



## FIT Health & Fitness Review!

### In This Issue:

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- Online Personal Training Review from About.com
- "Romanian Dead Lift" by Gabe Rinaldi, FIT General Manager
- "Fatigue" Johnny Nguyen, FIT Exercise Director
- "The Trials of FAT Loss" by Scott Kolasinski MS, FIT Metabolic Director
- FIT Client of the Month! Ron Schmidt
- "Posture & Strength Training- Is There a Crossover?" – Chris Reed MPT, OCS, ATC

### Online Personal Training Review from About.com

by Paige Waehner, [www.about.com](http://www.about.com)

HyperStrike is a website offering customized workouts based on your fitness level, goals, available equipment and schedule. You receive a full schedule of cardio and strength training workouts, access to a full database of exercises as well as fitness articles covering a variety of topics. You also have the ability to blog about your workouts and connect with other HyperStrike users. Overall, this is a great site offering ease of use and simple, effective workouts for all exercisers from beginners to elite athletes.



#### Signing Up and Choosing Your Program

To begin, you choose the type of program you want - HyperStrike Lean, Fitness or Performance. The differences between these programs are the type of workouts and how they're scheduled- for the Lean program, you get 2 strength workouts and 4 cardio workouts. For the Fitness Program you get 3 strength and 2 cardio workouts and for the Performance Program, you get 4 strength and 2 cardio workouts although you can always add or delete workouts to your heart's content.

One interesting aspect is that each program includes six different phases, lasting for 15 workouts, that focus on different areas. For example, in the Lean Program, the strength phases are divided into Lift Off, Stretch & Sculpt, Strengthen, Define & Tone, Build Stamina and Refresh & Renew. Each phase involves different exercises as well as different sets, reps and intensity levels.

After choosing a program, you fill out a standard medical history followed by your available equipment, schedule, fitness level and

workout history. Within minutes a workout schedule is created for you and listed on a calendar along with a chart of your exercises detailing sets, reps and necessary equipment. To view the exercise you can click on the thumbnail picture and be taken to a video demo of the move along with a complete description. The video demos are probably the best part of the site, showing a virtual exerciser (sans skin) moving slowly through the movement. The muscles worked are highlighted during each move so you can see exactly which muscles you're working.

### The Workouts

The workouts include cardio and strength training, always scheduled on different days, and include a warm up, the workout and a flexibility segment. The cardio section is one of the weak areas of HyperStrike, only including running and the elliptical trainer for cardio exercises, although they plan on adding more over time. Currently, there's no way to enter your own workout if you choose a different activity, but there are other cardio moves included for people who have no equipment (such as hops, lateral jumps, etc.).

The strength training workouts include a variety of exercises and are organized in a pattern focusing on tougher, compound moves at the beginning of the workout and moving to lower intensity moves towards the end. You can also access the Exercise Lab at any time to view a database of all the exercises available. There's a huge variety of moves involving everything from machines and free weights to bands, balls and even foam rollers. The database also contains a number of high energy functional moves like lunges with rotations, plyometric jumps and lateral shuffles which are great for athletes or people who want something a little different. The flexibility exercises include standard stretches along with some great, relaxing stretches on the ball.

Each time you view an exercise you'll see:

- A 3-D animated demo
- The number of reps and sets
- A full description of the exercise
- Tips on form
- Equipment needed
- Muscles worked
- Purposes of the exercise

This is especially nice for beginners or people unfamiliar with strength training exercises.

### Managing Your Workouts

Though the workouts are created for you, you do have some control over them. Some of the things you can do include:

Swapping out exercises. To choose a different move, you simply

click on the 'swap' button and you'll get a list of similar exercises

Moving or deleting a workout.

Logging your workouts. To log a workout, you click the 'Report Results' button where you have the option to log the workout as-is or change any reps or sets.

Changing the type of workout. If you'd rather have a different workout, you can change from cardio to strength training or vice versa at any time.

Printing your workout. You can print with pictures and descriptions or just a list of the exercises with reps and sets.

Sending the workout to your mobile device. This works with Windows Media devices and there are full instructions on the site for how to download your workouts.

#### The Bottom Line

HyperStrike is an excellent choice for anyone interested in online workouts and want a site that's straightforward and easy to use. It's also good for any level of fitness, from beginner to advanced as well as for a variety of goals.

Some of the highlights:

- The video demonstrations and descriptions are excellent
- You have some control over the workout with the ability to swap exercises, change your weekly schedule or even change programs
- The workouts are interesting and are customized according to the equipment you have available
- The site is very easy to use and you'll receive your workout schedule in minutes
- The price is very reasonable

The only real drawbacks are, first, the lack of cardio exercises available in the database and, second, the inability to add in your own exercises if they aren't in the database or the workout. It would be nice to have some blank boxes or even a notes section where you could record any other exercises you included in your workout. It would also be nice to be able to schedule cardio and strength workouts on the same day if you're short on time or have a schedule change, but you can always do the workouts together and log them separately.

These minor inconveniences don't take much away from the HyperStrike experience. This is a great choice if you want simple and effective online workouts.

## **"Romanian Dead Lift" by Gabe Rinaldi, FIT General Manager**

A discussion about the RDL and its usefulness for Olympic weightlifters

The Romanian Deadlift (RDL) is one variation out of several to lift or pull the barbell up the body. Other pulls include conventional deadlifts, sumo deadlifts, snatch pulls, clean pulls, straight leg deadlifts, stiff leg deadlifts, and high-pulls to name a few. Due to the seemingly infinite number of ways to pull the barbell and the variety of naming systems employed for this family of exercises, the Romanian Deadlift is often misunderstood or criticized. From my readings and discussions with Jim Schmitz, past USWF president and 1980, 1988, and 1992 Olympic Team Coach, it seems he named the exercise in 1990. The story is that Nicu Vlad, Olympic and World Champion from Romania was in San Francisco training with his coach Dragomir Cioroslan at Jim Schmitz's training center The Sports Palace. After he finished his clean and jerking session where he went up to 220 to 230 kg he performed a weird deadlifting movement. Apparently he did this movement with 250 kg for triples and was seen at a later date doing it with 300 kg for a double. Someone in the crowd asked what the exercise was and they didn't have a name for it. Jim Schmitz suggested calling it the Romanian Deadlift and the name stuck (for some people).

I guess I should mention many people are hesitant to call the exercise a RDL because they had seen or heard of athletes from various different countries performing this movement many decades before it was named in 1990. To add to the confusion some coaches use the term RDL synonymously with straight leg deadlifts or stiff leg deadlifts. It is beyond the scope of this article to go into each variation, but these are all different movements. In this article I will discuss the Romanian Deadlift as it was originally named and as most people call it in the strength and conditioning world. In addition to describing the exercise I will discuss its usefulness to weightlifters (spelled with one word to denote those who train with the competitive lifts; i.e., the Snatch and Clean and Jerk).

### RDL Technique

The starting position of the RDL is the top position. To start a set of RDL's use a clean grip and pulling stance to perform the concentric portion of a conventional deadlift. Once standing with the barbell, the first rep of the RDL can be performed. Bend the knees approximately 15 degrees, retract the scapula (pull the shoulders back and lift the chest up), perform an anterior pelvic tilt (hold a nice concave position with your lower back), take a deep breath in, and brace your abs and back prior to lowering the barbell.





To lower the bar focus on pushing your hips back, maintain the same 15 degrees of knee flexion, maintain the fixed naturally arched spinal alignment you focused on prior to lowering the bar, and keep the bar as close to the body as possible.





Lower the bar as low as you can without touching the floor and without your low back rounding or knees bending more than they were at the top position. If the hips are pushed back and the bar is kept close to the body, then the shoulders should be anterior to the barbell.



When ascending the same spinal alignment must be maintained, the movement occurs from the hips, and the knees do not extend, but rather stay flexed in the same exact position. Exhale as the lift is completed. The arms should remain straight the entire time. The movement should be steady and controlled rather than explosive.

#### Common Mistakes

Common mistakes with the RDL are flexing the knees too much on the descent, allowing the low back to round (posterior pelvic tilt), allowing the shoulders to round forward (protraction of the scapula), fully extending the knees at the top position, not flexing the knees enough during the entire movement, and excessively extending the back at the top (leaning back too much). Despite being a fairly simple movement many lifters struggle with this exercise initially. Tightness of the hamstrings tends to cause excessive knee flexion and lumbar flexion (rounding the low back) during the descent.

#### Transferability of the RDL to weightlifting

Transferability in this case refers to how well the RDL improves the performance of the competitive lifts. For a weightlifter the most specific training is performing the competitive lifts at near max loads for a very few number of repetitions. This cannot be done 100% of the time because it can lead to overtraining in the form of neural and muscular fatigue, injury, and loss of motivation.

Therefore, the lifter must balance training with lifts that are similar to the competitive lifts as well as train at different intensity levels throughout the training cycles.

So, how well does the RDL improve performance of Snatches and Clean and Jerks? To help us understand this let's look at a few sequence shots of a Clean.







The lifter in these photos is Rob Earwicker. He has competed in weightlifting at the international level. He was the same athlete in the RDL photos. Both sequence shots were performed at a sub-max 110 kg load on the same day and were taken from video footage of entire lifts performed at normal speed.

A video comparing these two lifts with the barbell trajectories can be seen here:

<http://www.youtube.com/watch?v=i1taUuKre3w>

To understand the meaning of this data it is important to realize that forward and backward movement of the barbell directly relate to forward and backward weight distribution on the feet due to mechanical principles of balance and stability. This statement is even more accurate with a more experienced lifter lifting a greater load relative to bodyweight.

Despite a seemingly similar movement pattern between the clean and RDL many differences become apparent when looking at the barbell trajectories.

When the bar is at the lowest position:

Clean – weight fairly evenly distributed on foot, torso close to 45-degree angle, hips down

RDL – weight back on the heels, torso close to parallel with ground, hips high

When the bar is at the knees:

Clean – weight is being transferred further back on the heels, torso close to 45-degree angle, hips higher, barbell moving slightly backward

RDL – weight is being transferred further forward onto the ball of the foot, torso close to 45-degree angle, hips higher, barbell moving slightly forward

When the bar is at mid-thigh:

Clean – weight has shifted toward the front of the foot, torso is fairly upright, barbell moving forward and is accelerating rapidly (most powerful part of the lift)

RDL – weight shifts forward on the foot, torso fairly upright, barbell is decelerating drastically (low power)

These data show us that the movements are not as similar as they seem at first glance. It is my belief that the RDL can teach the skill of keeping the shoulders over the bar during the first pull. It also develops the strength required to do this movement. Hamstring strength is crucial for a rapid double knee bend phase and explosive triple extension during the Olympic lifts. The RDL can help with this so there will be some transferability. The question is if the strength of the posterior kinetic chain cannot be improved while performing an even more specific movement. I believe clean and snatch pulls may be a better choice in some cases. A coach or athlete must consider the development level of the lifter, the training phase, and the specific goal for each exercise. In many cases the RDL may be appropriate, but my overall point with transferability is that the RDL is not as specific to the Olympic lifts as many may believe. I would go as far as to argue that doing too many RDL's may reduce performance on the competitive lifts in some athletes.

What is the RDL good for anyway?

Flexibility

Once the movement is understood and the nervous system can coordinate the movement this exercise can be used to develop flexibility. The bottom position should be the point just prior to rounding the back or bending the knees too much. In extremely tight individuals this may be at the point where the bar is just around the knees.

Strength

The RDL is great for developing strength in the posterior kinetic chain. The hip extensors; i.e., hamstrings and glutes must produce force isotonicly (contraction causes movement), while the muscles of the back are primarily used to isometrically stabilize the spine.

It is worth noting that the type of strength the RDL optimizes is strength-speed; i.e., on the force-velocity curve the improvement is high for force, but low for velocity. This is in contrast to speed-strength training that would be low force, but high velocity; e.g., throwing a javelin.

### Improved Function

The RDL is a very functional exercise for life. In other words, there are many movements in life where one might lean forward at the hips and lift an object with the feet planted on the ground. Some examples might be lifting groceries out of the trunk of a car, leaning forward to pick a child up off the ground, or lifting a sail out of the water from the edge of a sailboat. That last example is one that I heard about from one of my clients who competes on a sailing race team. Incidentally, I have him perform RDL's in the gym to prepare his body for the task should it occur during a race.

The RDL improves hip extension strength. Many movements like running, jumping, and cutting and changing direction all include elements of hip extension. An athlete requires a large amount of hip extension strength.

In life and in sport we do not always have the opportunity to drop our hips and perform a perfect conventional deadlift. In many cases the movement looks more like a RDL and unfortunately often times the movements are more dangerous for the spine. Performing perfect RDL's can reduce the likelihood of injury to the spine during these situations.

### Other comments about the RDL

Competitive lifters should wear the same shoes that they compete in when training the RDL for maximum transferability. In other words, a weightlifter should wear weightlifting shoes, a powerlifter should wear whatever shoes they use during deadlifts, and a strongman competitor should wear whatever shoes they wear during any sort of pulling movements.

It is common for weightlifters to use lifting straps while performing RDL's. This is a relatively low skill exercise that is typically done for reps. In an effort to save grip strength for other training sessions athletes will use lifting straps. I would not recommend the use of straps for beginning lifters or those training for overall improvements in fitness.

When first performing this exercise remember to start light and develop technique. Eventually an athlete might use the same sort of weight as used for clean pulls. Very highly trained individuals can go much heavier than this; e.g., Nicu Vlad doing 300kg for 2 reps.

Most people do not have the flexibility to warrant this, but a very advanced variation of the RDL can be done standing on blocks and lowering the barbell farther.

## Conclusion

The RDL is an excellent exercise if one wants a pure strengthening exercise for the posterior kinetic chain. If an Olympic lifter is using this exercise to improve technique, then they should be aware of some potential limitations.

## **"Fatigue" Johnny Nguyen, FIT Exercise Director**

Fatigue determines how much work you can sustain. It occurs with various types of physical work, from intense and short-burst activities such as heavy lifting and sprinting to moderately intense and long-lasting activities such as marathons and hiking – the former producing "fast fatigue" and the latter "slow fatigue." Basically, the former is reached quickly through the anaerobic system (with no oxygen utilization) and the latter is reached slowly through the aerobic system (with oxygen utilization).

Endurance is the ability to resist fatigue. There are actually many types of endurance that can be identified and are activity-specific. Some examples are: strength, strength-speed, speed-strength, speed, endurance, as well as isotonic (dynamic) strength and isometric (static) strength. Life almost guarantees you'll face physical activities that require a certain level of endurance from some or all of the qualities above.

With training, your body can increase these various endurance types, or, simply, delay the on-set of fatigue. It is one of the reasons for which many athletes train and one of the many benefits that the rest of us gain when we exercise. The adaptation that occurs in the central nervous system and the peripheral system depends a lot on the training method (and your ability to push yourself), resulting ultimately in the delay of fatigue. Without getting too wrapped up in the various training methods available, we can rest assured that fatigue is elastic, and can be influenced through training.

If you train mostly for power by using Olympic-style weightlifting with three reps or fewer, then you will have great peak power, but you aren't likely to sustain power output because fatigue sets in rapidly after 3 reps; you have not trained for power endurance. Competitive weightlifters don't care about power endurance, because the objective of their sport is to lift as much weight as possible in a single effort, not to lift it as many times as



possible. For athletes of other power sports, like tennis players, they may need to express power repeatedly, so it is within their interest to express this power continuously. This group would therefore train for power endurance by using more than three reps, if not continuously then intermittently, with lighter weight and much shorter rest periods.

The type of fatigue one needs to overcome depends on the demands of one's sport. But for those who want to be fit for any activity in life, it is probably a good idea to have as much strength as possible for a single all-out effort – like lifting a very heavy box – while still possessing the endurance for continuous effort at lower resistance – like carrying a backpack for a 10-mile hike. Generally-fit people should train with various methods to improve their maximum strength for short bursts of heavy workload as well as to increase their resistance to fatigue for sustained effort at lighter workload. One thing to remember is that the greater the intensity the faster the fatigue. An extreme example of that is the display of maximum strength expressed by a one-rep-maximum Deadlift. An example of the opposite of that is walking – a low-intensity activity that is much more resistance to fatigue. You must train to overcome fast and slow fatigue, if you want both to be optimal; you can't train one and expect to develop the other. (I knew of a bodybuilder once that can lift a ton of weight, but became out of breath by a mere walk to the car.)

All this talk about fatigue has gotten me tired. Until next time...

## **"The Trials of FAT Loss" by Scott Kolasinski MS, FIT Metabolic Director**

### The Trials of Fat Loss

In January's newsletter, I gave some basic guidelines to lose fat successfully. However, there were still some other aspects of fat loss that I did not include. If you are one of those who have already tried to lose weight, you know I certainly did not reveal EVERYTHING. Here are some more guidelines to use everyday at home, at work and while socializing (a time when you would not want to get out your food journal or nutritional manual) to help you attain your fat loss goals:

1. Weigh yourself first thing in the morning, after you go to the bathroom. Weigh yourself at least twice per week. If you do not see a change, after one week, then you need to either eat less, workout more or both. Talk to your doctor if you suspect a medical condition may be affecting you.
2. Even when you have a "bad" day or week, still weigh yourself. Be responsible for your actions (or lack there of it).
3. Try to lose no more than 2 pounds per week. Losing more weight suggests you are losing muscle. Muscle is what burns calories, therefore, you want to minimize as much muscle loss as possible.

### On-the-Go or In the Office

1. Use Ziplock bags and Tupperware as much as possible. Store these with an assortment of raw veggies and ice to keep in your refrigerator. When you are in a rush and need a quick bite, grab a Ziplock and go. Use these any time you need a quick snack. Your refrigerator should have at least three containers filled with vegetables all of the time.
2. The other option are nutrition bars: keep bars available at the office, in a purse, gym bag, luggage, etc., to prevent long spans of time without eating.

### Sit-Down Restaurant Eating

1. Select foods that are steamed, garden fresh, broiled, boiled, baked, roasted, poached or lightly sautéed or stir-fried.
2. Grilled fish is always better than grilled chicken, and both are always better than grilled beef. But, be careful of the grilled fish as it is usually smothered with a sauce, based with butter or cream. Ask for either no sauce or have it on the side.



3. Take the skin off of chicken, turkey or duck before eating it. Eat the low-fat breast meat of these.
4. Substitute fried side-orders (i.e. French fries or potato chips) and mashed potatoes, which are usually made with cream or butter, with mixed veggies, broccoli, or green beans. If the meal already comes with these, you can order extra veggies.
5. Demand from your server to have your veggies steamed without butter, oil or margarine. If necessary, tell them that you have a butter and margarine allergy. Keep in mind, you might get quite a hassle, so it might not even be worth coming back to this restaurant. Do not let their laziness sabotage or increase your efforts in the gym.
6. If you find that you do not know the number of calories in a meal, then ask your server for a To-Go box or Doggy-bag when the food is delivered to your table. Take half of your meal and save it for later. Close the container and get it out of sight. You will be much less likely to overeat if it is not in front of you.
7. Always order a salad with the dressing on the side. You will save yourself hundreds of calories if you delicately dip your fork into the dressing. Or, better yet, do not use any dressing at all. However, if you must add a little extra flavor to your salad ask for balsamic vinegar or a wedge of lemon or lime to squeeze over your salad.
8. If a dish unexpectedly shows up with butter, gravy, mayo or a white dressing on it, scrape it off.
9. For a beverage, drink water, diet soda or even 6 oz. of dry white wine with seltzer (50 calories).
10. For dessert (if you must), try to avoid getting a dessert for yourself. Most desserts are prepared for more than one person. Share with somebody, and do not feel you need to finish it. Remember, the restaurant is not interested in your physique or health, but your money. Which is more important to you?
11. Plain sherbet is an acceptable dessert (no sauce or fruit syrups added).
12. Or, during dessert, try finishing with a latte, coffee or tea (no added sugar).

#### Fast Food Eating

1. Many fast food chains offer salads, BUT you do not need the entire packet of dressing on the salad. Also, white dressings have more fat than clearer dressings.

2. The worst choice of salad, in terms of the amount of fat and calories, is usually the Caesar Salad. A Cob Salad or Chef Salad with chicken and minimal or no dressing is a much better choice as it has fewer calories and fat.

3. Sandwich and submarine sandwich shops are everywhere. Visit these often for a sandwich, soup or salad. But, no "special sauce," mayo or oil. Stick with mustard and vinegar. Spice up any sandwich or salad as you like with veggies, herbs and dry seasonings. Go ahead and load up the fresh veggies on wheat bread or in a wrap.

4. Clearer soups are better choices than "cream of ..." soup.

5. Wraps at Subway are a much better option than the bread. A wrap is much lower in calories and it contains much more fiber; two absolute "musts" (low calories and more fiber) when trying to lose or maintain weight, and even to gain weight. However, the prepared-low-carb wraps are higher in calories and fat because of the dressings used on top of the wrap contents.

6. Cheese is never needed. Go without it on salads or sandwiches. If you must, in general, the whiter the cheese, the lower the fat content.

7. In terms of pizza, thin crust is the best option. A cheese or margarita pizza, with high-water veggies (such as peppers, onions, etc. versus olives) is best. The greater the meat content on the pizza, the greater the fat content, which is greater the calorie content.

8. At the movies, bring your own popcorn, jerky, protein bar and/or bottled water. The theaters are too expensive and do not offer healthy nutritional options.

#### Conclusion

1. Plan your meals. Even if you know you are going to overeat at a party, then eat accordingly prior to it and exercise at a high intensity.

2. Use Ziplock bags, Tupperware and nutrition bars while on the go and at home.

3. While out dining away from home, always aim for eating fresh food. Fresh is always best.

## **FIT Client of the Month! Ron Schmidt**

Name: Ronald "Ron" Schmidt

Age: 61

FIT Member since: November 17, 2005

Goal: Offset the losses associated with a recent Parkinson's Disease diagnosis, Increase total body strength and improve upper body flexibility

Results: Ron has improved from doing sets of 12 assisted pull-ups to sets of 8 pull-ups with no assistance. He has also learned to jump rope, deadlift (75# for 2 x 12) and set a personal record for the rope climb with 4 consecutive climbs!

Likes: TRAINS! TRAINS! TRAINS! Ron also likes cars, spending time with his daughter (and future 1st grandbaby), his wife, and did we mention he loves trains?!

Dislikes: Rowing, burpees (although he does them with a smile), and injuries.

PR 500 meter row: 2:18.5

PR Pull-ups: 5 strict consecutive

PR Rope Climbs: 4 Climbs to the bell consecutive

Keys to success: Ron is determined and dedicated to his workouts. Although he does travel a bit, he always makes time to exercise. He is on time, hard-working, and manages to complete even the movements he finds difficult with a smile and a sense of humor!

Ron has Parkinson disease and has decided that rather than let it reduce his quality of life and level of activity, it has increased his body awareness, physical activity, and improved his outlook on life. Ron is able to find humor in the exercises that he struggles with and instead of giving up he learns the movement, practices, and puts up with both



Thom and Analisa's order's to complete each set regardless of how long it takes to execute optimal form. Ron is refreshing and hard-working, two qualities that couldn't be more ideal for a person striving to improve their physical well-being with each workout.

Quote from client:

"I have found my trainers at FIT have a high level of professionalism. They push me hard to improve my performance but are careful to keep the excersise routines within my capabilities. I also enjoy Analisa's and Thom's humor which makes even the hardest of routines fun. I am really grateful that friend and FIT director, Andy Ludwick, introduced me to FIT when I told him I had PD."

## **"Posture & Strength Training- Is There a Crossover?" – Chris Reed MPT, OCS, ATC**

Posture and Strength Training – Is there a crossover?

Chris Reed MPT, OCS, ATC  
Agile Physical Therapy



I came up with the idea for this article from a recent post on the FIT Forum. Postural training is a topic I cover on a daily basis with my clients. However, I had never thought about whether a strength-training program could truly affect one's static posture. So let's start with a review of ideal posture in a sitting and standing position. Then I will discuss the phases of motor learning and how strength training may or may not play a role improving one's posture.

Ideal standing posture can be signified by a plumb lined hung from the ceiling. The plumb line should fall through the lobe of the ear, the bodies of the cervical vertebrae, through the center of the shoulder joint, and midway through the trunk in the upper quarter. For the lower quarter, the plumb line should fall through the greater trochanter of the femur, just anterior to the midline of the knee, and slightly anterior to the lateral malleolus of the ankle. The feet should ideally be facing forward with a slight toe out position of about 7-10 degrees.

Ideal sitting posture can be described with the following guidelines. The feet should be resting flat on the floor (or on a box depending on the seat height). The knees should be bent to about 90 degrees with about 2-3 inches between the end of the seat and the back of the knees. The hips should be flexed to slightly less than 90 degrees and be slightly above the knees. The lumbar spine should be supported by the back of the chair or by a lumbar support pillow. The shoulders and trunk should be aligned directly over the hips. The ears should be aligned directly above the

shoulders.

Now that we know what the ideal postural positions should be, let's discuss the Fitt's three stages of motor learning, to identify how one goes through the transformation from poor posture to good posture. The first phase is the cognitive stage of the motor learning process. In this stage the learner has to be consciously aware of their behavior and relies on both external and internal feedback to correct errors. Next comes the associative stage. During this stage, the learner starts to understand the various components to the skill and is able to detect and correct training errors on their own. The final phase of the motor learning process is the autonomous stage. This is the stage where the learner is able to perform the skill being learned with few errors and in a variety of situations.

All right, now we know how to obtain proper posture and we know the different stages of learning a new skill or task. The question that remains now is the one we started with, can strength training improve one's posture. My initial thoughts on this topic were posted on the FIT Forum in early January and are reprinted below:

"The problem I see with "strength" training to improve posture is that most of the time, we are working the Phasic muscles in the body. These are the muscles that are responsible for movement through space, they act quickly. When thinking of Phasic muscles, you can think Pectorals, Quads, Hamstrings. The muscles that affect and control posture are our Tonic Muscles (think transverse abdominus, lower trapezius, rhomboids). These muscles are designed to be "on" for long periods of time to counteract the pull of gravity. Therefore, they need to be trained with low loads and high repetitions."

Honestly, I continued to believe these thoughts up until I started to do a little more research for this article. While going through my Motor Learning text from school, I came across the idea of generalizability, or transfer, of the learning. This is the idea that you don't "practice" always in the exact same environment as you perform. For example, you come into FIT to see one of the trainers. They make you do kettle bell squats during your workout. Because you have done this exercise time and again over the last several months, you don't think twice about it when you go to lift the crate of books in your garage over the weekend. You just walk up to the crate; get it between your feet, squat with your legs while keeping your back in a neutral position, and pick up the crate with no problem. Now you never really practiced picking up the crate, but the kettle bell squat "transferred" to the real life situation in which you used it.

So, how does all this relate to posture? Well, if you are training in the gym properly, then you are constantly activating your postural muscle groups to maintain good form during your workout. Because you are constantly "practicing" this skill, then it is reasonable to deduce that you would be able to "transfer" the practiced skill into real life situations of sitting and standing.

Now some of you may be thinking, "but when I am at the gym, I am moving dynamically, and when I am sitting at my desk, I am in a static

position. So how does transfer happen?" Let's think about it. Say you are doing seated rows and overhead squats as a part of your workout. Both of these maneuvers have a static and dynamic component to them. With the seated rows, your trunk is relatively static, while you make the motion with your shoulders and arms. In the overhead squat, you perform a squat while statically holding the bar overhead and maintaining good trunk position. Now while sitting at your desk may seem purely static, let's examine it a little closer. I believe most of us are typing at a computer, reaching for a phone, shuffling through papers, etc. Hmmm....seems somewhat similar to the seated row. Maybe transfer can happen.

This by no means is scientific proof and I do not know of any that exists on the subject. However, I hope this has spawned some thought about working toward improving your posture for most of you. Let me end with a little tid-bit I give to my patients who have a desk job to help improve their posture. I like to tell them to place a note somewhere that they will see it often. Most of the time I use the top right corner of their computer monitor. I tell them to use a bright sticky note that will catch their eye and to write on it something like "how's your posture" or "sit up" or "I hate Chris." Anything that will make them think of our "posture conversation." Then everytime they go to close down a program or minimize something, they will end up in the top right of their screen, see the note, and consciously think about how they are sitting. I am positive this happens several times an hour for most of you. After awhile, you will notice that you no longer are "correcting" your posture, but that you are naturally sitting in a good postural position...and "training" your postural muscles to work properly.

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