am impressed by Rasch's contention that there is a certain minimal strength needed for success in athletics, specific to the sport, beyond which additional strength produces negligible benefits. Of course, this would be much greater for putting the shot than for playing basketball, but this kind of gross judgment doesn't help determine exactly what that minimal level is. What is the minimal strength for a shot putter, in terms of pressing a barbell, that will be sufficient for him to put the shot 60 feet? Gubner, who is fantastically muscular, is beating O'Brien and Long, which you might expect, since he can probably press 50 lbs. more than either of them could do at his best. However, Gubner could also press that much more than Neider, whose outdoor record he has yet to beat. (Barring injury, however, he will surely beat it. Gubner is the N.Y.U. freshman I suggested you test to see how far his arm was extended when he

released the shot. He is likely to make the Olympic team both as a shot putter and heavyweight weightlifter.) The point I guess I am trying to make is that you can attain this minimal level of strength with barbells, and in the process you have a measuring going on that tells you when it is reached. This seems to me to be an advantage for isotonic weight training over isometric contractions.

One more comment on isometric exercise, before I next have a chance to talk with you: I am amazed at the ready acceptance of this training system by coaches. These same coaches condemned weight training for years, and many still condemn it, because you necessarily move slowly against weight resistance, and because you may "strain yourself trying to lift something heavy." Now, practically overnight, they eagerly embrace a training system that is so "slow" that there is no movement at all, and in which a person "strains" against something so "heavy" that he can't possibly move it at all. One coach, in fact, was quoted in *Sports Illustrated* as saying isometric contractions are the "finest thing for body building and overall coordination we've ever had." This coach claimed he lost 12 lbs and two inches from his waistline with 30 seconds of isometric contractions a day. Inches, maybe, but what was the physiology involved in weight loss via non-moving contractions of 30 seconds a day?

Jim Murray

April 19, 1968

Dear Doctor Karpovich:

Jane and I enjoyed visiting with you and Mrs. Karpovich yesterday, although the visit was all too brief. After you left I realized you had asked me a question I had not really answered—about Dr. John Ziegler . . .

But I have some doubts about his capabilities because he once undertook to inject testosterone into weightlifters in an attempt to make them stronger. This, in itself, might not be so objectionable, but I did not feel that he was controlling these experiments in any way including observing the men to determine whether the treatments might be damaging them physiologically. I notice that he is currently advertising himself (in *Iron Man* magazine) as a scientific innovator who invented isometrics, or something like that.

**Sincerely,
Jim Murray**