

Future Questions

When it comes to bettering our practices relating to movement and dysfunction there are still many questions that have yet to be answered. There are areas and ideas we must continue to explore in order to enhance our abilities as coaches and trainers. Good is not enough when better is possible, and at Reignited Fitness we strive to live out this mantra. Here are some of the gray questions interesting us that we do not yet have a clear black and white answer to:

- How does exercise strengthen connective tissues (ligaments, bones, and tendons) so that joint injuries are prevented? More importantly, what is the correct and specific balance of exercise that elicits a response that is healthy for the joints as opposed to “too much,” thereby leading to joint damage. What are the best methods for training connective tissues specifically (controlled articular rotations, resistance training, etc.) and at what specific protocol?
- What is the mechanism for muscle atrophy when skeletal muscles are unloaded? In other words, how long does it take for muscles to decrease in size following a period of no exercise or resistance training? In addition, does this decrease in size result in a loss of strength as well? If so, linearly or exponentially? What muscles atrophy faster than others and to what extent? What mechanisms in the diet can be implemented to preserve such muscle size and strength when no exercise or resistance training is being implemented?
- How does moderate exercise improve immune function, and how does overtraining depress immune function? More importantly, what is the specific balance of exercise to elicit the most positive effect on the immune system, without doing too much and tapping into a depressed immune system?

- What is the mechanism for the good feeling produced after exercise? We know that the hormones secreted are endorphins, but what amount specifically is this hormone produced in relation to the amount of exercise? Does the presence of other individuals increase the number of endorphins? Can certain individuals we have feelings of dismay for decrease the endorphins, even though our training is better at the same time?
- Is muscle injury obligatory for muscle hypertrophy? “When you are pushing the limits of human capacity you are going to feel mechanical pain.” - Max El-Hag. To what extent can we elicit muscle hypertrophy exactly without causing any injury to the body? Just how great can an athlete, or a specific member of the general exercise clientele be concerning their goals, without experiencing injury?

Improvements in human performance are usually based on science. As new techniques in science are found, it is a challenge for us to determine whether and how new techniques can be applied to unanswered questions. Answering these questions will open up a limitless number of opportunities to improve both health and human performance for our clientele. As time passes more and more gray areas will evolve, but this brings about the opportunity for more questions to be answered. At the very least, we know that not moving is the new smoking. It is our job to get the masses moving and create a community of individuals that strive in the realm of wellness!

References

Garrett, W. E., & Kirkendall, D. T. (2000). *Exercise and Sport Science*. Philadelphia: Lippincott Williams & Wilkins.