

July 2007 – July 2009



HEALTH
FITNESS
NUTRITION

THE VERY BEST OF KEN KASHUBARA



Health, Fitness & Nutrition Articles | Ken Kashubara

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4 Ways to Reward Healthy Eating (Published by renu, issue 1)

So you really want to lose fat. Three days straight, you ate fruits, vegetables, fowl and seafood without any hint of cheating. You even went out and did some cardio on two of those days. You should be rewarded, right? Right, but this is usually the precise moment when individuals sabotage themselves and their goals. As a reward, dieters have been known to consume an entire pizza, half a birthday cake, 4 cheeseburgers, 2-liters of soda-pop, twenty pieces of candy, two chocolate bars and five glasses of wine.

Positive reinforcement is a good idea, but the rewards should be streamlined with your goals. Here are a few ideas of rewards that go hand-in-hand with fat loss goals.

1. **Get a massage.** Listening to the soft music and getting the knots out of the muscles will decrease your stress levels. Decreased stress has been proven to lower hunger levels. The massage therapist will also talk about toxins and drinking water after the massage, which makes individuals not want to eat fast food.
2. **Add more natural sweets to your diet.** Many health food stores carry natural snacks and sweets. If you know you are bound to break, pre-emptive strike the binge by having natural treats readily available. Don't binge on empty calories – make sure the snacks have some nutritional value (eg. oatmeal cookies) and eat these snacks in moderation.
3. **Go shopping.** Ladies, go to the mall and get a new pair of jeans, a dress or a cute pair of shoes. Guys, why not get those speakers for the house or a new hand-held gadget? New “toys” will keep your mind off of eating badly.
4. **Find a new activity.** Indoor rock climbing's popularity is exploding. It helps build relationships and is an activity in which individuals find passion. If indoor rock climbing is not for you, try yoga, Pilates, dance or even martial arts classes. Most studios allow “newbies” to try a class for free so you can decide whether it is the right activity for you. When you find the right activity, the instructors will further encourage you to eat healthy.



Some of these steps may sound expensive; however, going out to eat and drinking alcohol isn't cheap either. It is up to you to decide your priorities. Taking care of your body should be extremely high on the list. The best way to do take care of your body is to eat healthy and reward yourself with treats that go hand-and-hand with your health goals.

Facts on Abdominal Training (Previously Unpublished)

Abdominal training articles flood magazines and internet websites. A lot of information comes from actual personal trainers; but unfortunately, most of the information is written by writers with little to no clinical or practical knowledge. Another problem is the curse of partial information. The writer takes a complex subject and squeezes out a 300-word article. The problem with this is that most of the detail is left out of the article, leaving readers guessing. This article is designed to give you the bottom line facts about abdominal training.

Fact 1: You cannot spot train. This means no amount of any single exercise forces the body to lose fat in one specific part of the body. There is no “magic bullet” exercise that will shred the belly fat. If you want a smaller waist or lose those love handles, take care of your nutrition and exercise consistently. You will burn fat evenly across the entire body, including the abdominal region.

Fact 2: The core is any muscle connected to the pelvis on lumbar spine, not just the abdominals. Too many individuals talk about the core and only have an inkling of what it actually is. If you want to have great abs, you have to work the oblique muscles, spinal erectors, hip flexors and glutes, along with the abdominals.

Fact 4: Train the “lower abs” first. The muscle fibers closest to the groin have the least stamina, so complete leg raises at the beginning of an abdominal routine. This way you get the most out of these muscles before they tire.

Fact 5: Train the “upper abs” last. The muscle fibers just below the chest have more stamina than the “lower abs” and the oblique muscles combined. Finish off the abdominal routine with some variation of crunches but do not pull on the neck. Pull the belly-button down towards the floor and let the abs do the work, not the arms.

Fact 6: Do as many repetitions as possible. Don't be a wimp and quit as soon as the abs start burning. Keep going until you literally can't do another repetition. Do not train to failure on full-body or complex movements, but go ahead and crush the abs and arms.

So there you have the basics. To get a flat stomach, train the entire body, eat right, follow correct exercise sequence and go to failure. Have patience and it will happen for you.



3 Ways to Get Broader Shoulders (Published by livestrong.com)

Shrugging

Professional athletes of contact sports have many traits in common—one of them being broad shoulders. American football players lower their shoulders to deliver bone-crushing hits. Hockey players also lower their shoulders to punish opponents with brain-rattling checks. The key upper-body muscle for contact is the traps. Anyone, not just professional athletes, can intimidate with developed, flared traps; and the traps are built with shrugs. Shrugs must be performed with perfect form in order to avoid injury and ensure effective repetitions. To start the shrug, the feet should be shoulder-width apart with knees slightly bent. Hold dumbbells at your sides and in direct correlation with the feet (straight ahead—not slanted or tilted). Maintain perfect posture. Be sure to keep the head facing straight with the traps even with your ears. Pull the weight straight up as if you are attempting to touch your ears with your shoulders. DO NOT tilt the head up or down as this movement will quickly recruit secondary muscles and put the neck and shoulder at a greater risk of injury. Lastly, if you have already developed a general physical preparedness, use a heavy weight with a repetition range under 12. The upper traps are quick-twitch muscles. They respond well (grow) with heavy weights.

Overhead Pressing

While the traps provide an intimidating physique, well-developed deltoid muscles give definition between the shoulders and arms as well as the appearance of extra width. The deltoid muscle wraps around the shoulder joint and has heads in the front, side and rear of the body. Front, side and rear arm raises are popular exercises that can help muscular definition but will not provide size. Overhead presses will grow the deltoid muscles. Perform overhead presses standing instead of sitting because while standing, the stress is dispersed evenly throughout the joints. Again, use dumbbells, as a barbell inhibits proper posture, as well as prohibits dangerous behind-the-neck pressing. The dumbbells should be in line with the ears and the weight should be pressed straight up and down. The weight of the dumbbells is not an issue as the deltoids respond well with high and low repetition ranges.

“Prehab”

It's impossible to get broad shoulders if you have an injury. “Prehab” exercises teach exercise enthusiasts to worry about injuries before they occur, not waiting until it is too late. Stretch the shoulders daily. Work on stability and joint strength on off days or after workouts. Hold a pushup position with the hands on a Swiss ball to increase joint stabilization. Hold very light dumbbells and lift the arms in multiple directions and perform arm raises to the front, side and overhead. Another popular way to do “prehab” is to move the arms in the likeness of letters in the alphabet. Shoot for repetitions between 25 and 50. Arm raises will make the tendons and ligaments stronger, keeping the shoulders healthy.

3 Ways to Get Bigger Biceps with Weight Training (Published by livestrong.com)

Pull-up Series

Find an adult who can perform ten pull-ups and that individual will have impressive biceps. The pull-up is the “magic” exercise in regards to building muscle size in the biceps. A real pull-up begins with the arms completely straight and ends with the chin even with or above the bar. The unfortunate element of real pull-ups is the difficulty. The silver lining is that there is a proven series of exercises that will enable you to perform pull-ups. The first exercise in the series is the basic cable pull-down. The pull-down can be performed with a wide pull-up grip or chin-up grip (arms close together with palms facing your face). Perform pull-downs until you can complete one repetition with your bodyweight. The next exercise in the series is the flexed arm hang, as seen in Presidential Fitness Challenges. To complete the flexed arm hang, hold onto a bar with a chin-up grip. Keep the chin above the bar for as long as possible. Once you can keep the chin above the bar for thirty seconds, move on to the next exercise. The next exercise in the series is the chin-up. Move on to pull-ups (hands wide) when you can complete five chin-ups without help. You will have big biceps once you can complete ten pull-ups.

Go to Failure

Exercises like the bench press and squat should not be performed to failure because of the demand those exercises place on the entire body. The chances of continuing an efficient workout, after failing on a squat attempt, are slim. The biceps, on the other hand, place a low demand on the body. The biceps are a small muscle group and respond well to exercises performed to failure.



Drop-down Sets

A traditional drop-down set calls for an exercise to be performed with decreasing weight. To perform a drop-down set on machine preacher curl, perform ten repetitions with 60 pounds, then drop the weight to 50, complete ten more reps, and continue dropping weight after every ten reps until the weight is as low as possible. Drop-down sets for the biceps can also be performed by varying grips. Holding dumbbells, perform ten repetitions with the palms facing the floor, then with the same weight, complete ten repetitions with the palms facing the ceiling, and then do ten repetitions with the same weight and the palms facing each other. Always go to failure with drop-down sets. Building muscle is not a glamorous process. It takes a lot of hard work and dedication.

Best Exercise Routines for Women

(Published by ehow.com)

Most men want to build large muscle mass. Most women do not so most women should not train like men. While aerobics burn a lot of calories, women must not neglect strength training all together. Training with weights increases bone density and helps prevent osteoporosis. Circuit training strengthens the heart and the muscles. Functional training improves muscular coordination, which leads to a decreased risk of injury. Full body movements increase the body's ability to burn fat. Circuits, functional training and full-body movements allow women to reap these benefits while limiting muscle growth.

History

The first health clubs began popping up in the 1950s. These clubs were designed more towards men and bodybuilders/athletes in particular. With the implementation of Title IX, women became afforded the same athletic opportunities as men. In the late 1970s and the 1980s, women flocked to step aerobics classes and avoided weight training. While step aerobics classes burn a lot of calories, women have learned that they can lift weights without gaining an extraordinary amount of muscle.

Types

The best exercise routines that meet the goals of most women are circuit training, functional strength training and full body training. These types of workouts increase the heart rate, which burns fat. Circuits, functional training and full body movements also restrict local fatigue, reduces stress on individual joints and increase coordination. The workouts also limit muscular growth.

Features

Defined, a circuit training workouts perform movements for different parts of the body with little to no rest between sets. A sample circuit training workout would select an exercise for the legs, followed by chest, back, shoulders, biceps and triceps one after the other with no more than 30 seconds rest between exercises. Functional strength training exercises mimic everyday body or sporting movements and have a high carryover from training to life. For example, an individual wishing to be a better golfer will use bands to perform resisted golf swing motions that mimic a golf swing. Full-body training is characterized by movements that use multiple muscle groups, such as a squat with an overhead press.



When performing this movement, begin with your feet shoulder width apart and hold dumbbells at your shoulders. Bend your knees and hips to lower your backside towards the floor. Then while straightening the legs, press the dumbbells over your head. Bring the dumbbells back down to your shoulders and repeat.

Considerations

When putting together exercise routines, women need to understand their goals. Getting “toned” is not a goal. Losing fat is a goal. Gaining muscular density is a goal and so is training to perform well at an athletic event. Follow an exercise routine that is designed to reach your goals and work hard during workouts. Increase your workout performance and the aesthetic results will follow.

Misconceptions

Most women claim they stay away from strength training because they do not want to get "bulky". Human Growth Hormone (HGH) and Insulin make it possible for women to build muscle. However, the body adapts to the exercise demand placed upon it. If a person is consistently lifting heavy weights, the body must compensate by adding muscle. Circuits, functional training and full-body movements require lighter than maximum weights to be completed correctly. Following these exercise routines limit muscle growth while reaping all the other rewards (eg. increased bone density, stronger heart, decreased body fat, etc) of strength training exercise.

How Many Calories Do I Burn a Day? (Published by ehow.com)

Most individuals concerned with losing, gaining or maintaining weight wish to know how many calories they burn over the course of the day. The calorie out equation adds the basal metabolic rate, lifestyle activity level and calories burned during exercise. The sum determines how many calories an individual should eat in a given day.

Features

The resting metabolic rate depends on the basal metabolic rate, lifestyle activity level and calories burned during exercise. The basal metabolic rate is the amount of calories needed to sustain basic body processes. If an individual stayed in bed for twenty-four hours, the amount of calories needed for this individual to maintain current weight is the basal metabolic rate. Lifestyle activity level is how active a person is during the day. A waiter at a restaurant working an 8-hour shift will burn more calories than an accountant sitting at a desk for 8 hours. The amount of calories burned during exercise can be determined by wearing a heart rate monitor or typing information into a cardiovascular machine so it can guess how many calories burned during the bout of exercise.

Function

An educated guess of an individual's total metabolism is 10 calories per pound of bodyweight. For example, a 150-pound individual's basal metabolic rate would average 1,500 calories.

Considerations

One pound equals 3,500 calories. In theory, an individual wishing to lose one pound per week would need to eat at a 3,500 calorie deficit over the course of a week. The week covers 7 days, so the daily deficit would be 500 calories per day.

Expert Insight

An individual's metabolism is determined by age, gender and body fat percentage. Metabolism decreases with age. Men have higher metabolisms than women. At any age, regardless of gender, muscle is more active than fat. Take 2 male individuals with the same age, height and weight, the one with more muscle will have the higher metabolism.

Warning

Do not try to lose more than 2 pounds per week. When an individual eats at a deficit of over 1000 calories a day, the body decreases metabolism. In this case the body does not know the difference between starving and dieting. When the body is starving, the body naturally cuts back all body processes to prepare for the long haul. While you may know you can eat at any moment, the body does not know when it is going to eat again.

How to Make Exercise Fun for Kids (Published by ehow.com)

The key to effective workouts for kids is fun. Children have a short attention span so they tend avoid long-distance or boring training sessions, so the exercises chosen must be short in length and put a smile on their faces.

Circuit Training:

Take your child to a local park or field – soccer or football fields with painted lines work well. Set up stations at the four corners of the field. Take a warm up lap at one corner and designate that corner as “home”.

The mirror drill is a very fun exercise for kids. Shuffle back and forth with your child, telling the kid to stay in front of you. When you feel you or the child are tiring, drop the tennis ball and race to the next corner of the field.

Once you reach the second corner, give the child enough time to catch his or her breath. Have the child backpedal. Once they reach about ten to twenty steps backwards, roll the soccer ball towards them. Have the child run to the ball, kick it back to you and then backpedal again. Repeat five to ten times and then run to the next station.

Remembering to let the child catch his or her breath, give the child a bodyweight exercise to complete. This exercise should involve some core elements, such as pushups, sit ups or wheelbarrow walks. Run to the third station.



Have the child complete another bodyweight exercise and then sprint home. Give the child an extended rest once they reach home and allow them to drink water before continuing.

Mix up the races to the next stations. Run side-by-side. Let the child start leading and threaten to pass them. Start in the lead and encourage the child to pass you. And as long as the child is giving effort, always let the child win the race.

Tips & Warnings

Provide positive feedback during the workout. Don't worry if they are dropping the tennis ball, kicking the soccer ball nowhere near you or anything else. An easy-going attitude puts no pressure on the child, which is important, especially for overweight children.

Avoid completing too many revolutions around the circuit - stop before the child looks drained of energy. And to avoid cramping, do not let the child drink too much water. Let them get just enough to stay hydrated in order to avoid cramping.

Vitamins for Healthy Skin and Nails (Published by ehow.com)

Free radicals weaken nails and destroy healthy skin. Free radical cells are like vampires. They hunt other relatively healthy cells and turn them into vampires until the body is overrun by free radicals. The proper mix of nutrients reverses the trend.

Benefits

A simple multivitamin can help brighten skin tone and strengthen nails. The supplement should have a combination of vitamin A, B complex, vitamin C, D and E, with the minerals boron, copper, magnesium and zinc.

Types

Extra Vitamin C promotes skin healing. MSM (methylsulfonylmethane) produces new skin. Flaxseed oil and water replenish skin moisture. B complex vitamins grow nails and fight infections.

Misconceptions

Gelatin is not a good cure for weak nails. The nails need protein but gelatin is missing two essential amino acids.

Warning

Avoid coffee, cigarettes, soda-pop and alcohol. Coffee, cigarettes, soda-pop and alcohol promote rampant free radical manifestation.

Expert Insight

Wear rubber gloves when completing housework. If you want to absorb moisture, coat the inside of the gloves with unscented talcum powder.



4 Ways to Increase your Vertical Leap (Published by livestrong.com)

Increase Your Flexibility

Imagine flinging a rubber band. To get more distance or speed you will stretch the band far. A muscle is like a rubber band because it lengthens and then shortens to gain speed or distance. The more flexible the muscle is, the greater the power of movement.

Complete dynamic, i.e. ballistic or active, stretches before the workout. Examples of these stretches are marching, skipping and alternate movement drills. Alternate movement drills are running backwards for a few steps, shuffling a couple and then completing carioca movements.

After the workout, stretch statically by holding each stretch for twenty to thirty seconds. Be sure to stretch all the muscles in the legs, calves, hamstrings, quads, groin and hips, after a workout designed to increase your vertical leap.

Jumping drills

Beginners to advanced athletes should complete simple jumping drills. Jumping in place needs no explanation. Standing jumps can be horizontal or vertical and begin from a dead stop. Bounding exercises are like sprinting but with a maximal one leg jump with every step. Box jumps are when you leap onto a barrier. Depth jumps are stepping off a barrier and landing in a stable squat position. As you advance you can complete these exercises on one leg.



Hit the Weight Room

Strength coaches use a term called relative strength. Relative strength is the amount of load lifted that exceeds bodyweight. If a two hundred pound man can squat four hundred pounds he has a relative strength of two hundred pounds. This two hundred pounds of relative strength can be directed vertically and explains how five foot ten inch bodybuilders can dunk a basketball.

To increase your relative strength on the squat, use eighty to ninety percent of your one rep maximum for sets of four to six repetitions. Try to use one hundred or one hundred and five percent every four to six weeks to judge how much relative strength you have gained.

Loaded Plyos

Loaded Plyos are the types of exercises you see on the Nike SPARQ commercials. Loaded plyos are for advanced athletes who need resistance that exceeds bodyweight during sprinting and jumping training.

Weight vests are beneficial for jumps in place, standing jumps, box drills and depth jumps. Tear away cords and parachutes assist with bounding and sprinting exercises. Medicine balls are an effective and easy way to add resistance during explosive upper body and core movements.

3 Ways to Get Firm Glutes (published by livestrong.com)

Hit the weight room

A lot of women will not buy a pair of pants if they do not think their butt looks good in them. Women want to love the pants. When you love your butt, it is much easier to find pants you love. Speaking of love, a firm butt looks like a heart.

Squats, lunges and stepups are the best weight room exercises for the glutes. Squats do not have to be completed with a barbell. They can be done with just bodyweight or holding dumbbells. Keep your feet pointed straight ahead, keep your heels on the floor and get depth. The glutes do not get a workout if you do not squat deep.

Lunges can be completed in a stationary position, stepping back and forth or walking. Make sure your legs are staggered because the closer they are, the more the stress goes on the thighs. Add weight by holding dumbbells or placing a light bar across the back of the shoulders.

Stepups might be the best exercise for your butt. The glutes work harder as the step increases in height. Hold dumbbells in your hands or place a light barbell across the back of your shoulders when performing stepups.

Girl exercises

Many people refer to Pilates and core work as girl exercises. Pilates, while providing benefits for all people, works the core muscles. The core is any muscle connected to the pelvis or lumbar spine, including the glutes.

Stand on one leg when performing upper body exercises. Use the big ball, whether you call it a stability, Swiss or balance ball. Standing on one leg and using a ball activates the core while simultaneously working the upper body muscles. The result is firm glutes.

Work hard

Girls do not sweat. They glisten. Whatever you call it, too many women do not work hard because they do not like a watery fluid to seep from their pores. You have to work hard to achieve your goals.

Furthermore, you are not going to bulk up. If it were easy for people to gain muscle, every guy in the gym would be walking the streets looking like Arnold Schwarzenegger in his bodybuilding prime. Building muscle is just not that easy.

What happens to women is the muscles hold more water when they are being exercised consistently. People eat too much; do not lose fat, and the layer of fat stays over the muscles. This causes the appearance of bulk. Eat less at breakfast, lunch and dinner to solve this problem but make sure to take in at least one thousand calories a day. Anorexics do not have firm bones, muscles or skin, let alone glutes.

4 Ways to Get a Slimmer Waist (published by livestrong.com)

Biggest meal at breakfast

Breakfast is often dubbed the most important meal of the day. This saying is not entirely accurate, as every meal is important. Breakfast is important because it kick-starts the metabolism, supplies energy for the day, and the calories consumed at breakfast has a direct correlation to waist size.

People who eat dinner as the biggest meal of the day have large waists. People who eat breakfast as the biggest meal have small waists. This is true because large portions of breakfast are burned throughout daily activities. Large portions at dinner sit in the stomach and turn into fat as you sleep.

High Intensity

Jogging burns more calories during actual exercise than sprinting. However, running only takes up about one out of twenty-four hours in a day. Many studies have shown that sprinting burns seven to nine times more calories after the workout than jogging.

Apply this theory in the weight room as well. Increase the intensity of every set. Take one minute to catch your breath and then do another set. Be sure to pick exercises that use as many muscles as possible. That means no biceps curls or calf raises until you have a slim waist.

Portion control

Portion control is not rocket science. It is brain surgery. You need to wire your brain to know when you have had enough to eat. Know that you will get a chance to eat again. Restaurants, on average, serve meals with three times the recommended serving sizes. Take home a food bag. At home, use a smaller plate if you have to. Sometimes people keep eating just because there is still food on their plate. A smaller plate will lead to a smaller waist.

Abdominal Exercise Sequence

Of the abdominal muscles, the lower abdominal muscles have the least amount of stamina. Hit these first when you are performing your abdominal routine. Good exercises are any type of leg raise or use the dead bug series developed by Mike Robertson. Complete as many repetitions as you can while still keeping the lower back flat.

Hit the oblique muscles second. These muscles have more stamina than the lower abdominal muscles but less than the upper abdominal muscles. Use twisting motions when training the oblique muscles. Do very high repetitions.

Work the upper abdominal muscles last. The upper abdominal muscles have more stamina than the oblique and lower abdominal muscles combined. The most common mistake people make when performing crunches is using their neck. The neck should not bob up and down. It should be held in a stationary position. Concentrate on using your abdominal muscles to lift your upper body and complete as many repetitions as possible.

5 Ways to Lose Weight After Pregnancy (Published by livestrong.com)

Exercise with your baby

Place the baby on the floor and get in a pushup position with the baby under you, it is okay to have your knees on the floor. From the pushup position, bend your arms until you are face to face with your baby. Interact with the baby by giving it a kiss or say something nice. Interaction provides entertainment for the baby while you get fit.

Crunches also provide benefits for mother and baby. As the mother, get on the floor so you are looking at the ceiling. Hold the baby in your hands. As you perform the crunch, lift the baby in the air.

Another exercise that provides simultaneous benefits is the wall sit. Sit against a wall with your knees at a ninety degree angle. Hold the baby in your arms. Just sit there as long as you can, holding, rocking or talking to the baby.

Food preparation day

A major issue with new mothers is time management. The new baby needs a lot of attention and your time becomes even thinner if you already have children. With time at a premium, it becomes too easy to just grab and eat the first thing you see. The key to eating right while having a newborn is preparation. Take one day, or even one night, and dedicate it to your meals. Go to the store and have a specific meal in mind for each purchase. If it is eggs, hard boil them for your next seven breakfasts. Nursing mothers need to ingest excess protein anyway.

Walk before you run

Doctors generally tell new mothers not to exercise for six weeks after giving birth. However, walking is not only allowed but also recommended. Break out the stroller and take walks with your baby. And do not forget, mothers with healthy, active lifestyles have children who grow up to lead healthy, active lifestyles.

Yoga and Pilates

That pregnancy not only temporarily ruined your body fat percentage; it also turned your spine into an S and twisted your hips out of whack. Yoga and Pilates help put everything back into place. Some new mothers may not be able to go to a studio class. If this is you, be sure to stretch daily. Stretch all the major muscle groups, including the calves, hamstrings, quadriceps, groin, hips, lower back, shoulders and chest. Do not stretch the abdominal muscles because they have already been stretched for nine months.

Circuit Train

When you return to the weight room, circuit train. Circuits do more work in less time. Perform exercises in the order of legs, chest, back, shoulders and arms. Take about twenty seconds between each body part. After completing one circuit, take one minute rest and then start again at the beginning.

4 Ways to Get Leaner Arms (Published by livestrong.com)

Dual Movements

A dual movement combines two separate exercises and merges them into one. An example of a dual movement is a dumbbell curl with an overhead press. The two movements are not completed simultaneously. In this dual movement, you curl the dumbbells to your shoulders and then press the dumbbells overhead. Dual movements catalyze leaner arms by increasing the energy expenditure of exercises. A dumbbell curl with an overhead press will burn more calories than an individual dumbbell curl or overhead press. Dual movements also force you to choose lighter weights for exercises. The lighter weights help avoid muscle bulking. These movements will still increase strength while helping you get leaner arms with weight training.

Single-Joint

A 2000 study performed by the Human Performance Laboratory at Ball State University conducted a 10-week strength training study. They took two groups. Both groups performed four multi-joint exercises (i.e. bench press/squat) but one group added two single-joint exercises, biceps curls and triceps extensions. At the end of the study, both groups added muscle mass. However, the Human Performance Laboratory, led by Dr. Rogers, found that direct arm training produced no additional effect on arm size or strength. This study indicates that single-joint exercises will not only avoid muscle mass growth, but may assist with getting leaner arms.

Functional Strength Training

Functional strength training exercises utilize reflex responses to maintain balance and/or have a high carryover into work or sport. An example is simulating a golf swing with a resistance cable. Functional movements, such as the resisted golf swing, have been proven to improve strength, power, endurance, flexibility, coordination, balance, agility and speed. While providing all of these superb health benefits, functional strength training has been shown to *limit muscle growth*. You can complete functional strength training exercises with added variations. Many health clubs let members use balance balls, medicine balls, resistance bands, balance boards and BOSU balls for functional strength training. These items can also be found in retail stores for home use, and all keep you fit while limiting muscle growth. Be sure each functional strength training exercise utilizes as many muscles in the body as possible. Exercises using upper and lower body muscles are ideal.

Circuit Training

Circuit training is the completion of various exercises for different body parts with little to no rest between sets. An example of a circuit is an exercise for the chest, followed by an exercise for the back, and then shoulders, biceps and triceps. Circuits allow you to perform more work in less time. Circuit training increases caloric expenditure, strengthens the heart, reduces stress on individual joints and increases endurance. The one aspect circuit training does not do is build muscle. Use circuits to assist you in getting leaner arms with weight training.

4 Ways to Get Leaner Legs (Published by livestrong.com)

Sub-maximal Loads

A sub-maximal load is not the same as using a low weight. What a sub-maximal load (weight) refers to, in regards to getting leaner legs, is weight selection during total body movements—like a squat with an overhead press. A squat with a dumbbell overhead press works the leg and shoulder muscles. As the number of repetitions increases, the shoulders will tire before the legs because the legs are stronger. Choosing combination (total body) movements will work the legs without making them bigger. A total body movement, like a lunge with a cable row (legs and back), will also burn more calories than a lunge or a cable row by themselves.

Ludicrous Repetitions

Total body movements expend a tremendous amount of energy mentally and physically. Physically, energy is needed throughout the body, which exponentially increases the heart rate. Mentally, total body movements increase neurological stress because of the increased coordination demands. If you are not ready for total body movements, take simpler exercises and tremendously increase the repetitions. A lot of exercise programs may call for three sets of ten repetitions on the squat. Ten repetitions are not enough to get leaner legs with weight training. The minimum number of repetitions should be fifteen. If you are not huffing and puffing at fifteen repetitions, try 25. Test your limits with each workout and try to increase the repetitions. Strive for 100. The difference in calories burned between ten repetitions and one hundred repetitions will be significant and really assist getting leaner legs.

Single-Joint

Start your workout with a total body movement, such as the squat with overhead press or lunge with row. Then move on to a multi-joint exercise (squat, dead-lift, leg press, lunge, step-up) and perform very high repetitions. Lastly, finish off the leg workout with single-joint exercises such as the leg extension and leg curl. Neither the leg extension or leg curl will “bulk” the legs. The leg extension and leg curl were designed to provide the legs with definition. While performing leg extensions or curls, be sure to complete each set with at least fifteen repetitions.

Stay Flexible

The leg workout is complete. It may be a good idea to perform core/abdominal work after a leg workout. Then before heading home, be sure to stretch. Stretching provides many health benefits but the one that concerns us here is getting leaner legs. Fully-developed adults have been known to grow an inch after staying consistent with a stretching, yoga or pilates routine. They don't actually grow. What happens is the muscles release all “knots” and stay relaxed. This relaxed state allows the joints to release—providing breathing room, allowing the body to reach its full length potential. Long, relaxed muscles give the body the appearance of leaner legs.

Pregnancy and Training (Published by Greenmaple Wellness, December 2008)

Cross-sectional surveys consistently report that expecting mothers exercise more often than their non-expecting counterparts. An expecting mother's body takes on many changes during pregnancy. Her weight will increase while the body is fooled into believing it is going through puberty again, and negative stressors can be damaging. Exercise can negate some of the harmful bodily reactions that come with pregnancy. While expecting mothers should and will gain weight, proper fitness training during pregnancy will help mothers before and after the baby's birth.

In Native American tribes, men, woman and children all performed duties that were important to the survival of all. If a group of men, women or children fell ill and could not perform these duties; the results were disastrous, which is why many tribes adopted a peculiar law. Women could not give birth more than once every three years. The tribes found that if a woman gave birth on a yearly basis, she could not physically keep up with her duties. The act of carrying a baby inside her for nine months, giving birth and recovering was too taxing on the women's bodies. Obviously, much has changed since those days, but one element has not changed, and that element is the toll pregnancy takes on a woman's body.

Body Changes during Pregnancy

The body prepares for birth during the pre-natal period. The fetus grows for nine long months as a woman's hormones create changes within the body. The changes take a toll on the body's skeletal and muscular systems.

As the baby grows, the body releases hormones that trick the body into believing it is in puberty. The hips widen to prepare for the actual birth and the feet grow. The joints are literally being pulled apart, which causes the joints to become unstable and more susceptible to injury.

The body's changes also take a toll on posture. Breast tissue increases size so the glands can hold life-sustaining milk. The increase in breast size also causes the shoulders to slump forward, negatively effecting posture. The growing pelvis tilts forward, causing mothers to lean backwards while the shoulders are slumped forward, creating an "S" shape of the spine.

An expecting mother's cardiovascular and circulatory systems also pay a toll. The expanding uterus causes the diaphragm (the muscle separating the digestive system from the lungs) to rise. The rising diaphragm literally shortens the lungs and the ribcage expands to compensate for the lack of lung capacity. The body loses the ability to take in optimal oxygen, causing expecting mother's to become short of breath.



The result of all these changes is fatigue. The blood and air supplies take care of the baby first, as does the digestive system. The body is taking care of two individuals in one, which raises the resting heart rate and lowers maximum heart rate. So what is an expecting mother to do? She must take steps to alleviate stress and exercise.

Pre-Natal Exercise Benefits

Women who engage in pre-natal exercise have fewer occurrences of swelling, cramps, fatigue and back pain. When an expecting mother exercises, the muscles get worked. Stretching the muscles helps prevent swelling and cramps. Weight training strengthens the muscles, which helps decrease back pain. Exercise also increases energy levels and helps alleviate fatigue.

Active pregnant women are more likely to stay within recommended weight gain standards. The weight gain recommendations depend largely on the mother's pre-pregnancy weight. If the mother was underweight before pregnancy, she should gain 28 to 40 pounds (12.7 to 18kg). If the mother's weight was normal before pregnancy, she should gain 25 to 35 pounds (11.3 to 15.9kg). And if the mother was



overweight before she became pregnant, she should gain 15 to 25 pounds (7 to 11.5kg). Mothers under the age of 21 should shoot for the higher weight gain while mother's over 35 should try to stay on the low end of the weight gain recommendations.

Exercise curbs negative psychological feelings of stress, anxiety and depression, and will increase overall mood. Exercise counterbalances the stress and anxiety feelings built up during the day by releasing endorphins. These same hormones are responsible for the "runner's high", making individuals happy and decreasing feelings of depression.

Exercise Guidelines

Walking on a daily basis is strongly recommended. A reasonable goal would be to walk 30 to 45 minutes per day. Using an incline is okay when using a treadmill. Keep in mind that air flow is constricted during pregnancy, so the maximum heart rate will decrease as the baby gets bigger. During the third trimester, mothers should not push the heart rate past 140 beats per minute.

Yoga and Pilates minimize the ill effects pregnancy causes on the muscular system. Yoga and Pilates involve a lot of stretching, which helps prevent cramps and posture. Yoga and Pilates also keeps the core muscles strong. Expecting mothers should check out a yoga and/or Pilates class at the local health club or studio. Some classes are designed specifically for pregnant women. If the gym does not provide this type of class, pregnant women should inform the instructor before the class of her condition. Good instructors will call out movement moderations for expecting mothers.

Pregnant women should avoid exercises lying face-down on the floor. Lying on the womb puts too much pressure on it. Many believe expecting mothers should not perform any exercises lying on the back either. Studies report conflicting information on this subject. To be safe, I recommend staying away from crunches or any other exercise that calls for a supine or prone position. Any crunches performed should be completed at an angle on a large exercise ball.

The muscles should be strengthened as well as stretched during the pre-natal period. Women recover from giving birth faster if the muscles are strong. Some believe strength training makes giving birth easier, but studies do not overwhelmingly concur with the statement.

The majority of strength training exercises should be performed from a standing position. Stay away from heavy weights. The exercises can be performed with dumbbells or cables/bands. Pregnant women should not neglect the back muscles. They should be sure to perform many movements that start with the arms away from the body and pull bands/cables towards the body. Doing so greatly helps keep proper posture, which decreases lower back pain.

Pregnancy ensures the survival of the species. The body's changes make a mother feel something other than human, something more, yet alien. The changes are perfectly natural but come with risks. Performing cardiovascular activity, stretching and strength training can minimize those risks.

Muscle Scar Tissue (Published by Greenmaple Wellness, April 2009)

Many individuals have muscle scar tissue and don't even realize it. They may have limited motion or pain in a joint from an old injury, and they believe there is nothing to be done about it. They are wrong. Prescription medications treat the symptoms of muscle scar tissue but certain techniques, such as massage, foam rolling, and active release, cure muscle scar tissue injuries.

If the body were a puppet show, the skeleton would be the marionette, the muscles would be the strings and the nervous system would be the puppeteer. The nervous system orders muscles to fire and then the muscles manipulate the bones to move in a multitude of directions. All three aspects of the movement parts (sometimes referred to as the kinetic chain) need to be working in proper order to achieve efficient motion. Muscle scar tissue prevents the muscles from moving the bones in an optimum manner. Using the puppet show analogy, muscle scar tissue is as if one of the strings became tangled or broken, preventing the marionette from moving in certain directions without putting other strings at risk of becoming tangled or broken.

What is Scar Tissue?

The body endures many types of injuries – virus, infection, skin damage, nerve damage, broken bones, ligament and tendon strains, muscle tears and more. Different defense and protection systems deal with injury and heal the damaged body part. White blood cells destroy invading microbes. Small portions of microbes can help individuals gain immunity to the specific microbe. After a broken bone is set, minerals (such as calcium) create a bond at the broken juncture. The broken bone bonds can become stronger than the bone was before it broke. The muscles are not so lucky.



Muscle scar tissue can develop from surgeries and injuries, but most individuals develop scar tissue from repetitive motions performed over a long period of time. The forearm extensors (muscles which run from the wrist to the elbow), for example, can be overused by individuals who type or sit at a computer all day or tennis players who use improper form. The resulting injuries are carpal tunnel syndrome and tennis elbow. Both types of injuries develop muscle scar tissue.

The forearm extensors muscle fibers run parallel to each other from the wrist to the elbow. The muscles shorten when contracted and expand during relaxation after a contraction (like a rubber band). Injuries, whether developed from a specific injury or overuse, create tears within the muscles. The body realizes tears have developed and tries to fix them by sending hard proteins to the area. The hard proteins do not simply connect the parallel strands, they seal off the area by creating strands in different directions,

creating a knot. The forearm extensor cannot contract and release as easily after scar tissue has developed, creating pain and weakness.

If the muscle scar tissue was in the neck, shoulders or back, the knot creates pressure on nerves, which sends pain all over the body. The muscle scar tissue will also try to fuse other muscles together, spreading the pain down an entire side of the body.

Curing Muscle Scar Tissue

Common prescriptions designed to decrease the pain of muscle scar tissue are rest, anti-inflammatory medications and pain killers. These prescriptions reduce the symptoms of muscle scar tissue (pain and inflammation) but do little to heal the injury. Massage techniques, self-myofascial release, stretching and Active Release Techniques (ART) are systems designed to treat the injury itself, not just symptoms of the injury.

What causes the most problems with muscle scar tissue is that the healing proteins do not run parallel to the muscles, which creates knots and tightness. A massage therapist will run his or her hands over the injured area in the direction of the muscle. Doing so can alleviate pain by aligning and smoothing out areas of muscle scar tissue. This type of massage is sometimes referred to as a deep tissue massage. A soft tissue release massage may be more effective because the therapist applies pressure to the injured area while stretching the muscle at the same time.

Self-myofascial release (SMR) is completed on a circular foam roller. Foam rollers come in different shapes and sizes but the most common size is 36-inches long with a 6-inch diameter. Using the foam roller for SMR is easy. The individual uses his or her bodyweight to sandwich the foam roller between the floor and the muscle. If an individual has muscle scar tissue on the back, he or she would place the foam roller perpendicular to the spine and roll slowly from the neck to the lower back, pausing at tender areas for one minute. The foam roller can be used on the hamstrings, hip flexors, IT band, adductors, quadriceps, gluteus muscles, piriformis, calves, lower, middle and upper back, latissimus dorsi, triceps and even the pectoral muscles of the chest. SMR is the least expensive way to treat muscle scar tissue.

Individuals with muscle scar tissue can use different stretching techniques to ease the pain and help solve the problem. Corrective and functional flexibility can decrease the pain of muscle scar tissue. Corrective flexibility is used to correct muscle imbalances. It is characterized by static stretching after workouts, holding each stretch for a period of 20 to 25 seconds. Functional flexibility is stretching before a workout with a specific exercise or sport in mind. Functional flexibility uses dynamic stretches that mimic the activity the athlete performs on the court, field, rink, track or course. A hurdler in track will perform walking lunges before hurdling and a golfer would complete band rotations before teeing off on the first hole. Both types of stretching help individuals feel less pain during activity.

Active Release Techniques (ART)

Joints work together in a multi-planar environment known as synergies. Every push has a corresponding pull, for example, the quadriceps (above and in front of the knee) push and the hamstrings (above and behind the knee) pull. During an exercise or stretch, the muscle being worked is known as the agonist and the opposite muscle is the antagonist. When an individual stretches the hamstrings, the hamstrings are the agonist. The quadriceps muscles push from the same joint, making it the antagonist during a hamstring stretch.

Muscles need to relax in order to achieve a proper stretch. The Golgi Tendon Organ (GTO), located where the muscles and tendons meet, allow the muscles to relax. During the hamstring stretch, the GTO springs into action and accepts the pressure of the stretch from the hamstring. With all the pressure on the GTO, the hamstring is free to relax.

Active Release Techniques use the body's synergies to remove the pain from muscle scar tissue. ART practitioners take clients through a variety of tests to determine the exact location of the muscle scar tissue. They then attack the muscle scar tissue by using active flexibility methods.

Active flexibility improves the neuromuscular efficiency of a muscle. Going back to the puppet show analogy, ART not only untangles the strings, but it also helps the puppeteer learn how to not tangle the strings in the future. Active flexibility is characterized by contracting and relaxing muscles.

If muscle scar tissue has developed in the hamstrings, ART places them in a stretched position for approximately 10 seconds. Then the hamstrings contract and pull for 5 to 8 seconds. When the hamstrings relax again, a greater range of motion will occur. Contracting the quadriceps to straighten the leg during a hamstring stretch is another technique of ART. The two forms of contract-release can be repeated many times during one ART session.

Individuals can perform ART alone but it is best with a partner or under the supervision of a trained professional. Research your area to find a personal trainer or an ART practitioner to help cure muscle scar tissue.

Training for Your First Run (Published by Greenmaple Wellness, November 2008)

Struggling with your training? Perhaps you just want to get fit. "Training for Your First Run" explains how to perform several different types of cardiovascular workouts. These workouts - light days, steady state runs, and intervals - can be followed by anybody, regardless of fitness levels. Also included are step-by-step instructions on the Maximum Aerobic Function (MAF) test. The MAF test is a short, easy trial run that monitors your training progress.

"Couch to 5k" programs are becoming very popular all around the world. They are designed to help the sedentary individual become active and get fit in as little as eight weeks. While "C25K" works for many, the most common complaint about these programs is that the training program advances too quickly. All individuals progress at different rates, especially in regards to the cardiovascular system. Running is more difficult to begin than weight lifting. Think of the body as an electrical outlet. Biceps curls (a weight lifting exercise) are like plugging a hair dryer into the outlet. Running is like plugging a hair dryer, a television, a light and a microwave into the same outlet. The outlet needs a sturdy fuse and a large power source. To run effectively, the body needs a nervous system in proper working order, large lung capacity, a strong heart, open blood vessels and the muscles need the ability to convert oxygen into energy. Three types of cardiovascular workouts fill all of these needs.

Light Days

Light days are characterized by easy to moderate exercise intensity. Beginners should use this day to get some fresh air, get the heart rate elevated and learn to enjoy exercise. Light days also teach the body how to burn fat efficiently.

During the light day workout, you should be able to breathe normally, carry on a conversation easily and even be able to sing if needed. Walk for 20 to 60 minutes and use these in the beginning weeks of training. Increasing the duration of light workouts over time builds endurance.

Light days can also be used by those with intermediate fitness levels. The purpose of light days for intermediate to advanced athletes is recovery. Everyone, regardless of fitness levels, should take one day a week off to rest the body. Light walks work out muscular soreness and prepare the body for the next intense training session.

Steady State Training

Steady state training runs are characterized by moderate to hard intensity. Steady state runs help individuals push through discomfort and fatigue. During this run, you should be able to talk but you should not be able to sing. The body will feel a slight burn in the muscles as well.

Steady state training runs should be used as a standard for test runs. Run at a pace you wish to run in the actual race. If the race you are preparing for is a 5k or 10k, run that distance. Use steady state training runs as a dress rehearsal, so when the race comes, you will feel no surprises.

Interval Training

Interval training can be performed using incline, speed, equal time and the ladder method. Interval training increases endurance, the body's ability to burn fat, oxygen utilization, and strengthens the heart and muscles. Intervals are meant to be as fun as they are challenging.

Incline intervals work the hamstring and gluteus muscles as well as the heart. Incline intervals can be performed outside or indoors. Outside, find a hill. Walk up and down the hill one or two times as a warm up. Next, try to run/jog up the hill one or two times. Try to time how long it takes you to reach the top as a performance marker. To add more variety to the workout, shuffle sideways up the hill, and perform sit-ups or pushups at the top or bottom of the hill.

Inside, perform incline intervals on a treadmill. Increase the incline of the treadmill every two to five minutes until you are out of breath, and then return to walking on a flat surface. You can also pick an incline that you can manage for the entire workout. Doing so will build strong hamstring muscles.

Speed intervals increase the strength of the quadriceps muscles and the amount of blood pumped per heartbeat. Increasing the amount of blood pumped per heartbeat decreases how many times the heart has to pump during exercise and at rest. Similarly to incline intervals, speed intervals can be performed indoors or outdoors.

Inside, speed intervals can be performed on a treadmill or elliptical machine. Warm up by walking for 5 to 10 minutes. Then increase the pace for 30 to 60 seconds. When you become out of breath, decrease the pace and walk until you feel like you are ready to increase the speed again. Use your recovery time as a standard for improvement. The heart becomes stronger as the recovery time decreases.

Outside, speed intervals can be performed on a track. Walk and stretch for 5 to 15 minutes as a warm up. Run 10 to 120 seconds and recover by walking. Again, use how long it takes you to recover as a standard of improvement. The ultimate goal should be to run and recover for an equal amount of time.

Equal time intervals should be performed no more than once a week. Equal time intervals can be performed using speed or incline methods of work/recovery. The amount of time spent at a high incline or speed should equal the time spent recovering. Equal time intervals can be as little as 10 seconds or as long as 4 minutes.

The ladder method of interval training is best performed indoors on a treadmill or elliptical machine. The ladder method is a combination of all other intervals and the steady state run. As always, warm up before beginning exercise. Increase the intensity slowly by using speed or incline. After a set amount of time (eg. 2 minutes), increase the intensity again. Using 2 minutes as an example, it should take you 10 minutes to reach a steady state feeling. You should be able to talk but not be able to sing. Stay at the steady state pace for two minutes and then gradually decrease the intensity every 2 minutes until you are at a warm up pace. Repeat 2 to 3 times.

M.A.F. Testing

The Maximum Aerobic Function test measures improvement. After a warm up, start a timer and begin walking or jogging. Record the time of each mile and go 2 to 4 miles. Using a 12-minute mile pace as an example, write down 12 minutes at mile one, 24 minutes at mile two, and so on.

The MAF test provides feedback in many areas.. It records the overall time for overall improvement. The MAF test also helps you determine your race strategy. If your mile time increases as the miles add up, you need to slow down in the beginning of the run. In a road race, the mile times should be consistent. If the final mile takes a significantly less time to complete than the first (eg. 2 minutes less), then you can most likely pick up the pace in the first mile.

Use the information from the MAF test so you have a plan coming into the race. The most common mistake individuals running their first race make is starting out of the gates too quickly. We understand, you have been training for this race for at least 8 weeks. The time has finally come and you are excited to begin. Be smart about it. Stick to the game-plan so you can finish the race not only with your best time ever, but without feeling too much pain as well.

Extra Advice

Train three to five days a week. Make sure to stretch after every workout. Do not train more than 90 minutes in one day, and that includes warm up and cool down.

Use a combination of light days, steady state runs and intervals. Complete the MAF test on the first day of training. After the race, you will be surprised how much you have improved over such little time. Replace the steady state runs with the MAF test every three weeks.

Do not cross train within eight weeks of the run. Lance Armstrong is the all-time greatest cyclist but he is not a great runner. The muscles adapt to the demand placed upon them, so if you want to be a good runner, run.

Always build a support group. The support group can be family, friends and training partners. Support groups and training partners help keep you motivated. They also make the workouts more enjoyable.

Have fun during training! Keep the love of exercise in mind and not the rewards. If you love what you are doing, the rewards will come.

As always, consult your physician before beginning any exercise program. If you have any additional questions, feel free to consult a personal trainer at your local health club.

Strengthening the Lower Back (Published by Greenmaple Wellness, October 2008)

Experience lower back pain? How can it be treated? Chronic lower back pain can be reduced with proper body mechanics, strengthening the core muscles and improving flexibility.

Approximately 80% to 90% of the population suffers from lower back pain during a lifetime. In the United States alone, over \$26 billion is spent on lower back medical claims. The \$26 billion does not even include worker's compensation or disability. Besides the economic drain, lower back problems are one of the most painful injuries individuals suffer. The pain is not relegated to the spine. A pinched nerve can radiate shooting pain down the legs, around the pelvic region or even up the back. Science has discovered the causes. Physical therapists know how to treat the symptoms. But how can you avoid lower back pain before it strikes?

Low Back Pain Causes

A variety of issues cause lower back pain, including obesity, inefficient body mechanics, an inactive lifestyle and poor posture. Each issue causes weakness in some muscles and tightness in others. The weak/tight muscle combination is known as muscle imbalances.

The average office worker sits at his or her desk, staring at a computer screen, six hours per day. While seated, the hip flexor muscles (where the leg connects to the pelvis in the front of the body) gradually become accustomed to a bent position. The bent position creates tightness in the hip flexors. Sitting has the opposite effect on the gluteus muscles of the rear, as a seated position forces them to stretch. The prolonged stretched position causes the gluteus muscles to weaken.

Tight hip flexor muscles and weakened gluteus muscles is just one example of a muscle imbalance caused by excessive sitting. The same imbalance occurs with the abdominal muscles (tight) and the lower back muscles (weak). To make matters worse, slouching to type on a keyboard constricts the pectoral (chest) muscles while weakening the upper back muscles. The proliferation of muscle imbalances causes the body to become "stuck" in a hunched body position, making good posture impossible.

These muscle imbalances can be minimized with an active lifestyle; however, many individuals remain inactive. An inactive lifestyle and not monitoring food intake lead to obesity. Obesity places a tremendous amount of stress on the spine, providing an environment conducive to bulging discs.

Another cause of lower back pain is poor body mechanics during movement. Many individuals do not follow ergonomically-correct movement patterns for picking objects up off the floor, twisting or getting up and down off the floor. Over a long period of time, poor body mechanics can lead to an individual "throwing out" the back just by picking up a piece of paper off the floor.

Strengthening the Lower Back

A study performed by Dettner, et al, at the Department of Public Health and Caring Sciences at Uppsala University in Sweden, found core coordination training to be more effective at treating lower back pain than massage. Patients in the study sat on top of a stability ball for 7 minutes twice a week. The patients were ordered to balance themselves without the help of the feet or hands. Each treatment session consisted of 7 one-minute balance periods with 30 seconds of rest between sets. The treatment was used for 4 weeks. The patients claimed a significant decrease in disability and pain after weeks 2 and 4. The massage patients did not claim a decrease in disability.

When muscle imbalances proliferate, deep core muscles fail to contract. The stability ball group achieved results because while balancing on the ball, the core muscles were forced to react to unstable stimuli. The re-activation of the core muscles created an improved nervous system and thus better coordination of muscle contractions.

Physical therapist's lower back rehabilitation programs build upon coordination programs with three basic exercises – the cat-camel, bird-dog and floor bridges. Physical therapists will also concentrate on increasing flexibility in the hamstrings.

The cat-camel exercise is performed on the hands and knees. The patient tucks the belly-button in towards the spine and arches the back like a scared cat. The next part of the movement is releasing the abdomen and then pressing it towards the floor, creating a "U" shape in the spine.

The bird-dog exercise is also completed on the hands and knees. To complete, keep a flat spine position while extending one arm forward. Simultaneously lift the opposite leg and point it backwards. Return to the starting position and alternate hands and legs.

Floor bridges are performed lying on the back with the knees bent so the heels are just inches away from the rear. Push the heels down into the floor and raise the hips as far up as possible while squeezing the gluteus muscles. The cat-camel, bird-dog and floor bridges counteract muscle imbalances by stretching the hip flexors and abdominals while strengthening the gluteus and lower back muscles.

Stretch the hamstring muscles (on the back of the leg) on a daily basis. Flexible hamstrings are a lower back's best friend. If the hamstrings are tight, the legs do not straighten while walking, jogging or walking up steps. A bent-knee position causes the stress to move from the hamstrings to the lower back. When the hamstrings are flexible, the leg is able to extend during movement, keeping the stress on the hamstrings and not the back.

A well-qualified personal trainer can gradually implement strength training exercises as lower back pain decreases. Personal trainers at your local health club, when aware of your lower back problem, can implement a routine to strengthen the lower and upper back and neck while stretching those tight pectoral muscles. The strength training routine will consist of many rows and the reverse fly, but the hard work will be worth it when you see noticeable improvements in your posture and reduction of lower back pain.

Quick Nutritional Note

Insulin is the most powerful anabolic hormone. Defined, an anabolic hormone grows tissues. Foods such as rice, pasta, potatoes and bread create an insulin surge. If an individual wishes to avoid growth, high insulin response foods should only be consumed before or after vigorous bouts of exercise. Doing so will limit weight gain and the possibility of bulging discs.

Proper Body Mechanics

Taking steps to correct body mechanic flaws may seem like a boring and daunting task, and it is. The good news is that when you create a habit of moving properly, the correct movements become ingrained in the brain and remain forever. Proper body mechanics also strengthen the lower back.

Lifting objects off the floor can be safely performed in three ways. The first way is the two-leg squat lift. The two-leg squat lift is efficient when lifting objects such as laundry baskets. Using the laundry basket example, bring the feet as close to it as possible. Bend both knees with the stomach tight, grab the basket with both hands and stand while using the legs to lift.

The second way to safely lift objects off the floor is the one-knee lift. The one-knee lift is best used when picking up children or unusually shaped objects. Using a child as an example, stand close to the child. Bend down until you are kneeling on one knee with a straight back. Stand from this position with the child in both arms.

The third and last way to safely lift objects off the floor is the golf pickup. The golf pickup is used for movements such as picking clothes out of the bottom of a washing machine. Using the washing machine as an example, place one hand on a wall or similar stationary support. Then reach the other hand into the washer while lifting one leg off the ground. Keep the back straight and rise slowly.

Getting up and down off the floor is another important body mechanic issue for the lower back. To get down on the floor, go down on one knee. Bring the other knee down as you place your hands on the floor in front of you. Lower yourself as if you are performing a pushup until you are flat on the floor. You can roll over on your back by simply rolling. Get up off the floor by reversing the steps.

Conclusion

No one thinks about lower back pain until it happens to them. Following the steps to treat lower back pain, before it occurs, reduces the likelihood of spinal injuries.

While untreatable occurrences, such as arthritis, may continue to cause occasional discomfort, the pain can be reduced by balancing muscle imbalances; keeping track of nutrition and moving with proper body mechanics.

10 ways to get a beach body fast (Published by Examiner.com)

Many individuals use the “T” word (tone) when discussing health and fitness goals. They wish to lose fat and build muscle. And they want it as fast as possible. Unfortunately, there are no magic pills, diets or exercises that will do it. It takes effort, but it can be done if these tips are followed.

1. Use Calorie King to count calories or keep a food journal. Fat should be less than 30% of total calories. The other 70% should come from fish, lean meats, fruits, vegetables and whole grains.
2. Perform total body strength training workouts. Heart rate is the most significant factor of how many calories are burned during a workout, and total body workouts increase the heart rate more than one body part per day.
3. Be “good” on the weekends. Too often, dieters eat right and exercise Monday through Thursday, and then blow it on Friday night, Saturday and Sunday by consuming too much alcohol and/or food.
4. Strength train two to four times a week. Each workout should consist of a squat, bend (picking up something off the floor), lunge (or step-up), and upper body push, pull and twist.
5. Avoid junk food advertising tricks. Boxes of junk food in the local supermarket say “only 100 calories” or something similar. 100 calories of junk food is still junk food.
6. Perform interval cardiovascular workouts. While aerobics and long-distance running may burn more calories during a workout, sprints/intervals burn up to nine times more calories after a workout.
7. Eat five to six small meals per day. Many, small meals help keep hunger in check and increases metabolism.
8. Don’t waste time doing hundreds of arm curls. Bicep curls do not burn a lot of calories. Pull-ups, pull-downs and rows will burn more calories than curls, while still working the biceps.
9. Avoid late night snacking. Why? Individuals do not grab an apple at eleven o’clock at night. They grab buttery, salty popcorn or fatty, sugar-filled ice cream.
10. Stay active. When combined with a well-balanced diet and exercise program, taking walks at lunch and taking the stairs will only help increase the amount of calories burned.



The key to losing fat is increasing the amount of calories burned. Follow these steps and the fat begin to vanish.

45 Quick Fitness Tips (Published in a series on iGoogle.com)

1. Flexible hamstrings decrease lower back pain by relieving stress placed upon the back. Stretch your hamstrings in the morning, before bed and after exercise.
2. Medicine balls are great way to incorporate fun during workouts. Throw the medicine ball, slam it or even place one under a hand while doing pushups.
3. Music can decrease the feeling of exhaustion during exercise. The best running songs are less than 4 minutes long with fast beats and rhythms.
4. During daily activities, you move forward and back, side to side and turn. Be sure to incorporate all three motions during weight training sessions.
5. Some people lift weights but don't stretch. Other people stretch but don't lift weights. Do both. The body works best when it is strong and flexible.
6. For every push movement there is a corresponding pull. The strength of these movements is related; so if you want a strong bench press, do tons of rows.
7. So you've finished exercising and need to stretch. Static stretch after the workout. Stretch every tight muscle and hold each stretch for 20 to 25 seconds.
8. Static stretching cools the body down so don't do it as a warm-up. Perform active or dynamic stretches like calisthenics before your workout.
9. When it comes to stretching, the old saying "no pain, no gain" is false. If there is pain during stretching there will be no gain. No pain equals gain.
10. Have a sore shoulder? Increase the duration of your warm-up, avoid direct shoulder work, and perform upper body exercises with palms facing each other.
11. During your next leg workout, do squats, dead-lifts, lunges, step-ups and leg presses. These exercises provide the most work in the smallest amount of time.
12. If you have a bad or sore lower back, avoid barbell back squats, dead-lifts and full sit-ups. Instead, complete squats with dumbbells in your hands and half-crunches.
13. The body squats, bends, lunges, pushes, pulls and twists. Perform these movements every week and you'll train every muscle in the body.
14. Beginners should use machines until they learn the basic movements of weight lifting. After the body learns the movements, advance to free weights.
15. How many repetitions should you do? For strength, perform 1 to 5 repetitions. For muscle building, do 6 to 12 and for endurance, perform well over 12 repetitions.
16. The number of sets you complete is dependent on the goal. Do 8 to 10 sets for strength work, 4 to 7 sets for hypertrophy and 1 to 4 sets for endurance.
17. Take 3 to 5 minutes rest between sets during maximal strength training, 1 to 2 minutes rest for muscle building goals and 1 minute or less rest for endurance.
18. All people should exercise at least 30 minutes a day, 6 to 7 days a week. If your schedule doesn't allow for 6 days, increase the duration of the workout.
19. Each bout of exercise should be at least 30 minutes in duration. However, exercise can become counter-productive if it lasts longer than 90 minutes.
20. Supersets are a great way to complete more work in less time. An example of a superset is squats and leg presses completed in succession with little to no rest.
21. Weight training circuits burn tons of calories. To complete a circuit, perform exercises for the chest, back, legs and shoulders with little to no rest.
22. If you want to add lean muscle, complete workouts with lots of repetitions and less rest. To add mass, decrease repetitions and increase rest time.
23. You can grow muscle in two ways. The first is to lift lots of heavy weight. The second way is to keep stress on the muscle for 30 to 70 seconds per set.

24. Use functional training exercises that mimic everyday activities. Performing dead-lifts in the weight room makes picking up and holding babies almost effortless.
25. Multi-joint exercises burn more calories than single joint exercises. For example, squats burn about seven times more calories than leg extensions.
26. A common question people have is whether they should lift weights or perform cardiovascular activity first. No more guessing, it's weights first.
27. You cannot "spot" train one part of the body. Pick exercises that burn the most calories and you will burn fat in the whole body, including the problem area.
28. Proper form is the key to a safe and effective workout. Improper form is like spinning wheels, going nowhere and you can't train at all if you're hurt.
29. A proper warm-up decreases the risk of injury and makes for a more efficient workout. Perform a rhythmic activity for 5 to 10 minutes and actively stretch.
30. A proper cool-down helps the body return to balance after a workout. Walk slowly for 5 to 10 minutes and then static stretch the worked muscles.
31. Always train the biggest muscles first. If you're training upper body, back muscles first, then chest, followed by shoulders, triceps and ending with biceps.
32. The "core" is any muscle connected to the pelvis, sacral or lumbar spine. It is the center of gravity and also the center of all strength. Don't neglect it.
33. Ballistic training, also known as plyometrics, is any exercise that requires explosive strength, like jumping. Do this to gain speed and power.
34. If you have knee problems, be sure to stay away from heavy weight, complete lower body exercise one leg at a time and stretch the quadriceps muscles daily.
35. When performing abdominal training, work the lower abdominal muscles first, followed by the oblique muscles and end with the upper abdominal muscles.
36. Foam rollers are an inexpensive and convenient way to release muscle knots. Just put the tight muscle on top of the foam roller and hold until the muscle relaxes.
37. New studies have shown that sprints burn nine times more calories after a workout than long-distance jogging. Sprints also assist in building muscle.
38. Make sure any new exercise program you find fits into your schedule before starting. The program won't be effective if you can't do all the days required.
39. Pregnant but still want to lift? Perform dumbbell squats with feet wider than shoulder width. For upper body, use cables while standing as much as possible.
40. Standing on one leg is a sure-fire way to prevent cheating during upper body exercises. You'll know if you tried to cheat because you will lose your balance.
41. The Stability Ball (a.k.a. Swiss/Balance) really works the core during exercise. Crunch, push and pull on a stability ball to build strong, lean abdominal muscles.
42. Re-evaluate your progress every four to six weeks. Check your weight, body fat percentage and strength gains to make sure you're going in the right direction.
43. Want to know if you're working at the right intensity during cardio? If you can sing, you're not working hard enough. If you can't talk, you're working too hard.
44. Fear you are over-training? If you are, your body will show symptoms of a sedentary lifestyle, like low energy levels and achy joints. Take off five days.
45. Know the difference between burning muscles and pain. A burning sensation tells you that your muscles are being worked. Pain tells you that damage is being done.

Review of Jillian Michaels' 30-Day Shred Program (Published by Examiner.com)

Jillian Michaels, celebrity trainer of TV's "The Biggest Loser", developed and filmed "30-Day Shred" so everyone could have a taste of what the contestants go through on the show. Part 1 (level 1) is for those who have low fitness levels. Part 2 (level 2) is more difficult, although shorter, with a run time of only 20 minutes. This workout is more advanced from the start, as the warm-up includes more cardiovascular elements.

Neither part 1 nor part 2 of the 30-day shred workout requires complicated equipment. Most of the exercises can be completed with body weight. Even if an individual doesn't own dumbbells, the movements can be challenging without them.

The workout begins with a warm-up of active stretches. The workout is then designed around 3 minutes of strength training, followed by 2 minutes of cardio and then 1 minute of abs. The only equipment necessary is dumbbells.

- Unlike many videos and/or group exercise classes, Jillian takes time to teach proper form, which is good.
- One actor performs the advanced movement and the other performs modified, easier progressions of the same exercise, also beneficial.
- She rips the "taking the escalator" approach of increasing movement in everyday life, in favor of standard workouts. Why not do both? Taking the escalator and finding other ways to increase movement, such as parking farther away at the mall, can only help weight loss and fitness goals.
- People don't realize how hard it is to film these videos. The actors must perform these exercises for hours during filming, which can be draining.
- Jillian knows most individuals can do more than they think they can. The body will keep moving if the mind tells it to. Athletes have known this for many years, but the general population needs to have the confidence they can keep going and lose weight.
- During the cool-down, one will notice Jillian's shocking lack of flexibility.

Like any exercise routine, it can be nitpicked, but this author has seen no glaring holes in the actual workout. The problem is with the tagline. "You could lose up to 20 pounds in 30 days."

Translated, that means one individual lost 20 pounds in 30 days, and it is possible for the morbidly or super-obese. For the rest of us, don't expect to lose more than a couple pounds a week. Significant industry studies have found the majority of individuals who lose weight and keep it off do so by losing 1 to 3 pounds a week.

When beginning reviews of Jillian's work, this writer didn't want to like the workouts. However, Jillian is a good trainer. She knows how to get the most out of her clients, and this knowledge translates well in her videos.

Jillian Michaels' "30-Day Shred" can be purchased by DVD. Individuals with Comcast On Demand can watch the workout in the Exercise TV section.

Pain: top 7 injuries and physical therapy basics (Published by Examiner.com)

The advances in sports medicine have allowed athletes to get back onto the field and court faster than ever. All athletes, from the professionals to the weekend warriors, experience common injuries – tennis elbow, lower back pain, neck pain, shoulder pain, and develop arthritis in joints.

The goal of physical therapy and sports medicine is to ensure the injuries are overcome. The following list details common injuries, exercises to avoid and exercises to do when a body part is injured.

1. Sprained ankle

Avoid: quick changes of direction

Do: barefoot training, foot circles

2. Knee injury/Knee replacement

Avoid: heavy leg extensions and leg curls

Do: work on balance, flexibility and contracting the quadriceps

3. Lower back pain

Avoid: full sit-ups, barbell squats and dead lifts

Do: crunches, arm opposite-leg reach, stretch hamstrings and hips

4. Shoulder Pain

Avoid: behind-the-neck presses and pull-downs

Do: dumbbell raises and presses with palms facing each other

5. Tennis Elbow

Avoid: the repetitive movement that caused the injury

Do: perform movements with wrists locked, allowing larger, stronger muscle groups to work.

6. Neck Pain

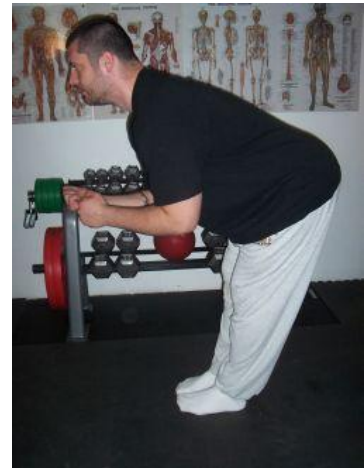
Avoid: upright rows, behind-the-neck pull-downs and presses

Do: neck curls and side neck bends

7. Middle (Thoracic) back pain

Avoid: heavy shrugs and overhead presses

Do: use foam roller (if available), lying “hug yourself” stretch



After suffering any injury, consult a physician and follow the RICE method – rest, ice, compression and elevation, for 24 to 48 hours.

About Weight Measurements (Published by ehow.com)

Weight measurements are used to determine an individual's health and fitness level. The measurements are taken in a variety of ways, each with varying accuracy. Each variety of weight measurements has specific ranges for fitness, health and obesity.

Types

The three most common weight measurements are the scale, the Body Mass Index (BMI) and body fat percentage. The scale is the least accurate measurement when determining health and fitness. The Body Mass Index is a relatively better barometer. The body fat percentage is the most accurate weight measurement when relating the measurement to health and fitness levels.

Features

The scale is pretty self-explanatory. Step on it and it will tell you how much you weight. The Body Mass Index provides individuals with goal weights depending on height. The BMI equation is weight (in kilograms) divided by height (in meters) squared. The BMI chart classifies individuals from severely underweight to hyper obese. An individual is considered underweight if the BMI is under 18.5. An individual becomes overweight when the BMI measurement is over 25 and is obese with a BMI over 30. The normal, healthy BMI range is between 18.5 and 25.

Function

Body fat percentage can be calculated by a bio-electrical impedance, calipers and a full body scan. The full body scan is the most accurate method but can be expensive. The caliper measurement is the most popular method of determining body fat percentage. Most fitness professionals and doctors use the calipers on the right side of the subject's body. The professionals pinch the fat on the back of the arm, midsection and thigh. Measurement spots can differ between male and female subjects, as males are often pinched at the chest instead of the arm.

Considerations

Neither the scale nor BMI takes an individual's bone structure or lean muscle mass into consideration. Bodybuilders with six percent body fat are often measured as "obese" classification when using the scale or BMI. They are obviously not obese. Any individual who has a wide bone structure or much muscle mass will struggle to get into the "healthy" range of the Body Mass Index.

Expert Insight

According to the American College of Sports Medicine, females should never rise above 35% body fat and males should never go above 25%. The athletic range for men is between 8% and 12% and 16% to 20% for females. The healthy body fat percentage range for women is between 21% and 29%. The healthy body fat percentage for men is between 18% and 22%.

About Workout Schedules (Published by ehow.com)

Finding time to exercise can become a chore. However, fitness must be made a priority. Plan workout schedules to stay consistent and stay accountable. Find a workout split that is streamlined with your goals, and don't become the typical weekend warrior.

Considerations

The planned workout schedule should be laid out 4 to 6 weeks in advance. When you plan your schedule, write down every life event beforehand so you don't overbook yourself. You should plan one or two days a week to take off from exercise. Know which days of the week seem to be your busiest, and don't exercise these days. These "off" days do not have to be the same days each week. Depending on your goals, schedule cardiovascular activity and strength training workouts at least 2 days a week each.

Benefits

It takes 2 to 4 weeks to create a habit. Putting together a workout schedule helps individuals create the habit of exercise. Writing workouts on your schedule makes you accountable to your fitness. As with anything in life, you need to have a plan of action to achieve a goal.

Expert Insight

Fitness enthusiasts talk often of exercise splits. Exercise splits refer to strength training workouts. Individuals can split body parts in seemingly endless variations. The whole body can be worked two to three times a week, depending on your fitness level and recovery time. When you split the workout in to less and less muscle groups worked, the number of exercises and sets working each body part increases. For example, a common exercise split is working chest/shoulders/triceps (push muscles) one day and legs/back/biceps one or two days later. You can work all the upper body one day and the legs and abdominal muscles another. Other workout routines call for upper body push (chest/shoulders/triceps) and lower body pull (hamstrings/gluteus/spinal erectors) and then upper body pull (back/biceps) with lower body push (quadriceps). The variations continue until you work one body part per day. The exercise split chosen will depend on your goals.

Warnings

If your workout schedule demands cardiovascular and strength training workouts on the same day, strength train first. You should exercise anywhere from 30 to 90 minutes per day. Anything over 90 minutes can become counter-productive. It is better to schedule more short workouts during the week than exercising for 2 hours, 2 days a week.

Misconceptions

All is not lost if you miss a day on your workout schedule. Do not use one missed workout to fall off the exercise wagon. Make up the day on an off day if possible, and if not, just go on to the next workout. Keep working toward your goals.

Adrenal Gland Function (Published by ehow.com)

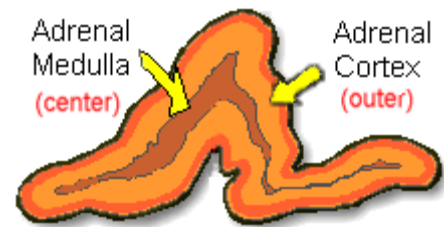
The adrenal gland functions as a part of the endocrine system and releases hormones within the body. The role of hormones is to go to the other systems of the body, ordering cells when to activate and when to stop activity. The adrenal gland gives orders to the sex organs, plays a role in metabolism and manufactures sympathetic nervous system response (fight-or-flight) hormones.

The adrenal gland sits on top of the kidney. It has an inner medulla and outer cortex. The inner medulla produces epinephrine (adrenaline) while the outer cortex produces cortisol.

The adrenal glands produce cortisol. **Cortisol** is a steroid hormone that is used to bring **homeostasis** (balance) back to the body during a period of stress. Thus, the nickname “stress hormone.” Cortisol is an antagonist to insulin and breaks down fats and proteins. Therefore, it plays a role in controlling how the body uses nutrients. It does this by selecting the best nutrient to meet placed demands. Cortisol is linked to weight gain for two reasons. First, cortisol moves fat from the liver to the deep abdominal muscles. Second, cortisol increases appetite.

Television commercials promise weight loss by inhibiting the effects of cortisol release. No one gains weight simply because of an increase in cortisol. Proper nutrition, sleep and regular physical activity go a long way to reducing stress, thus, reducing cortisol. These steps are a long-term solution; pills are part of the problem.

Prolonged secretion of cortisol causes hypoglycemia and weakens the immune system. The effect on the immune system is why cortisol is used to treat allergies, because allergies are a result of a hyperactive immune system.



While the outer layer (cortex) of the adrenal gland produces cortisol, the inner layer (medulla) produces epinephrine, also known as adrenaline. **Epinephrine (adrenaline)** works with the sympathetic nervous system to elevate heart rate. Adrenaline also prompts carbohydrate metabolism.

A release of adrenaline is called “adrenaline rush” because it is the most important hormone in “fight or flight” sympathetic nervous system responses. When the central nervous system deems a situation to be dangerous or an emergency, adrenaline is released.

Adrenaline increases heart rate and stroke volume, as well as dilates the muscles of the legs. It also increases blood sugar by prompting the use of glucose. The increase in blood and energy flow heightens oxygen and glucose delivery to the muscles and the brain. The overall feeling of an adrenaline rush is profoundly positive.

Epinephrine (adrenaline) is used to treat cardiac arrest and / or cardiac dysrhythmias. A scene in the movie *Pulp Fiction* made this treatment part of popular culture.

Alternatives to Human Growth Hormone Therapy (Published by ehow.com)

Human growth hormone (HGH) therapy has become a highly controversial topic. The sports media glorifies HGH therapy by discussing it constantly while vilifying those who have or were suspected of using it. Meanwhile, human growth hormone therapy is perfectly legal with a doctor's prescription and is even advertised at so-called "anti-aging" clinics. The public begins to question the safety of human growth hormone therapy, what it does, if it works, and the alternatives to synthetic injections.

Growth hormone, naturally produced by the pituitary gland, plays a major role in the growth of all tissues, including muscle. Growth hormone helps individuals grow muscle, which in turn will raise metabolism, burn fat, improve brain function and improve cardiovascular output.

Side Effects

Side-effects of human growth hormone therapy injections may include elevated blood pressure, carpal tunnel syndrome and enlarged breasts. Large HGH injections can cause adverse effects on the pituitary gland, as it may shut down production of natural growth hormone because the body is getting it another way.

Misconceptions

HGH therapy can only be effective if taken by means of injection. The body never loses the ability to produce high levels of growth hormone. However, natural growth hormone production slows with age, poor diet, stress, smoking and drug and alcohol consumption.

Exert Insight

Growth hormone is released during deep REM sleep. Make sure the bedroom is as dark as possible and try to get at least 8 hours of sleep per night. Weight lifting produces a positive growth hormone response from the pituitary gland. Growth hormone can be secreted for approximately an hour of strength training and will begin production again as muscle recovery begins. Many studies have concluded that a decreased rest time between weight lifting sets increases the amount of growth hormone production. Growth hormone is also produced during cardiovascular activity up to 90 minutes in duration. Extreme intensity for at least 10 of those minutes maximizes output.

Considerations

Many foods can assist in increased growth hormone production as well. Foods that produce a large insulin response will also provide a growth hormone response because insulin is the most powerful anabolic hormone in the body. While starches may be harmful for individuals with arthritis, they can be very anabolic when consumed right before or after a workout. Citrus fruits and berries do much of the same. Other foods that can help with growth hormone are fish, chicken, organic red meat and dairy products, eggs and nuts and seeds. Processed foods can decrease the pituitary gland's ability to produce growth hormone.

American Heart Association Guidelines for CPR (Published by ehow.com)

The American Heart Association teaches laypeople how to perform emergency first aid and cardiopulmonary resuscitation (CPR). CPR is designed for non-medical personnel to help victims who are believed to be going through cardiac arrest. CPR “buys time” until emergency medical personnel arrives to assist the victim. The Occupational Safety and Health Administration (OSHA) requires many service industry employees to be CPR certified.

Considerations

Make sure the area you are going to perform CPR is safe and flat. Clear the area and have another individual call for help. Have another individual go get a first aid kit and automated external defibrillator (AED) if available.

Effects

Check the victim for consciousness. If the individual is non-responsive, begin performing CPR immediately.

Misconceptions

Non-medical personnel should not check an unresponsive victim’s pulse or signs of circulation.



Function

Perform 30 chest compressions after giving 2 rescue breaths. Give 2 compressions every second.

Benefits

CPR can double or triple a victim’s chance of survival if performed immediately after the damaging incident. If you are not confident or certified in CPR, perform chest compressions. You could save a life!

Cholesterol Lowering Diet (Published by ehow.com)

When doctors measure an individual's cholesterol, they receive numbers for total cholesterol, the ratio between low-density lipoproteins (LDL = bad) and high-density lipoproteins (HDL = good) and triglyceride levels. Individuals are in danger of heart disease and stroke when total cholesterol is higher than 200mg/dl, if LDL (bad cholesterol) outweighs HDL (good) and if triglyceride levels are high. The quickest way to lower these bad cholesterol/fat levels is through the diet.

Foods

Avoid saturated and trans fatty acids. Saturated fats are solid at room temperature, like bacon grease. Saturated fats are found in all animal fats; however, a cholesterol lowering diet does not need to be vegetarian. Saturated fats should comprise less than 10% of a diet and total fats should consist of no more than 30% of any diet.

Trans fatty acids are unsaturated oils with added hydrogen. Even small amounts of trans fatty acids significantly lower "good" cholesterol while raising "bad" cholesterol levels. They also increase the risk of diabetes. Individuals with high cholesterol should also avoid smoking.

Individuals with high cholesterol should consume proteins through a variety of lentils, including pinto beans, lima beans, kidney beans and navy beans. While lentils are not complete proteins, complete proteins can be formed by mixing lentils with high-fiber foods (see next section).

Animal meats contain complete proteins. Lean meats, such as skinless chicken and turkey, can be consumed in moderation when trying to lower cholesterol. Fish is also highly recommended.

Foods high in fiber have been found to lower cholesterol levels. Oatmeal, barley and whole grain products lower total cholesterol levels because fiber decreases the body's absorption of cholesterol. Apples, pears and prunes contain high amounts of fiber as well (the actual fruits, not fruit juices). Eat 25 to 30 grams of fiber each day.

Omega-3 fatty acids contain good cholesterol and little to no bad cholesterol. Omega-3 fatty acids lower triglyceride levels as well as help prevent heart disease. Omega-3 fatty acids are found in many types of fish, including salmon, sardines, shrimp, clams and oysters.

To receive the health benefits of fish oils, fish should be baked or grilled. Individuals who do not like to eat fish can supplement with fish oils.

Almonds, walnuts, olive oil and flaxseed oil provide cholesterol lowering benefits as well. The calorie content in these foods comes almost exclusively from fat, so be careful with serving sizes. Read the labels to learn serving sizes – they are typically less than many would think. Consuming too many calories can cause weight gain, which would negate positive health benefits of these foods.

Lastly, exercising 30 minutes per day will decrease cholesterol levels. Combining a cholesterol-friendly diet with an exercise program can produce significant health benefits in just 4 weeks.

How to Perform a Cable Wood Chop (Published by ehow.com)

The majority of injuries occur when the body is twisting. The Cable Wood Chop can help limit injuries caused by throwing a ball, swinging a golf club or even moving heavy grocery bags from the shopping cart to the trunk of a car.

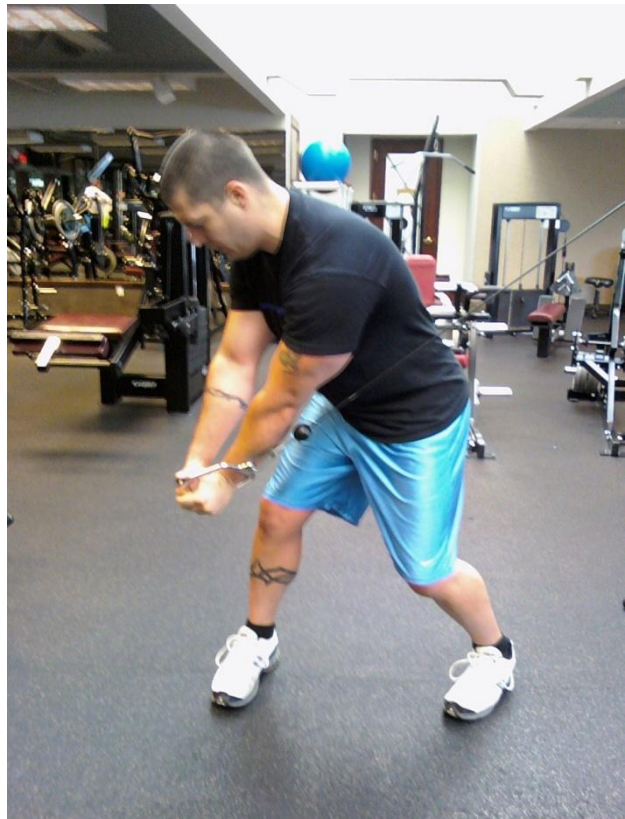
When setting up your body position, place your feet places slightly wider than shoulder width. Stand perpendicular to the cable/band. Hold the cable/band with your arms completely straight. When using a cable cross machine, you can use a regular handle or a rope handle.

To complete, start by twisting your body and raising your arms above the shoulder closest to the cable/band. The twisting should be performed by the core – it's not a shoulder movement.

Now twist the opposite direction and bring the handle of the cable/band to the outside of the opposite knee. Squat slightly when lowering the band/cable. Twist as if the ribs and pelvis are tied together and one cannot move without the other. The head should maintain good posture, ensuring the movement resonates from the core.

Slowly return to the starting position with your hands over the opposite shoulder. If you are new to this movement, each repetition should take at least four seconds to complete. The movement can also be performed with no resistance as you perfect form (see picture examples).

After performing ten to fifteen repetitions on one side, turn around and perform ten to fifteen repetitions on the other side. Rest twenty to sixty seconds and repeat for two to four sets.



The cable wood chop can be performed with a partner. Each person should hold opposite handles of a resistance band. Perform the movement facing each other and simultaneously. To add more resistance, you and your partner can go in different directions – when one of you is at the side of the knee the other will be over the shoulder.

Common mistakes individuals make when performing the cable wood chop are twisting from the lower back, using the shoulders to move and twisting the neck. Do not twist from the lower back. The lower back seeks stability, not mobility. The movement should be initiated from the core muscles (TVA). Do not use your arms to perform the movement and keep the head in strict alignment.

Speed, Agility and Quickness Drills (Published by ehow.com)

A natural athlete cannot usually dominate without training hard for a sport. These athletes need to increase speed, agility and quickness because the lesser athlete can close the athletic gap with hard work and determination. Every participant needs to learn different types of drills, perform them with good form and in consideration to the types of movements needed in a specific sport. Do so and the results will be dramatic.

Speed kills on the field, court and in the ring. Take two athletes with the same approximate size and determination. While one athlete may be technically more efficient, the faster athlete can overcome a small difference in skill if he or she is faster and quicker. While it is still vastly important for every athlete to learn proper technique and have an iron will, speed can make up for small mistakes.

Skip drills, high knees, butt kicks and bounding exercises are a few drills coaches use to increase an athlete's speed. These drills can be performed without specialized equipment. Coaches and athletes can buy rip cords and chutes to provide resistance during sprinting. Shuttle runs and change of direction drills increase an athlete's agility and quickness without the need for equipment. Cones are a favorite tool used to increase agility and quickness. One piece of equipment that can be used to increase speed, agility and quickness is the agility ladder (pictured to the right).

Athletes need to learn the drills slowly before trying to go full speed. Start off slowly until the body learns the movement. As the athlete becomes more comfortable, he or she can begin to increase speed of movement until they are able to safely complete each exercise as fast as possible.



Speed, agility and quickness drills increase rate of force production within the muscles. This means that when performing a movement, the brain receives sensory information and is able to produce a motor unit response in a short period of time. Increases in speed, agility and quickness are as much improvements of the nervous system as they are improvements of muscles.

Consider the qualities specific to the selected sport when choosing speed, agility and quickness drills. Think about what exercises are similar to the specific competition and do them. Consider the demand, as some sports demand more straight ahead speed and others rely on side-to-side quickness. Take the direction of the movement in the sport, for example, a basketball player needs to be able to get vertical. And when choosing speed, agility and quickness drills, think about the region of force production. A speed skater needs to concentrate his or her efforts on building power in the hips and thighs.

Type II Diabetes Diet (Published by ehow.com)

Type I Diabetes is genetic in nature. Type II Diabetes can develop from a combination of nature and nurture. While some individuals may be more prone to Diabetes through genetics, a poor diet, obesity and lack of exercise can contribute to the development of Type II Diabetes. A proper diet is paramount when treating Type II Diabetes

Types

Insulin resistance leads to Type II Diabetes. Insulin lowers blood sugar levels. If the body is resistant to insulin, the blood sugar level spikes. The body keeps releasing insulin until it cannot produce the hormone any longer. The purpose of Type II Diabetes diets is to control insulin levels, thus keeping down blood sugar levels.

Features

Carbohydrates are converted into sugar in the body and insulin helps them pack energy to the muscles. Individuals with Type II Diabetes need carbohydrates that break down slowly and provide energy for long periods of time so they have a better chance to be absorbed by the muscles without an excess of insulin production. Complex carbohydrates, such as vegetables, whole and sprouted grain breads and legumes, break down slowly. Foods high in fiber must also be included. Individuals diagnosed with Type II Diabetes need to cut simple sugars (candy/fruit juices/soda-pop) out of their diet.

Expert Insight

Individuals with Type II Diabetes should pay attention to saturated versus unsaturated fats. Saturated fats are solid at room temperature and contribute to high cholesterol levels. According to Harvard Health, for individuals with Type II Diabetes, less than 7% of total caloric intake should come from fats. Unsaturated fats should be consumed. Essential Omega fats can be found in fish, oils, and nuts and seeds. Unsaturated fats also help keep individuals feeling full to avoid overeating. Individuals with Type II Diabetes can eat a handful of nuts or seeds before meals to prevent binge eating and eat fish, such as salmon and tuna, every day.

Insulin sensitivity can be restored with modest weight loss; as little as 10 to 15 pounds can make a difference. Over 90% of individuals who lose weight and keep it off do it with a combination of proper diet and consistent exercise. Everyone should try to exercise thirty minutes a day, six to seven days a week.

Considerations

It's usually a good idea for individuals with Type II Diabetes to follow low-carbohydrate diets. Carbohydrates should be consumed but stick with complex carbohydrates. All proteins should be as lean as possible. If these recommendations do not assist with lowering weight loss or blood sugar levels, ask a doctor to recommend a dietician for further assistance.

Vitamins Important for Bodybuilding (Published by ehow.com)

Bodybuilding is a sport. It takes a tremendous amount of sacrifice, hard work and discipline. Perhaps the most important element of bodybuilding is nutrition. When genetics and workouts are similar, the individual with the best nutritional program is going to win.

Benefits

The right vitamin and supplement mix helps bodybuilders increase anaerobic and aerobic capacity, assists muscle recovery and increase growth hormone production.

Types

B complex vitamins increase energy levels and have anabolic properties. Octacosanol (wheat germ) increases aerobic capacity. Creatine increases anaerobic capacity. Arginine helps increase the production of growth hormone. Branched Chain Amino Acids (BCAAs) help muscle building and recovery.

Misconceptions

During a workout, you get your energy from carbohydrates and fats. You need to eat carbohydrates to have high energy levels during a workout.

Warning

Consult your physician before beginning any supplementation program, especially if you are currently taking any medications.

Expert Insight

Vitamin supplements are an addition to an already healthy nutritional program. All the right vitamins in the world will not do any good if you are eating junk food and drinking alcohol on a daily basis.



What are Triglycerides Used For? (Published by ehow.com)

The liver builds triglycerides by using a glucose (sugar) base with three fatty acids attached to it. Triglycerides can be built without food consumption but ingesting food contributes to the creation. After triglycerides are built, they can be stored in the liver or sent to the muscles to be stored intramuscularly.

Function

The liver creates triglycerides as stored energy. When energy levels become low, the hormone glucagon orders the fatty acids to be broken off of the sugar base. The sugar and fatty acids can both then enter energy production cycles.

Effects

The calorie is a measurement of heat energy. Carbohydrates and proteins contain only four calories per gram. Fats contain nine calories per gram, thus providing the body with more than twice the amount of energy as sugars and proteins.

Misconceptions

While the body prefers to use fat as the main energy source, it should represent less than thirty percent of an individual's diet. High fat diets leave individuals at risk of obesity, and all the diseases associated with it.

Warning

An excess of triglycerides causes fat build-up in the liver and around the muscles, causing an increase in body fat percentage. The excess fat can also be deposited in arteries, placing individuals at greater risk of heart disease and stroke.

Expert Insight

Triglycerides, in modest amounts, can be beneficial to an individual's energy levels. Too many can clog arteries in the heart and brain. Keep triglycerides at normal levels by eating a well-balanced diet of natural foods and exercising daily.

What is a Healthy Resting Heart Rate? (Published by ehow.com)

Resting heart rate can be measured by hand on the wrist and neck, and by using a heart rate monitor. Individuals should understand the significance of the resting heart rate, when to take it, what it means and the danger signs of a high resting heart rate.

Identification

Adult males average a resting heart rate of 70 beats per minute and adult females average a resting heart rate of 75 beats per minute. The healthy range for adults is between 60 to 100 beats per minute. The resting heart rate lowers with age, as youths are known to have resting heart rates well over 100 beats per minute.

Time frame

The best time to measure resting heart rate is in the morning before getting out of bed and while wearing a heart rate monitor. Set the alarm five minutes earlier than normal and put on the monitor. Lie still (without sleeping) and watch the heart rate for at least two minutes while monitoring the heart rate. If the resting heart rate is measured at different times of the day, or in different body positions, the resting heart rate can vary as much as ten beats per minute. Taking it in the morning before starting your day will provide the most accurate results.

Significance

Resting heart rate can be a good indicator of health and fitness levels. Endurance athletes have been shown to consistently have resting heart rates under the gender and age averages.

Effects

The resting heart rate is generally lower in individuals who exercise consistently because exercise trains the heart to pump more blood per stroke. Exercise also trains the muscles to utilize oxygen more efficiently, taking even more stress off the heart. A resting heart rate above gender averages means the heart is weak or the body is not using oxygen efficiently.

Warnings

A higher than normal resting heart rate is a sign that something is wrong. For athletes it can be an indicator of overtraining. A higher than normal resting heart rate can also indicate high stress levels. Individuals with resting heart rates higher than the gender averages have been shown to be at a greater risk of heart attacks. These individuals become in a danger zone if the resting heart rate is over 100 beats per minute. Usually a resting heart rate below average is a sign of good health and not a warning.

Misconceptions

Pulse is not necessarily the same as heart rate. The pulse can be lower than heart rate if blood pressure is low or if an individual is suffering from arrhythmias.

Causes of High Blood Pressure (Published by ehow.com)

A blood pressure reading measures the amount of pressure blood places upon the blood vessels during circulation. A blood pressure test reads one number over the other and is read like a fraction. The top number (systolic) reads the highest amount of force placed upon the blood vessels. The bottom number (diastolic) measures the lowest amount of force placed upon the blood vessels. Persistent elevated blood pressure (hypertension) can lead to stroke, heart attack, heart failure and aneurysm.

Obesity

Obese individuals are 5 times more likely to suffer from hypertension. The obese body causes the heart to have to work harder to perform simple tasks. The prolonged elevated heart rate, combined with poor diet and lack of exercise, places tremendous pressure on the heart and blood vessels.

High-Sodium Diet

A diet high in sodium can cause elevated blood pressure. Excess sodium in the system causes the blood to become heavy, placing greater force upon the blood vessels.

Family History

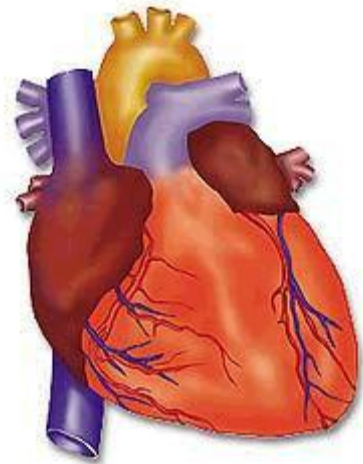
A family history of hypertension increases the odds of an individual suffering from high blood pressure. Like most diseases, high blood pressure stems from a combination of nature and nurture.

Advanced Age

Advanced age can be a cause of high blood pressure. The blood vessels stiffen with age. When the arteries become rigid, blood must be pumped more forcefully through the body, creating elevated blood pressure.

Stress

Prolonged stress becomes a factor when discussing hypertension. Stress causes the body to release the hormones cortisol and adrenaline. These hormones elevate the heart rate, and the consistently elevated heart rate places excess pressure on the blood vessels.



Train Movements or Muscles? (Published by Suite101)

An example of a muscle imbalance is when a stiff lower back causes the hamstring muscles to be tight and the adductor (groin) muscles become weak. Fitness professionals have two theories to correct this problem. One is to train movements like a side lunge with a twist. The other is to place the affected person onto an adductor machine, isolating and training the muscles.

While training movements, many muscle groups work together to perform the function. During a side lunge with a twist, the adductors contract to move the leg to the side, the hamstrings passively stretch, the adductors (hips) inhibit unwanted motion, the core muscles twist the body and the shoulders stabilize the load. The movement theory is that the weak adductor muscle will adapt to the movement and become strong. The tight hamstring muscles will be forced to stretch. Eventually, the body, which seeks balance, will find it.

The movement proponents will say training muscles is useless and potentially dangerous. In everyday life, the body never uses only one muscle group. Functional, multi-joint exercises mimic body movement and will enhance athletic ability. Doing so will also burn calories at a high rate.

While training muscles, even an isolated exercise like a biceps curl is technically a movement. With the exception of the face, it is impossible for the body to use only one muscle to perform any exercise. During a standing dumbbell biceps curl, the forearm and hand muscles hold the load, the triceps muscles passively stretch, the shoulders inhibit unwanted motion and the core stabilizes the entire body.

Advocates of isolating and training muscles say functional training will only enhance a muscle imbalance. In this case, the adaptation to functional movements will be that the tight, strong hamstring muscles will take over for the weak adductor muscles. The hamstrings will become even stronger and the adductors will continue to become weaker.

Which argument holds water? Both sides can show case studies where their theory worked better than the other.

The goal of exercise programs is to provide the body with an adaptation. An adaptation is an enhancement of bodily movements, resulting in aesthetic or athletic improvements.

The movement theory mimics daily and sporting actions and helps the body improve these activities, which is an adaptation. Training muscles increase their strength. This is an adaptation.

The theory that works best is a combination of training muscles AND movements. Training a movement will make the body move more efficiently. At the same time, if a muscle is weak, the fastest way to make it stronger is to isolate it. Train the movement first because a movement requires more energy. Train the muscle second. The combination of movements and muscles is hard to beat.

Prenatal Fitness (Published by Suite101)

Pregnancy ensures survival of the species. The body's changes can make a first-time mother feel like she is something other than human, something more - yet almost alien. These changes are perfectly natural. However, they come with risks. Exercise can minimize those risks.

Body Changes During Pregnancy

- Resting heart rate rises and maximum heart rate lowers.
- The diaphragm (the muscle dividing the lungs from the digestive system) rises because of the expanding uterus. This causes many pregnant women to become short of breath. The ribcage expands to compensate for the lack of lung capacity.
- Elevated levels of estrogen and other hormones cause the pelvis to widen and growth of breast tissue.
- The enlarging pelvis causes a pelvic tilt, causing women to lean backwards. Also, the growth of breast tissue can cause the shoulders to slump forward. The spine takes on an "S" shape.
- The changes in the skeletal system create muscle imbalances throughout the entire body. They will also cause a change in center of gravity.
- The digestive system takes precedence over the muscular system. If, for example, the liver becomes defective, it will utilize more of the body's energy demands, leaving the muscles at a deficit. In much the same way, a fetus will drain most of a woman's energy demands, thus the cause of fatigue.

Pre- Natal Exercise Benefits

- Women who engage in pre-natal exercise have fewer occurrences of swelling, cramps, fatigue and back pain.
- Active pregnant women are more likely to stay within weight gain recommendations made by the American College of Obstetricians and Gynecologists.
- Pre-natal exercise curbs psychological feelings of stress, anxiety, depression and improves overall mood.

Exercise Guidelines & Recommended Exercises

- Surprisingly, cross-sectional surveys reported that pregnant women exercise more than not pregnant women by four percent. Consult your physician before beginning any pre-natal exercise program.
- Light to moderate walking is strongly recommended. It is reasonable to walk 30 to 45 minutes a day. For most, the maximum heart rate will drop to around 140 beats per minute by the third trimester.

- Yoga and strength training are great for pregnant women to minimize the ill effects on the bones and muscles. Many studios provide yoga specifically for pregnant women. If such a class is not available in your area, inform the instructor of your condition before class.
- Avoid any exercises lying face down on the floor.
- For the stomach muscles, the best safe exercise is crunches on a stability ball.
- For the leg muscles, complete squats and deadlifts. These exercises will have to be executed with legs wider than normal and toes slightly pointed out, like ballet. Squat holds against a wall are also a great pregnancy exercise.
- For the chest muscles, perform standing cable presses, seated machine presses or seated machine flies.
- For the back muscles, do standing cable reverse flies, seated pulldowns, standing cable rows or dumbbell rows.
- For the shoulder muscles, complete standing arm raises (front and side) with dumbbells.
- For the biceps, perform standing dumbbell and standing cable curls.
- For the triceps, do standing cable pushdowns or dumbbell kickbacks.

Conclusion

A pregnant woman will experience many strange and beautiful changes. Stay active with light to moderate exercise and that pre-pregnancy body will be back in no time.

Calorie Deficit and Weight Loss (Published by Source1Nutrition)

They're out there - Atkins, South Beach, Nutrisystem, Body For Life, pill diets and more. You can include the Fitness Flyer, treadmills, elliptical machines, the Cindy Crawford Workout, Jane Fonda's Workout and more exercise programs. All of these programs promise weight loss. So with all of these products out there, why is the obesity problem worse than ever?

The answer is simple - diets do not work. The purpose of this article is to give people a long-term solution to weight management.

The psychology of weight loss

Overweight people get looked at and treated differently. They can't perform physical tasks that were once easy and spend more time in doctor's offices. They have a hard time maintaining a high energy level. Furthermore, they can't find good clothes and hate the mirror.

These facts cause overweight people to become depressed. They get desperate to lose weight. Then, this commercial comes on television. The commercial promises immediate weight loss. It shows before and after pictures. People get excited and buy.

A few months later, the overweight people are off the diet. They initially lost weight but then have gained it all back - plus a few more for good measure. The depression kicks in again until... a new fad diet comes on television.

These commercials take advantage of people's desperation to lose weight. Don't let them! The best defense is knowledge.

What are calories and where do they come from?

A calorie is a unit of energy. The calories we talk about, in terms of caloric intake and calorie burning, are kilogram calories (kcal). A kcal is how much energy it takes to increase one kilogram of water one degree Celsius.

The only way to lose weight is to burn more calories than ingested. Calorie intake comes from three nutrients - carbohydrates, proteins and fats.

Carbohydrates and proteins contain four calories per gram. Fats contain more than twice the amount of energy, with nine calories per gram.

Doctors and dieticians disagree about the amounts of carbohydrates and proteins in nutritional plans. However, no one disagrees about fat intake. Less than 30% of ingested calories should come from fat.

What and when should I eat?

- A person should consume five to six small meals per day. For most, this breaks down into breakfast, AM snack, lunch, PM snack and dinner.

- Breakfast is the most important meal of the day. Breakfast kick-starts the body's metabolism. It also makes brain function more efficient by providing it with energy.
- Eating meals after dinner should be avoided if weight loss is the goal. The reason is because the foods people eat late at night. People do not eat tuna and whole-wheat crackers for late night snacks. The snacks are usually high sugar or high fat foods.
- The key to eating five to six meals a day is preparation. When at the grocery store, purchase an item for a purpose. If it is bananas, say, "These will be my morning snacks this week."
- Life happens. You're bound to cheat once in a while. However, stick with it. Don't let a cheat meal become an excuse to eat fatty foods the rest of the day (or longer).
- You know what you're not supposed to eat. Don't eat it!
- Try to eat a lean protein with every meal. Breakfast, lunch and dinner should also contain a fruit and/or vegetable. Doing so almost ensures the body gets enough protein, vitamins and minerals.
- What most people believe to be serving sizes and actual serving sizes are quite different. On average, restaurants serve three times the recommended serving sizes of all foods, except fruits and vegetables.
- Keep a food diary for a month. In it, keep track of serving sizes and calories per serving. This will get you in the habit of reading labels.
- The rule for any successful food diary is, "if you bite it, write it." This includes the cream in your coffee, the calories in your beverages and the sugar in your gum.
- A food diary will ease the transition to a healthier lifestyle. Calories don't have to be counted; but if a person can't trust themselves without it, keep counting.
- Lastly, have patience. People do not gain fifty pounds in a week so don't expect to lose fifty pounds in a week.

Should I take supplements?

A supplement is a complement or addition to an already healthy nutrition plan; but even with proper eating habits, it's nearly impossible to get all the vitamins, minerals and essential fatty acids the body needs. As a solution, everyone should take a daily multivitamin.

90% of people who lose weight and keep it off combine proper nutrition with consistent exercise. Exercise has hundreds of positive effects on the body. One of them is that exercise builds muscle.

The amount of muscle mass in the body is one determinant of the resting metabolic rate. A pound of muscle is three times more active than a pound of fat. This is because fat adds 2 or 3 calories to daily metabolism while a pound of muscle adds 50 to 70!

Muscle is made of protein. Muscle protein is made of Branched Chain Amino Acids (BCAA) and essential amino acids. Therefore, a quality protein supplement will have BCAA and essential amino acids. Combined with proper nutritional habits and an exercise program, a protein supplement will catalyze the muscle building process.

The process of losing weight can be extremely difficult. It takes a lifestyle change. This change can be summarized in the following six words. Eat right. Move more. Have patience.

Avoid Holiday Weight Gain (Published by Suite101)

The average American gains seven to ten pounds between Thanksgiving and New Years' Day. Winter is coming. For many, this means decreased outdoor activities. Some believe the cold weather hinders metabolism. With all this working against the battle against the bulge, what is one to do?

Losing weight is difficult enough on its own without the added hindrances the season brings. However, there is hope! People are not doomed to a life of obesity. People can avoid holiday weight gain. It can be solved with a few weight loss tips.

- 1) Curb alcohol consumption. Alcohol sales skyrocket over the holiday season. People enjoy drinking to enjoy (or cope with) family activities. Don't get drunk! Alcohol contains seven calories per gram. Not only does alcohol contain calories, it also leads to poor nutritional choices. If a person drinks, eats and then goes to sleep, say goodbye to weight control and hello to weight gain.
- 2) Stop eating when full. This sounds obvious, but everyone has kept eating that turkey, or mashed potatoes, or ham way after the stomach says it is full. If seconds are absolutely necessary, wait a couple hours between plates. This gives the digestive system time to digest and get rid of excess calories.
- 3) Deal with hunger. Fruits, vegetables and water are not filling. When people are trying to control their weight, they eat produce and breakfast. Yes, this will cause an increase in hunger. Deal with it! It is easy to go to the fridge and grab leftovers - don't do it unless it is mealtime.
- 4) Use a smaller plate. Studies have shown that people eat more simply because more is on their plate. If smaller plate is used, the difference in hunger is minimal. This works with smaller bowls for soups, and plates for dinners, appetizers and even deserts.
- 5) Curb emotional eating. For many, the holidays are an extremely emotional time. Many use food as a coping source for depression. Keep in mind how counter-productive this is. People feel sad, so they eat, and then feel guilty for eating and end up even more depressed than they were before. There are no easy cures for this. People have to try enjoy everything they do. Instead of thinking about sadness, think of activities to alleviate the sadness that don't involve food. It is the holiday season - enjoy yourself! Think good thoughts!



Weight control is tremendously difficult over the holiday season. If it weren't, the average American wouldn't gain seven to ten pounds over it; but they do. Curbing alcohol consumption, stopping eating when full, dealing with hunger, using smaller plates and avoiding emotional eating will go a long weight in the battle against the bulge.

Don't view holiday weight gain as inevitability. View it as a choice that can be controlled.

Weight Training and Cardio (Published by Suite101)

Many people have read in magazines that long-distance cardiovascular exercise will break down muscle. Personal trainers have said that the body will use the protein in muscle as an energy source during long-distance training. Are these statements the same? No. Are they scientifically accurate? Yes and No.

During cardiovascular exercise, the body will use glucose (carbohydrates) as the main energy source. The body will use fat as a secondary energy source. The body rarely, if ever, breaks down protein and uses it as an energy source.

The breaking down of body tissues is known as a catabolic process. For instance, if fat is to be used as an energy source, a fat cell is broken down into a fatty acid and glycerol and used as energy. Proteins can be broken down into peptide chains and then into amino acids.

The nature of aerobic activity is catabolic. The main goal is to break down and burn fat. During this, the body will also seek to drop weight. The densest cells in the body are muscles. The body will seek to break down the muscles, not as much for an energy source, but to lighten the load - like a movie where an airplane is desperately trying to fly. The goal of this catabolic process is NOT to use protein as an energy source.

The nature of weight training is anabolic. Anabolic is the opposite of catabolic. Anabolic processes build. The goal is for the liver to release essential amino acids to be delivered via the blood to the muscles. The amino acids are built into peptide chains, which are built into the proteins that comprise muscles.

Long-distance running after a strength workout negates this process. Sprinting will cause an anabolic process whereas long-distance running causes a catabolic process. A workout program should not call for concurrent long-distance training and muscle-building weight training in the same day. A muscle-building program should consist of sprinting and plyometric-type training. These workouts should go hand-in-hand.

Aerobic training, for health, should be completed once or twice a week, depending on training volume. If the workout program demands two or three days of muscle-building workouts, complete two. If the workout program demands four or more days of muscle-building workouts, one day is sufficient.

On the other hand, endurance athletes should use long-distance aerobic training, combined with functional weight training. This will decrease the risk of injury by focusing on joint stabilization and muscle imbalances. Circuit weight training has been shown to increase VO₂ max as well. Weight training for aerobic goals should be performed twice a week.

Sometimes, workout parameters call for weight training and aerobic training on the same day. If this is the case, weight training should be performed first.

Long-distance aerobic training usually will not use muscle as an energy source, but it can hinder muscle hypertrophy (building). If hypertrophy is the goal, aerobic conditioning should be very light and completed on an off day.

Caffeine... A Balanced Look (Published by Greenmaple Wellness, July 2009)

Approximately 90% of individuals in civilized countries consume caffeine. It's in the tea, coffee, cappuccino, energy drinks and soda-pop. It is found in chocolate, diet pills and stay-awake pills. Is it beneficial or harmful to the body? How does it affect the body and mind? How much is too much? "Caffeine... A Balanced Look" answers these questions.

Caffeine synthesis produces many direct effects on the body. It stimulates the central nervous system, increases heart rate, stimulates the release of sugar for energy, constricts blood vessels in the brain while dilating blood vessels in the muscles, and relaxes the smooth muscles of the bronchi. Caffeine is addictive because it stimulates the central nervous system. Caffeine binds to receptors in the brain. Those receptors tell the endocrine system to release the hormone adrenaline. Adrenaline makes individuals feel a "high" but then the effects of caffeine cease after a few hours. After the caffeine wears off, fatigue and depression begin, making individuals want to consume more. Like most addictive products, users build a tolerance. It takes more and more caffeine consumption to achieve the same effects as when use first began. Also, ceasing use after long periods of caffeine consumption leads to withdrawal symptoms because the brain got accustomed to caffeine stimulating it.

Positive Effects

Caffeine increases the body's capacity for physical labor. A dosage of 5.5 to 8 milligrams per kilogram of bodyweight (pounds divided by 2.2) causes an increase in cardiovascular endurance. This is most likely due to the "fight or flight" hormones caffeine releases. Consuming caffeine is similar to a warmup before exercise. It constricts blood flow to the digestive system, increases the heart rate and releases sugar into the bloodstream to increase energy.

Caffeine has been proven to enhance the effects of painkilling drugs by up to 40%. Again, this is largely due to the release of hormones caffeine stimulates. The body releases dopamine after consuming caffeine. Dopamine activates pleasure centers in the brain (many believe it is the cause of "runner's high"). Slight caffeine consumption combined with mild pain killing drugs can create a euphoric, pain-free environment for a couple hours, but there is a danger to this (see next section).

Other studies have shown caffeine consumption can improve mental performance. Caffeine increases the speed of nerve firing in the brain. The increased speed of nerve firing increases the capacity for mental labor.

Caffeine has been used for medical treatments as well. Caffeine can decrease the severity of headaches. Many headaches are caused by blood vessels in the brain that have become overly dilated. Caffeine consumption constricts the blood vessels in the brain, counteracting the affects of a headache.

Caffeine is occasionally used to treat breathing problems in premature infants and those with asthma. Caffeine can be used to treat respiratory problems because it relaxes the smooth muscles of the bronchi.

Most individuals consume caffeine because it reduces the symptoms of fatigue. While it cannot eliminate the need for sleep, caffeine helps individuals mentally and physically prepare for a long day.

Negative Effects

Caffeine is an addictive substance and its use can create a tolerance and withdrawal. Heavy coffee drinkers develop a tolerance very quickly. Complete tolerance of caffeine develops after consuming 400 milligrams 3 times per day for 7 days, or 300 milligrams per day for 18 days. Partial tolerance develops after consuming 200 milligrams per day. Since 90% of the population consumes caffeine on a daily basis, it is safe to assume a large portion of the population has significant caffeine tolerance.

While caffeine use can alleviate headaches, caffeine withdrawal causes headaches. Caffeine constricts blood vessels in the brain, but when its effects cease, the blood vessels expand, causing an excess of blood in the brain.

As any heavy coffee drinker can attest to, caffeine withdrawal leads to fatigue, stomach ache, anxiety and irritableness. Individuals who decide to stop consuming caffeine “cold turkey” suffer from withdrawal symptoms for three to seven days. The length of caffeine withdrawal symptoms depends on how much had been consumed on a daily basis. An individual who ingests 500 milligrams per day will suffer from withdrawal symptoms longer than someone who takes 200mg per day.

Heavy coffee drinkers are in danger of developing digestive problems. Coffee increases the acidity levels inside the gastrointestinal tract. Increased acidity lowers the body’s pH levels. When the pH levels drop, the body becomes at risk from a multitude of illnesses, including ulcers and high blood pressure.

The Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, recognizes four disorders caused by caffeine: caffeine intoxication, caffeine-induced sleep disorder, caffeine-induced anxiety disorder and caffeine-related disorder not otherwise specified (NOS). For those without a heavy tolerance to caffeine, caffeine disorders can be caused by a dose of 400mg (3 to 5 cups of coffee).

Caffeine intoxication is characterized by producing a state of central nervous system overstimulation. Those suffering from caffeine-induced sleep disorder face disturbances in sleep and nightmares. Caffeine-induced anxiety disorder causes panic attacks, obsessive-compulsive behavior and can even mimic bipolar disorder and schizophrenia symptoms.

Disorders caused by caffeine, if developed over a long period of time, can produce long term negative effects in the brain and body. Brain manifested symptoms include nervousness, muscle twitching and insomnia. Symptoms manifested through the body include peptic ulcers, erosive esophagitis and acid reflux disease.

Conclusion

Caffeine is not unlike most of the materials we consume. It can be used for good purposes in moderation. Ingesting too much causes toxicity. While caffeine disorders and caffeine addiction can cause havoc to a system, caffeine is safe and useful in small doses. Most doctors agree that insomnia and other caffeine-induced disorders can be cured simply by decreasing caffeine intake.

An espresso in the morning can help momentarily increase brain function, providing a “jumpstart” to a morning, but is not a substitute for a good night’s sleep. Use caffeine for its positive affects when life gets in the way of an otherwise healthy day. Those who do not consume caffeine on a daily basis receive the most positive effects from its use, when it is consumed in moderation.

Sources:

Benjamin LT Jr, Rogers AM, Rosenbaum A (1991 January). “Coca-cola, caffeine, and mental deficiency: Harry Hollingworth and the Chattanooga trial of 1911.” *J. Hist Behav Sci* 27 (1): 42-55

Nehlig A, Daval JL, Debry G (1992 May-August). “Caffeine and the central nervous system: mechanisms of action, biochemical, metabolic and psychostimulant effects.” *Brain Res Rev* 17 (2): 139-70

Graham T, Rush J, van Soeream (1994). “Caffene and exercise: metabolism and performance.” *Can J. Appl. Physiol* 19(2): 111-138

Ivy JL, Costill DL, Finx WJ, Wowr RW (1979 Spring). “Influence of caffeine and carbohydrate feedings on endurance performance.” *Med Sci Sports* 11(1): 6-11

Juliano, LM (21 September 2004). “A critical review of caffeine withdrawal: empirical validation of symptoms and signs, incidence, severity and associated features.” *Psychopharmacology* 176 (1): 1-29

Encyclopedia of Mental Disorders

Diagnostic and Statistical Manual of Mental Disorders (DSM IV TR)

Body Fat Percentage(Published by Suite101)

Does anyone remember the commercial where the older man looks in great shape at the pool? All the woman have eyes transfixed upon him as he jumps off the diving board... and then promptly embarrasses himself with his lack of true health?

What's the moral of that commercial? Just because someone looks fit, it doesn't mean they are.

How Much Body Fat Is Too Much?

All body fat percentages divide into male and female charts. The American College of Sports Medicine divides the charts into subjects over and under 40-years old as well as fitness and health recommendations. If a person falls above these guidelines, they would be considered obese.

Female (under 40) - 16%-28% Fitness, 20%-35% Health

Female (over 40) - 16%-33% Fitness, 20%-38% Health

Male (under 40) - 5%-15% Fitness, 8%-22% Health

Male (over 40) - 5%-18% Fitness, 8%-25% Health



FUN FACT:

According to Charles Poliquin, people can start seeing the upper row of abdominal muscles with a body fat percentage of 15%. To have "6-pack abs," one must have a body fat percentage no higher than 9.8%.

Is There Such A Thing As Too Little Body Fat?

Yes. Fat is a necessary evil. For starters, body fat lubricates and protects joints, is necessary for cellular development, bone density and builds brain matter.

Men need to maintain a body fat percentage of at least 5% for health reasons. A layer of fat surrounds all the body's organs in order to protect them. Without this fat, the organs become susceptible to impact injuries.

Women need a body fat percentage of 15% to maintain a healthy menstrual cycle. The longer a woman is fewer than 15% body fat percentage the less likely it is that they can become pregnant. The hormonal imbalances can cause psychological diseases such as anorexia and bulimia.

What Is The Best Way To Measure Body Fat?

The most common ways to measure body fat percentage are the infamous calipers, body (DEXA) scan, underwater testing and bioelectrical impedance.

The DEXA body scan is the most reliable, yet most unavailable method of determining body fat percentage. Used at hospitals and medical facilities, the body scan works much like an MRI. The scan is as close as one can get to 100% accuracy.

Underwater testing is becoming dated. Accuracy problems arise if subjects have asthma, get nervous, or don't blow all the air out of their lungs. It's hard to find underwater body fat testing these days.

The bioelectrical impedance measurers are found on home scales and hand-held devices. These measurers send an electrical current through the body from one side and time how long it takes to travel through the body and reach the other side. This method is wildly inaccurate because of hydration levels. The more hydrated a person is, the less body fat reading. Along the same lines, the less hydrated a person is at the time of measurement, the higher the body fat percentage measurement.

Calipers, the infamous "fat pinchers," are the most common method of measuring body fat. A skilled practitioner of the calipers can come within 1% of The DEXA body scan. As a general rule, a fitness professional who has measured body fat 4,000 times will be much more accurate than one who has only measured 4 people.

Conclusion

Bite the bullet and let a fitness or medical professional take your body fat percentage. Body fat percentage is a much more reliable method of determining obesity and fitness levels than Body Mass Index (BMI).

Sources:

Poliquin, Charles. "Question of Strength: January" T-Nation, January 2008

American College of Sports Medicine

Hungry or Full (Published by Greenmaple Wellness, July 2009)

Endocrine glands directly affect our metabolism and hunger levels. The thyroid controls a large portion of our metabolism. The adrenal glands, pancreas and stomach produce hormones that elevate or lower our hunger levels. Knowing how these hormones work inside our bodies is like having a “cheat code” for a video game, manipulating the game to make weight loss easier. Get your cheat codes here.

Hormone levels are dependent upon feedback mechanisms. The control system works much like a central air unit, with hormone levels acting as the temperature in a building. When hormone levels become too low, their production is increased (turning on the heat). When hormone levels become too high, their production is decreased (turning on the air conditioning). The hypothalamus-pituitary complex in the brain acts as the body’s “thermostat.” The thermostat reads the amount of hormones in the blood and receives signals from nerves throughout the body. It then decides what hormones to produce and which to stop producing. This thermostat is especially important when trying to turn off hunger and turn on the feeling of satiety.

Metabolism

The thyroid is the most well-known endocrine gland. A defect in the thyroid can drastically decrease metabolism, but cases of true thyroid dysfunction comprise less than 5% of all obesity cases. The thyroid produces the hormone thyroxine.

Each cell has an “energy farm” called the mitochondria (a.k.a. the powerhouse). More mitochondria in the cells lead to more energy expenditure and higher metabolism. Thyroxine is the farmer. It controls the activity levels of the energy farms and how many are active. A significant amount of energy farms, working at full capacity, elevates metabolism.

What Makes Us Hungry?

Body fat percentage, stress levels and nutrient levels control our hunger levels. Body fat percentage affects how our body uses insulin, stress levels determine if our body is using sugar or fat as the main energy source, a hormone in the stomach (ghrelin) tells the brain when we are in need of nutrients, and the thyroid controls overall metabolism.

Muscles receive glucose (sugar) and protein from the blood. The protein is used to repair and grow muscles. Glucose is stored for when the body needs to produce large amounts of energy during periods of exercise. If the muscles do not receive the glucose, it stays in the bloodstream, increasing blood sugar levels.

The body stores fat between muscles. Too much fat creates a wall that blocks the muscles’ absorption of glucose. This causes blood sugar levels to spike. To compensate, the body releases insulin, as the job of insulin is to lower blood sugar levels. Too much fat surrounding skeletal muscle makes it impossible for insulin to do its job.

The muscles are then starved for glucose. The brain receives the distress signal in the form of hunger and sugar cravings. The individual then eats sugar, but the wall of fat blocks the muscles from using it, further elevating blood sugar levels and increasing appetite. This cycle leads to insulin resistance and possibly Type II Diabetes.

Stress affects the types of nutrients we use for energy and hunger levels. The body releases two stress hormones, epinephrine (adrenaline) and cortisol. Adrenaline is released during exercise to increase the heart rate, dilate blood vessels and prompts the muscles to use sugar as an energy source. Exercise and adrenaline creates hunger in a healthy way, by lowering blood sugar levels.

The role of cortisol is to bring the body back to balance after a period of stress. It also selects the best nutrient to meet placed demands. Cortisol stores fat by sending it to the liver and deep abdominal muscles. It increases hunger and creates sugar cravings by selecting sugar as an energy source. This elevation of hunger looks like it works similar to adrenaline, but it is the opposite. Adrenaline is used during exercise while the body is burning large amounts of calories. Cortisol increases appetite when the body is at rest and the mind is troubled. Long-term release of cortisol directly relates to weight gain and no “magic” pill can stop it. The only way to stop it is to find ways to decrease stress levels.

The stomach produces digestive and hunger and satiety hormones. Ghrelin is known as “the hunger hormone.” The nervous system constantly checks the “inventory” of nutrients in the body. If one of the nutrients is low, the stomach produces ghrelin.

Ghrelin is the reason the stomach growls. The role of ghrelin is to send a message (growling) to the brain, and the message is hunger. Ghrelin, unfortunately, has a limited vocabulary. The brain hears, “I’m hungry. Feed me.” Individuals do not realize a lack of water can cause the stomach to growl. Well-balanced meals cease the production of ghrelin. Less ghrelin equals less hunger.

Controlling Cravings

The stomach does not growl because it is empty. It grows because the body is lacking a nutrient. The type of craving should determine what to have for a snack.

- For potato chip cravings, pour sea salt over next snack/meal.
- For sugar cravings, add fruit.
- For cheeseburger cravings, have a veggie burger or a lean meat
- For fatty-food cravings, eat nuts or seeds
- For a non-specific craving, drink water

Satiety

Ghrelin is the hunger hormone. Leptin, on the other hand, is the satiety hormone. Leptin tells the body that it is full and no more food is needed. Its production increases when the production of ghrelin decreases.

Obese individuals can develop a leptin resistance much like insulin resistance. The resistance develops when individuals eat often when the body is not hungry. Interestingly, obese individuals produce more leptin than individuals of healthy weight. It is one way the body tells them to stop consuming too many calories.

The easiest method of increasing leptin levels is to eat well-balanced meals every 3 or 4 hours. Each meal should contain carbohydrates, fats and protein, with considerations given to fiber, sodium, water, vitamins and minerals.

Prepare “quick” meals for when there isn’t enough time to sit and eat a full meal. A piece of fruit, a chicken breast, a handful of almonds and water will quench hunger much better than fast food, and with a lot less calories.

Manipulate Weight Loss

Insulin lowers blood sugar levels. Its counterpart, the hormone glycogen, raises blood sugar levels. Glycogen is released when the body needs sugar and it does this, on one level, by ordering the breakdown of triglycerides (fat). The body releases glycogen in large amounts after a strenuous bout of exercise, therefore, Individuals need to exercise to make full use of glycogen.

Sugar cravings can be controlled with timed workouts and hormones. If you eat a high-carb meal before a workout, insulin will pack the muscles with sugar. Then during a workout, adrenaline will tell the body to use sugar as the energy source. After the workout, consume carbohydrates again. Insulin will tell the muscles to absorb sugar and protein out of the blood, eliminating sugar cravings and building muscle.

Water consumption before, during and after workouts stimulates leptin, creating the feeling of satiety. One cannot drink water all day and think they will never get hungry, but when combined with exercise and a well-balanced nutrition plan, it can help control hunger, catalyzing weight loss.

It’s easy to say, “don’t eat when you’re not hungry.” It’s easy to say, “don’t eat because of stress or emotion.” It is easy to say, “don’t eat because you are bored.”

Create a habit. Put full focus into losing weight for 28 days, without a cheat meal or cheat day, and exercise. You will be happier with the way your body looks and feels.