



Welcome to YOUR FIT NEWS!

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"How Often Should I Work Out?" Gabe Rinaldi, FIT General Manager

Many clients ask how often they should workout. Now that we have a new training option at F.I.T. – CrossFit Los Altos, this question has come up a bit more. Adult clients at F.I.T. now have an option of doing personal training, CrossFit training, Barbell Club training, or a combination of these.

When I first started writing this newsletter I included bits and pieces from research studies and discussed things such as hormonal response, 4 different definitions of intensity, neurological fatigue, muscle damage etc. Basically, it was too complicated and the further along I got I realized it left too many questions unanswered. It was a technical article that looked like swiss cheese. So, I trashed that version and now I'm going to keep it simple and share my thoughts and opinions on this topic.

The solution to this question is train at a frequency that optimizes your results and fits into your weekly schedule.

Different goals require different training approaches. If you want to train to be a huge, freaky, muscular bodybuilder, then you should be training differently than someone looking to become as fit as possible. If you want to train to Snatch and Clean and Jerk as much as possible, then you should be training differently than someone looking to be as healthy as possible.

I am going to give some scenarios on weekly training frequency for a variety of goals. With the info below I am going to list 5 different levels for each primary goal. Level 1 is someone who is just beginning a training program and level 5 is the most elite person training for that goal.



Legend:

PT – Personal Training session at F.I.T. – typically full body workout focusing on functional exercises specific to your ability and goals

CF – CrossFit Los Altos - high intensity functional exercise in a random fashion to optimize endurance, stamina, strength, flexibility, power, speed, coordination, agility, balance, and accuracy

BBC – F.I.T. Barbell Club – strength and power training focusing on Olympic weightlifting and variations

Health:

Level 1 – 2 days of PT

Level 2 – 2 days of PT, 1 to 2 days low to moderate intensity cardio

Level 3 – 3 days of PT or CF, 1 to 2 days of moderate intensity cardio

Level 4 – 3 to 5 days of PT or CF, 1 to 2 days of active recovery (low intensity cardio)

Level 5 – 5 to 6 days of PT or CF, rest and active recovery as needed

Fitness:

Level 1 – 3 days of CF or PT, 1 day of moderate intensity cardio

Level 2 – 3 to 4 days of CF or PT, 1 to 2 days of moderate intensity cardio or sports

Level 3 – 3 to 5 days of CF or PT, 1 to 2 days of sports participation

Level 4 – 4 to 5 days of CF or PT, 1 to 3 days of sports participation

Level 5 – 5 to 6 days of CF, 1 to 3 days of sports participation

Strength:

Level 1 – 2 days of PT

Level 2 – 2 to 3 days of PT

Level 3 – 3 days of PT or BBC

Level 4 – 4 to 5 days of PT or BBC

Level 5 – 5 to 6 days of PT or BBC

Olympic Lifting:

Level 1 – 2 days of BBC or PT

Level 2 – 3 days of BBC or PT

Level 3 – 3 to 4 days of BBC or PT

Level 4 – 4 to 5 days of BBC or PT

Level 5 – 5 to 6 days of BBC or PT

Fat Loss:

Level 1 – 3 days of CF or PT, 1 day of moderate intensity cardio

Level 2 – 3 to 4 days of CF or PT, 1 to 2 days of moderate intensity cardio

Level 3 – 3 to 5 days of CF or PT, 1 to 2 days of low to moderate intensity cardio

Level 4 – 4 to 5 days of CF or PT, 1 to 3 days of low to moderate intensity cardio

Level 5 – 5 to 6 days of CF, 1 to 3 days of low to moderate intensity cardio

Muscle Size:

Level 1 – 2 days per week of PT

Level 2 – 3 days per week of PT

Level 3 – 4 days per week of PT or equivalent

Level 4 – 5 days per week of PT or equivalent

Level 5 – 6 days per week of PT or equivalent

There you have it. That's my general prescription for frequency of training for specific goals. You can use this information to guide you, but please talk with the trainer you usually work with for a more specific answer for you.

New Service - Introducing CrossFit Los Altos!

F.I.T. is proud to announce a new training service available in Los Altos. We have affiliated with CrossFit, Inc. of Santa Cruz. CrossFit is a unique training philosophy that has rapidly gained popularity throughout the world in the last few years. Currently there are over 70 CrossFit affiliates in the world and now there is one in Los Altos at F.I.T.



CrossFit is a program designed to elicit as broad an adaptational response as possible. It is not a specialized fitness program, but a deliberate attempt to optimize physical competence in each of ten recognized fitness domains:

Endurance - The ability of body systems to gather, process, and deliver oxygen (cardiovascular/respiratory endurance).

Stamina - The ability of body systems to process, deliver, store, and utilize energy. (capacity to maintain repetitive muscular movements)

Strength - The ability of a muscular unit, or combination of muscular units, to apply force.

Flexibility - the ability to maximize the range of motion at a given joint.

Power - The ability of a muscular unit, or combination of muscular units, to apply maximum force in minimum time.

Speed - The ability to minimize the time cycle of a repeated movement.

Coordination - The ability to combine several distinct movement patterns into a single distinct movement.

Agility - The ability to minimize transition time from one movement pattern to another.

Balance - The ability to control the placement of the body's center of gravity in relation to its support base.

Accuracy - The ability to control movement in a given direction or at a given intensity.

The CrossFit Program was developed to enhance an individual's competency at all physical tasks. CrossFit participants are trained to perform successfully at multiple, diverse, and randomized physical challenges.

Aside from the breadth or totality of fitness the CrossFit Program seeks, our program is distinctive, if not unique, in its focus on maximizing neuroendocrine response, developing power, cross-training with multiple training modalities, and constant training and practice with functional movements.

We work exclusively with compound movements and shorter, high intensity cardiovascular sessions. We've replaced the lateral raise with push-press, the curl with pull-ups, and the leg extension with squats. For every long distance effort, our athletes (we call all clients athletes) will do five or six at short distance. Why? Because compound or functional movements and high intensity or anaerobic cardio is radically more effective at eliciting nearly any desired fitness result.

Neuroendocrine Adaptation

Neuroendocrine adaptation refers to either hormonal or neurological change in the body. Most important adaptations to exercise are in part or completely a result of a hormonal or neurological shift. Earlier we faulted isolation movements as being ineffectual; one of the reasons is that they invoke essentially no neuroendocrine response.

Among the hormonal responses vital to athletic development are substantial increases in testosterone,

insulin-like growth factor, and human growth hormone. Exercising with protocols known to elevate these hormones eerily mimics the hormonal changes sought in exogenous hormonal therapy (steroid use) with none of the deleterious effects. Exercise regimens that induce a high neuroendocrine response produce champions! Increased muscle mass and bone density are just two of many responses to exercises capable of producing a significant neuroendocrine response.

It is impossible to overstate the importance of the neuroendocrine response to exercise protocols. This is why it is one of the four defining themes of the CrossFit Program. Heavy load weight training, short rest between sets, high heart rates, high intensity training, and short rest intervals, though not entirely distinct components, are all associated with a high neuroendocrine response.

Power

Power is defined as the "time rate of doing work." It has often been said that in sport, speed is king. According to CrossFit, "power" is the undisputed king of performance. Jumping, punching, throwing, and sprinting are all measures of power. Increasing your ability to produce power is necessary to elite athleticism. Additionally, power is the definition of intensity, which in turn has been linked to nearly every positive aspect of fitness. Increases in strength, performance, muscle mass, and bone density all arise in proportion to the intensity of exercise. And again, intensity is defined as power. For these reasons, power development is an ever-present aspect of the CrossFit training.

Cross-Training

Cross training is typically defined as participating in multiple sports. At CrossFit, we instead define cross training as exceeding the parameters of the regular demands of your sport or training. The CrossFit Program recognizes functional, metabolic, and modal cross training. That is, we regularly train past the normal motions, metabolic pathways, and modes common to the athlete's sport or exercise regimen.

The CrossFit coaching staff long ago noticed that athletes are weakest at the margins of their exposure for almost every measurable parameter. For instance, if you only cycle between five to seven miles at each training effort, you will test weak at less than five and greater than seven miles. This is true for range of motion, load, rest, intensity, and power, etc. CrossFit training is engineered to expand the margins of exposure to be as broad as function and capacity will allow.

Functional Movements

There are movements that mimic motor recruitment patterns that are found in everyday life. Others are somewhat unique to the gym. Squatting is standing from a seated position; deadlifting is picking any object off the ground. These are both functional movements.

The bulk of isolation movements are non-functional. Natural movement typically involves the movement of multiple joints for every activity. Leg extensions and leg curls, for example, do not have equivalents in nature.

The importance of functional movements is primarily two-fold. First, the functional movements are mechanically sound and therefore safe, and second, they are the movements that elicit a high neuroendocrine response.

CrossFit has managed a stable of elite athletes and dramatically enhanced their performance exclusively with functional movements. The superiority of training with functional movements is clearly apparent with any athlete within weeks of their incorporation.

CrossFit Los Altos Implementation

CrossFit training will be conducted in a group environment. CrossFit groups will be scheduled throughout the week. See the front desk for a copy of the current group schedule. As the groups grow we will eventually add additional group times. To participate in the groups you have 2 options:

Unlimited monthly training in any CrossFit group - \$250 per month

One session drop-in fee - \$30

You are not required to sign-up for the group – simply show up ready to work hard and get great results. Talk to a trainer for more details.

**This information is adapted from original information available on the main CrossFit website: www.crossfit.com
A more specific link is: www.crossfit.com/cf-info/what-crossfit.html

Check out the pdf files entitled:
"WHAT IS FITNESS?" and "CROSSFIT'S FOUNDATIONS"

Thanks to Greg Everett at CrossFit NorCal for providing this adapted article!

www.crossfitnorcal.com

"Mind and Body Connection" - Johnny Nguyen, FIT Exercise Director

1963 Nobel Prize winner and renowned brain researcher Sir John Carew Eccles proposed a theory of philosophical dualism. That is, the mind is a non-physical substance, an invisible entity, separate from the physical world but without violating the principles of energy conservation.

Eccles calls the fundamental neural units of the brain "dendrons", and proposes that the 40 million dendrons in the cerebral cortex region are linked with special mental units, or "psychons", collectively representing the conscious experience. In willed actions, psychons act on dendrons and, for a moment, increase the probability of the firing of selected neurons. This, as suggested by Eccles, is how you consciously make your body move.

The woman who lifted a car with her own hands displayed the willed action of a mother desperate to save her child. Whether this story is fact or urban legend, super-human feats have been documented elsewhere for years, often in circumstances where the mind facilitates physical acts deemed otherwise impossible. Neurons on their own don't always fire to activate muscle fibers; something must activate these neurons, and, according to Eccles, it is the dendrons that trigger them, but they themselves must first be triggered by the mental units, the psychons, or the conscious mind. The invisible mind, then, controls the physical brain. And since the brain generally orchestrates movement of the body, it is then reasonable to say that your mind can be a very powerful determinant of what you can achieve physically.

You might follow the substantial view, which argues that the mind has its base in the brain but is separate and independent of it, or you might subscribe to the functional view, which holds that the mind is entirely dependent on the functions of the brain and can have no existence beyond the brain - nor can it survive the death of the brain. Or you might have your own belief and can debate any detail of the mind as it refers to the human intellect and consciousness, but you can't deny the fact that the mind is tightly intertwined with the body.

According to recent literature, the mind can help make the body healthy or pass it into the hands of disease – the mind can indeed modulate the functions of the immune system. Psychoneuroimmunology and psychoneuroendocrinology are areas of research examining the relationship between the mind, the immune system, the nervous system, and the endocrine system, whereby the brain and body communicate with each other closely in a multidirectional flow of information that consists of



hormones and neurotransmitters. Your mental attitude, then, can determine who you are, how you are, what you do, and how you do it. It can make you great or it can break you.

Attitude, a direct manifest of the mind, can also determine whether you reach your fitness goals or fall short of them. In exercising the general attitude is that the mind is not intimately involved when indeed it should be. We're talking about the illusive mind that transpires into the will power to push for an extra repetition, an extra 10 seconds of intense work, or fighting to save an otherwise missed lift in Olympic weightlifting. Your mind gives birth to the mental drive that pushes your body harder in order to achieve positive changes. Your attitude toward these things is kin to the mind.

And then there is the mind as it relates to training intelligence, such understanding as much as you can about exercising, recognizing appropriate rest periods, and being familiar with various methods of recovery and restoration (nutrition, food-intake timing, sleep, hot baths, massage, meditation, etc.). To attain fitness success, you must study, understand and effectively utilize the literature, advices, hints, and tricks as often as possible. The journey to optimal fitness isn't that of a passive process but of an active one, and perhaps it's even ok to pave this path with a bit of mania. Just as lovers of art, enthusiasts of cars and fans of Star Wars are maniacs, hobbyists, and geeks, so too should fans of fitness be buffs, addicts or fanatics.

Among the mind's many attributes that make us human, perhaps the most amazing of all is its ability to visualize. "You must visualize to actualize," the saying goes. Visualization is perhaps one of the most underestimated features of the mind when it comes to fitness-related endeavor. Sadly, many people adopt a fitness routine only to follow it aimlessly, wandering into the gym and going through the motion, cheating themselves out of the results they otherwise might enjoy had they engaged in visualization.

Visualize your performance. Visualize your ability to work harder. Visualize your body's transformation. The ability to visualize is perhaps the greatest gift to the human species. It has been the impetus to some of the greatest inventions of mankind, those things which improve life and advance the human conditions. This ability to visualize great things for the world is the same mechanism by which you will actualize your fitness success. Without it, you'll continue to shadow-box a faceless goal.

A healthy body is dependent on a healthy mind. Likewise, a

hard-working body is dependent on a hard-working mind. So when you come to the gym, don't forget to bring your workout shoes, but more importantly is remembering to bring a mind that is charged up for a tough workout.

"Why Do We Get Sore?" Scott Kolasinski, FIT Metabolic Science Director

Why do we get sore after exercise? Can stretching or something prevent it?

Delayed-onset muscle soreness (DOMS) is the soreness that we get 24-48 hours following exercise. In the past, it was thought that lactic acid was responsible for DOMS.

However, it has been shown that lactic acid or lactate is not responsible for this and there is more research accumulating that suggests it is actually our own immune system, or more specifically, neutrophils, that are responsible for this.

Neutrophils are the first white blood cell that reacts to an antigen, that is, a virus, bacterium or chemical that stimulates an immune response. These cells are armed with the ability to create several chemicals that could kill viral or bacterial infections, and they do a very good job at it.

Following intense exercise, there is literally damage to the muscle fibers, such that it does not "appear" as normal, healthy muscle. It is not this initial mechanical damage that causes any sort of DOMS. However, these structural changes trigger the inflammatory process – a cascading series of events that results in healing of the muscle. The neutrophils eventually become activated, and they respond to the structural damage in the same way as they would a bacterial or viral infection, multiplying in number in our circulation by a million-fold in 3 – 6 hours post-injury.

Unfortunately, when we perform new movements, whether they are faster, slower, heavier, or longer than what we are used to, the neutrophils become over stimulated. Their stimulation is correlated with the novelty of the movement and its intensity.

As the neutrophils travel throughout our circulation, they find the site of injury and they begin to adhere and infiltrate the muscle cell. Here, they not only release their onslaught of chemicals into the damaged muscle cells for repair, but also the surrounding healthy muscle. In other words, these same chemicals that were supposed to help us during an infection actually cause further damage to the already-injured muscle. This is referred to as secondary



injury. This entire process may take 24 – 48 hours. Slides of exercise-induced muscle injury 24-48 hours appear more injurious after the initial mechanical injury that occurred initially after injury. At the same time, the neutrophil's chemical onslaught causes our nerves to become more sensitive to pain.

Stretching pre-, during or post-exercise will not prevent this process from happening. The best option that we have is taking a non-steroidal anti-inflammatory drug, like ibuprofen, or naproxin BEFORE exercise, but I will not make any guarantees that it will always prevent any soreness.

Why don't I get sore every time I exercise?
This refers to the "repeated bout effect" of exercise. Following one set of exercise involving muscle-lengthening contractions (such as lowering a bar to the chest during the bench press – the chest muscles are lengthening), a muscle will not be as sore during a second set of the same intensity.

Scientists have not determined the exact mechanism of why this happens. There are several theories out there. However, when referring to neutrophils, there is a significant decrease in circulating neutrophils and neutrophil infiltration into the muscle cell. For some reasons, neutrophils do not become as stimulated as before, so there is not any secondary muscle injury and improved muscle recovery.

This suggests that one of the best ways to get rid of muscle soreness is to continue to exercise the sore muscles in the same movement as the initial exercise pattern, but not at a higher intensity.

Therefore, continue exercising. Do not let the initial pain prevent you from continuing to pursue your fitness goals. In due time, you will be able to handle a series of random movements of various intensities continuously, transforming yourself into a well-rounded athlete.

FIT Client of the Month! Meredith Rothrock

Age: 47

FIT Member since: October 2003

Goal: To get stronger and leaner

Results: Meredith has lost 4% body fat and she has continued to increase her strength



Likes: Working out. Meredith currently works out 5 days/week at FIT.

Dislikes: Chin ups.

PR 500 meter row: TBD

PR Chin-ups: 10 Jumping chin-ups

Keys to success: My coaches, Jimmy and Manny

I really enjoy coming to FIT. I love the way the trainers interact with each other and their clients. There is a great deal of camaraderie. The trainers are extremely well educated and continue to develop their knowledge. It's just an all around great place to get in shape.

Meet FIT Owner, Tracey Downing

Tracey Downing

Bachelor of Science, Kinesiology
Certified Athletic Trainer
USA Weightlifting
Co-Founder FIT

Graduated from the Kinesiology program at the University of Michigan. She has worked as a Rehab Specialist and Personal Trainer for 7 years. Her experience ranges from physical therapy clinics to professional rugby teams, domestically and abroad. Tracey has worked with a wide variety of clientele including high school & Collegiate athletes, weekend warriors, and professionals in sport.

Since relocating to the Bay Area, from NJ by way of Michigan, NZ, & the UK, Tracey has been very involved in many community and charitable events. Most notably, she is affiliated with the Leukemia Society's "Team In Training" in their marathon, triathlon and Ironman programs. In honor of her contribution to the community, Tracey was nominated and selected as an Olympic Torch Bearer for 2002.

When Tracey is not working or training, she enjoys backpacking, skiing, traveling, and adventure!

To Contact Tracey please email her at:

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For more information regarding FIT:
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