Higher Education

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I am writing this in hopes of clarifying supposed experts' roles and positions in the fields of Kinesiology and Exercise Physiology (at least at the University of Ottawa -- which may be relevant at other universities). I am currently a fourth year student who has taken some of the most ridiculous, illogical and costly courses available. I regret choosing this program and this university. Like all of my professors, I will be considered an 'expert' in the aforementioned fields if I choose to complete the required courses. Here are some professor-related examples as to why this should not be.

A doctor of reproductive biology told our anatomy and physiology class that an eccentric contraction is "just like pushing a car up a hill." When I asked to please clarify she sneered. I approached her after class and asked her if she thought she could find a less ambiguous analogy. I suggested that perhaps she could describe this contraction like being pulled out of the branches of a dense tree (upward) and at regular intervals grabbing onto the branches and fighting the pull. The "fight", I explained, could introduce a student to the concept of internal muscular friction, as constantly grabbing and resisting the pull would be analogous to the constant formation-breaking-formation of the cross bridges and the actual rubbing of the tissues together. Well, she laughed.

Apparently this was a much too simplistic view of Huxley's cross-bridge theory and I was told to review the subject. I did. The next class I brought into evidence an older college anatomy textbook. She still did not buy it and thought that her example was much better. I guess I hit a nerve because her example was on the final.

A doctor of philosophy told me that competition does not exist between humans. When I referred to Darwin's notion that species will compete for viable resources and compared this to the fact that many cultures still engage in this struggle, I was told outright to review the Theory of Evolution -- with a sneer, I might add.

The fact that this professor said that I needed to review Darwin's theory, although I gave a clear and viable example, suggests that he was more interested in showing the class how smart he was rather than explaining where I went wrong. I was angry at the time but now feel sorry for this older man. How threatened he must feel -- constantly trying to justify and prove his intellectual prowess.

A doctor of human movement (whatever that is) told our class that you can enhance recovery by using the 'cat stretch', wherein you pretend you are a cat and you stretch in a like manner. When I asked her to define 'recovery', possibly in part due to protein and glycogen supercompensation, she said that these were unimportant since you should 'feel' like you are ready to compete or perform. "Okay," I said, "whatever you say." A well-recognized sports psychologist/professor told our class exactly the same thing. However, subjectively evaluating one's fitness is analogous to Arnold's 'instinctual' training.

I have also had many encounters with colleagues, physiotherapists, graduate students, athletes, and a few NSCA strength coaches. These discussions left me with nothing but a very negative and grim impression of the field of exercise science. The absolute hypocrisy and lack of understanding that is so important in this field simply boggles my mind.

Out of all my experiences the worst would be, by far, our resident training expert -- an exercise physiologist. His lolligagger grad students are not any better, either. These people have consistently spread lies and illogical concepts to young and impressionable students for over eight years. How's that for blind leading the blind? The list of this man's irrationality is quite long, but here's a little taste.

The first day of class he indicated that there is no one best way of doing anything. This comment was prompted by me asking him beforehand what he had read and thought about high-intensity training (HIT). He stated it was nonsense, then proceeded to call me a reductionist in a derogatory manner. "When you start thinking like a scientist", he said, "you will understand." To further discredit himself he then explained to the class that he would be teaching his 'Rx Menu of Training,' which was the 'best' way to train to reach any and all of one's goals.

This man views recovery as recompensation some days and supercompensation on others. It would be nice if he chose one. His explanation and description for the growth mechanism trigger is a specific peptide released from either bursting mitochondria or myocytes from the exercise-induced reactive hyperemia. Yup, you got it, the good old pump. Maybe Arnold has been correct all these years -- yeah, right!

When I stated that overload could be a better explanation for growth and development of tissues (a stress response), he scoffed aloud and told me to review the literature before opening my mouth again. Of course I was sick and tired of being embarrassed in front of my peers by his snickering, gloating, and scoffing, so I challenged his belief system. I replied that I had read the literature and that it was laden with anti-HIT purporters (such as the NSCA), presenting conflicting results in invalid and unreliable studies. Moreover that these people rarely follow the laws of good scientific practice, let alone physics or it's subset, physiology. I was then asked to leave the lecture hall.

And what about overload? Unfortunately, a lot of the current literature does support the peptide/growth theory. "So what," I say. All of the research with which this phenomenon has been investigated has used high volume resistance and aerobic training. And don't forget other problems, like uncontrollable circumstances, poor research designs, and low reliability. As for me being a reductionist... good! Logical thought is the basis of the scientific method and a good scientific mind.

On another occasion I asked this professor if hydration levels can affect glycogen supercompensation, and he simply said no. I believed it was very well known that one could only store one gram of carbohydrate if three grams of water is present. I guess I'm still not thinking like a scientist.

A classmate of mine asked him about training to muscular failure and he spouted off on some tangent. He concluded that failure training is essentially only lactate training. Supposedly, the best way to train with weights is to complete multiple sets of 6-12 repetitions under 10 seconds so your body won't have time to run up the phosphagen meter. If you can't see the sheer lunacy of his recommendations, please reread the last sentence. Can you imagine how fast and dangerous this would be? Even plyometrics would be safer. When I asked him how long to wait before training the same muscle group, he said seventy-two hours!

Doing six repetitions in ten seconds is equivalent to just over 1.6 seconds per rep! This kind of idiotic training, bordering on fraudulent malpractice, is even faster than the NSCA's ballistic training methods. Simply put, there is a tremendous amount of stress (potential and kinetic energy) put on the soft tissues with much of the movement being the result of tissue elasticity (stored energy -- bouncing). So, not only can you hurt yourself from the high forces, but you are literally wasting precious training time by not adequately loading the muscles.

Do keep in mind that I am not a disgruntled student at a university. I have had some great science classes and professors as well. However, there remains some individuals who are quite incompetent, unable to explain or rationally argue basic points of physics and human physiology -- always telling people to 'review the literature.' I have changed my vocation and have applied to medical school. I only hope that that field knows what it is doing.