



HEALTH & FITNESS: SCIENTIFIC RESEARCH FOCUS

By Chad Clark, MSPT, CSCS

This volume of our newsletter will focus on the scientific research behind health and fitness facts. This should provide the fitness enthusiast solid facts about how to train, what to eat, and how to prevent degenerative diseases.

HOW SHOULD I STRENGTH TRAIN?

Training in a systematic and simple way that gradually overloads the body and then provides it with enough time to recover will result in improvements in strength and endurance. There is little to no scientific studies that show that you have to use complex and time consuming protocols to reach your fitness goals.

Weight training studies suggest that neither the number of sets, frequency of training, specific RM, or repetition duration differentially effect strength and endurance. Researchers cite a "common mechanism" that is perhaps responsible for providing an overload to the body that allows it to become stronger and have more endurance. Therefore, as long an overload (increase in resistance, reps, or sets) is introduced into a workout you can get stronger and improve your muscular endurance.

ARE LOW CARBOHYDRATE DIETS SAFE AND EFFECTIVE?

Overall, data supporting low carbohydrate diets are sparse and virtually nonexistent. Popularity of low carbohydrate diets has been high in recent years, but there is no magic within the diet. It appears to help people lose weight by reducing calories consumed by the dieter. This further indicates no one diet has found a way to trick the energy equation:

Calories in equal calories out to maintain

Calories in < calories out to
lose
to gain
Calories in > calories out

RECIPE FOR EFFECTIVE WEIGHT LOSS

Despite the numerous books and magazines on diets no one person or system can circumvent the energy equation above. Authors of one research article stated "The recipe for effective weight loss is a combination of motivation, physical activity, and caloric restriction; maintenance of weight loss is a balance caloric intake and physical activity, with lifelong adherence.

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ONE WAY TO PREVENT CANCER

Maintaining a normal Body Mass Index (BMI) can markedly reduce your chances of developing heart disease, diabetes, and cancer. It also was shown to reduce the chances of dying prematurely from the previously mentioned diseases. If your BMI is higher due to increased muscle mass, you are safe. However, if your BMI is high because of a higher percentage of body fat then you are more likely to increase your risk of heart disease, diabetes, and cancer. There is a chart at Mesa Health & Fitness that can reveal your BMI and body-fat can be tested by any of the personal trainers.

REDUCE YOUR AGE WITH EXERCISE

The loss of some strength, muscle mass, and fitness is inevitable. According to a leading expert on aging and exercise you can reduce your biological age by as much as 20 years with aerobic conditioning and strength training. Exercise training cannot restore already destroyed tissue, but it can protect the individual's body against a number of chronic diseases associated with old age. Exercise can maximize functional ability, increase life expectancy, delay total disability, and improve quality of life. Exercise is a very important component of healthy living.

VITAMINS: GOOD OR BAD FOR YOU?

Focusing on real foods that you eat will most contribute to good health. You should de-emphasize vitamins / supplements in your daily eating plan. The scientific data suggest that taking larger doses than recommended by a qualified health practitioner can in some cases cause harmful effects.

References:

⁴ Calle EE, et al. Overweight, obesity, and mortality from cancer in a prospectively studies cohort of U.S. adults. New England Journal of Medicine. 2003; 348: 1625-1638. Shepard RJ. Aging and exercise. Encyclopedia of Sports Medicine and Sciences. (E.D. Fahey, Editor). Internet Society for Sports Medicine, 1998. Kolata G. Vitamins: More may be too many. Science Times, New York Times. April 29, 2003, p. 1,6.

For any questions or comments please contact:

Chad Clark, MSPT, CSCS :: chad@pt-connections.com :: www.PT-Connections.com