



Core Strength & Functional Training

by Shannan King

Core strength is an important part of your weight training program because it boosts performance, prevents and alleviates injury by protecting the spine, and it helps your muscles function as a group (functional strength). When these muscles develop properly they promote healthy posture, and improve the balance necessary for exercise and everyday activities such as picking up groceries and taking out the garbage. Core strength leads to improved functional strength.

The muscles of the “core” are those that attach to the spine, there are a lot of them so I will only mention the ones that you have likely heard of: the muscles of the low back, the abdominal muscles, the gluteals, the hip flexor muscles, the diaphragm, and the muscles of the pelvic floor (these are the muscles worked doing kegels). Each muscle has a function crucial to the balance of all of the core muscles. Weak and imbalanced core muscles usually cause low back pain and in some cases severe back pain. One of the many benefits of following a regular program that promotes core strengthening is that you have less low back discomfort if any at all.

By now you surely want to know how to train these muscles to be strong and balanced! The good news is that although this term has been popularized in the past few years, the training technique is not new and does not require any fancy equipment. Functional training is performed any time that you are moving your body using body weight or free weights (i.e. dumbbells or even rocks!). It is during these activities that the muscles are forced to work as a group, balance is put to the test, and the spine is being strengthened. Many exercises work your core, but here are some examples: crunches on the ball, walking lunges, dumbbell squats, hip extensions (Yoga Bridge), quadruped, balance on one leg, and overhead press. So from now on when you're performing walking lunges, think happy thoughts of improved core strength!



Pumpkin Nut Muffins

Start your holiday season on a healthy note by serving your family treats packed with heart-healthy nuts, fruits, and spices. Try baking your own goodies all season long to avoid hydrogenated fats that are hidden in most pre-packaged, baked goods. Hydrogenated fats are artificially saturated oils that pose a health hazard. These trans fatty acids increase your bad cholesterol (LDL), and lower your good cholesterol (HDL) leading to heart disease. The body cannot get rid of trans fat and it is usually stored in the adipose (fat) tissue. Make sure to read labels and avoid these ingredients: partially hydrogenated oil, hydrogenated oil, margarine, and vegetable shortening. Butter is a saturated fat, so please use this in moderation. When baking you can substitute butter, cooking oil, or shortening with ground flaxseed meal at a ratio of 3 to 1. For example, replace ½ cup butter with 1-½ cup flaxseed meal. Flaxseed can be found at Trader Joe's, Wild Oats, or Mother's.

¾ cup whole-wheat flour

1 tsp baking soda

½ tsp baking powder

½ tsp ground cinnamon

1 tsp ground nutmeg

½ tsp ground ginger

2 eggs slightly beaten

2/3-cup buttermilk

1/3-cup butter, melted OR 1 cup flaxseed

½ tsp vanilla

2 tbsp honey

1 cup canned pumpkin

½ cup chopped chopped walnuts

Heat oven to 375. Place muffin cups in muffin pan. Combine flour, baking soda, baking powder, cinnamon, nutmeg, and ginger.

Beat together eggs, buttermilk, butter (or flax), honey, vanilla, & pumpkin in large bowl.

Stir in dry ingredients all at once, just until moistened. Fold in nuts.

Spoon into prepared muffin cups filling almost to top. Bake 15-20 minutes (if using flaxseed, muffins will brown more rapidly).

Cool on racks.

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PROTEIN

Egg Whites
Mahi-Mahi
Chicken//Turkey Breast
Tuna
Salmon
Swordfish
Sushi/Sashimi
Halibut
Wahoo
Tofu
Fat-free Dairy Products

STARCHY CARBS

Potato/Sweet Potato
Corn
Tomato
Peas
Oatmeal
Butternut Squash
Cream of Wheat/Rice
Brown/Jasmine Rice
Couscous
Corn Tortilla
Barley
Quinoa

FIBROUS CARBS

Broccoli
Carrots
Cauliflower
Asparagus
Spinach
Bell Pepper
Eggplant
Cabbage
Onions
String Beans
Cucumber
Kale
Artichoke

Member Spotlight



Octobers superstar is Lorraine Ferguson. Lorraine consistently works hard by strength training 3 times a week. After establishing a base of strength, Lorraine has furthered her success with adding cardiovascular activity on 3 other days. Her energy has amplified through her consistent workouts and her improved nutrition. Not only is Lorraine losing weight, but most importantly she is living in a state of health and wellness. Lorraine's nutritious and delicious dinners have not only been great for her, but beneficial to her family. Congratulations and keep up the good work in improving your health and fitness.

Supportive Eating

Understanding Sugar by Shannan King

Okay, so you know that cookies, ice cream, and doughnuts are not so great for you, but do you really know what foods containing sugar can really do to you and your diet?

Carbohydrates are digested in the body and turned into their simple sugar form, glucose. There are "simple" (glucose-blood sugar, fructose-fruit sugar, sucrose-simple table sugar, and lactose-milk sugar), "complex" (starchy glucose, grains, potatoes, rice, cereal, etc.), and "fibrous" (vegetables) carbohydrates. The carbohydrates that are closer to glucose, such as "simple" carbs, are digested faster and therefore increase blood sugar levels more quickly. Examples of these carbohydrates are: white breads, bagels, sweet refined foods, some "fat-free" items, whole milk, yoghurt sweetened with sugar, fruit juice, and soda.

When you eat a "simple" carbohydrate, or a meal that is not "supportive" (one protein, one starchy carb, and one fibrous carb) it is digested more quickly and a lot of glucose ends up in the blood. When there is excess blood sugar, the pancreas overproduces the hormone insulin to take the glucose from the blood and store it in the liver and muscles for future energy needs. Sometimes the pancreas does its job too well and low blood sugar results. This process generally triggers a sugar craving within 30-45 minutes, and in order

to get the blood sugar back up sometimes you eat too many chips or cookies...and then the vicious cycle starts all over again.

Fighting the sugar craving is only the beginning because you still have to worry about a "release" hormone called "glucagon". This hormone is partially responsible for lipolysis, or the release of body fat. When you eat a simple carbohydrate and insulin is released by the pancreas to store the excess glucose, glucagon is inhibited and as a result fat release is repressed. The left over insulin is most likely converted into fat and stored as body fat and when you eat unsupportive meals regularly, the end result of this cycle is usually weight gain.

To ensure that your blood sugar levels stay consistent throughout the day and to promote fat release it is important to eat a well-balanced and supportive meal every 3-3 ½ hours. A supportive meal will keep the insulin/glucagon balance stable and provide you with the fuel necessary for healthy performance while working out and during daily activities. If you would like to know more about how much sugar is right for you, talk to your trainer about your fitness goals.

**Protein + Starchy Carb
+ Fibrous Carb
= A Supportive Meal**

CARDIO

Why does my trainer keep telling me to do this?

By Marlene Avitia

“Did you do your cardio?” a question most of you have heard at least once. Cardiovascular activity is also known as aerobic exercise. This exercise, which involves large muscle movements and elevated heart rate over a sustained period of time, includes activities such as jogging, biking, swimming, or uphill walking. Why is cardiovascular exercise so important? The number one cause of death of men and women in the United States is coronary artery disease (CAD). Cardiovascular diseases claim more lives each year than the next five leading causes of death – combined. In women CAD has taken over breast cancer as the prominent cause of death.

Cardiovascular benefits combine to help lower your risk of cardiovascular disease by reducing risk factors like obesity, hypertension, and high blood cholesterol. Conditioning your body through aerobic exercise is strength training for your heart. As the weeks went on in your lifting program, didn't those 5lb dumbbells seem to get lighter as you progressed? Through aerobic exercise your resting heart rate decreases, which means your heart isn't working as hard for daily tasks; just as less effort was needed to lift the weight as your strength increased.

The amount of oxygen the body uses during physical activity significantly increases with aerobic exercise, which allows you to exercise longer and at a greater intensity before becoming fatigued. (This can increase up to 30%). A regular cardio program will not only cause a blood pressure to lower, but fats such as cholesterol and triglycerides, which are linked to atherosclerotic plaque that obstructs arteries, will decrease. Exercise is proven to increase high-density lipoprotein (HDL) levels, the “good fat” which helps carry cholesterol enzymes away from the arteries to the liver, which are then excreted out of the body. Because aerobic exercise burns calories, this aids in the expenditure \geq consumption which leads to the decrease of body fat mass.

ACSM recommends that aerobic exercise be done at the minimum of 30 minutes per day 3-5 days of the week. This aerobic (“with oxygen”) activity must be done in your target heart rate zone (60-80 % of your max Heart Rate). If you are doing anything below this heart rate it is classified as activity. Activity is defined as anything that results in caloric expenditure. Yes burning calories is great and we encourage you to be active everyday, but it will not benefit your heart like cardio does. Cardiovascular activity is done to improve one or more components of fitness. As you begin your cardio program remember it is important to ease into a program and consult your physician before starting.

Spelt Pasta w/ Chicken, Basil and Olives

Fall is upon us and the cooler weather brings warm, spicy dishes. Look for low-fat options to avoid putting on the 5-pound “winter coat” this year. Here is one of my recipe favorites with good-for-you olive oil and spelt pasta. Spelt is a great alternative to white or wheat pasta because it has a broader spectrum of nutrients, especially vitamin B2. My favorite brand is *VitaSpelt*, which can be found at Wild Oats, Mother's, or Whole Foods.

1 Tablespoon Olive oil

4 Garlic cloves, crushed

½ White Onion, diced

Crushed Red pepper

1 Jar Kalamata olives, diced, pit removed

4 Roma tomatoes, diced

2 Chicken breasts, boneless & skinless, cubed

Fresh Basil, sliced thin

Fresh grated Parmigiano-Reggiano

1 package *VitaSpelt* spaghetti

Boil water for pasta, cook pasta as you prepare the sauté.

In a medium saucepan heat the olive oil for 2-3 minutes.

Add garlic, onion, and red pepper and sauté until golden.

Add chicken and cook until done.

Add tomatoes and olives and cook for 3-4 minutes, stirring often.

Add basil at the last minute.

Serve pasta and add small amount of cheese.

Serve with a small dinner salad with oil, balsamic, and cracked pepper.



Hypertension and Exercise

By Marlene Avitia

Body Composition

What is the difference between losing weight and losing fat?

By Shannan King

The term body composition refers to the relative percentage of body weight that is fat and fat-free tissue. Fat-free tissue includes muscle, bone, and organs. The composition of your body is much more important than the number you see on a scale. Scales do not give you your lean-to-fat ratio and are extremely inaccurate due to variations in fluid retention, bowel contents, and menstrual cycle. The two most common and most accurate forms of measuring body fat are skinfold measurement, and underwater weighing.

What is the difference between losing weight and losing body fat? Weight loss will occur when you cut calories drastically because fat AND muscle is lost. As a result, the numbers on the scale will drop quickly, but only for a short time and then you hit the “plateau”. This plateau occurs because muscle is your “fat-burning” equipment, and without it you burn less calories per day. Food cravings begin to increase due to the lower calorie intake and so you give up on your “diet” and start eating more calories. And just like that you have gained the weight you lost PLUS more! Generally the extra weight gain is fat and now you are worse off than you were before...

Now that you have thrown away your scale and are ready to give food a chance, let’s talk about why it is important to focus on fat loss instead of scale weight. Body fat measurements give you a percentage that put you into categories like underweight, healthy, overweight, and obese. But more importantly, this percentage is the amount of weight, in pounds, that is fat tissue. And from that information you can determine how much weight is fat-free tissue. This information is essential to measuring fat loss against weight loss. Furthermore, the more lean muscle mass (fat-free tissue) you have, the more calories your body will use daily. With a decrease in fat and an increase in muscle, you will actually eat more the leaner you become. Who would have guessed that you could eat your way to fitness!

Avoid gaining excess body fat or start losing excess body fat by following a program with balanced nutrition, regular aerobic exercise, and regular strength training. Excess body fat increases your risk of complications from hypertension, type 2 diabetes, coronary heart disease, stroke, osteoarthritis, high cholesterol levels, sleep apnea and other respiratory problems, and certain cancers.

ACSM recommends that an individual perform physical activity 3 to 5 times each week for 20 to 60 minutes at a time. Aerobic activity should be performed 3 to 5 days per week and complementary flexibility and strength training should be performed 2-3 days per week. The level of intensity for this physical activity should be at least 55% to 65% of your maximum heart rate. Estimate your maximum heart rate by subtracting your age from 220 and multiplying the result by .55 or .65. Always consult your physician before beginning any exercise program.

One in four Americans is affected by Hypertension. Hypertension is defined as high blood pressure, which is anything at or above 140/90 mmHg. Blood pressure is the force of blood pushing against the walls of your arteries. It is measured as systolic (blood going into the heart) over diastolic (blood flowing out of the heart). A high blood pressure is associated with an increased risk of heart attack and stroke, these risks increase with severity of the condition. Blood pressure can be reduced through: weight loss, dietary modification, exercise, and medication. Regular exercise is an important part of controlling hypertension. Even with medication, exercise can make it possible for you to take a lower dose.

Strong evidence suggests that physical activity helps control high blood pressure. As your fitness levels increase, blood pressure will decrease. Studies prove that exercise relieves the total workload of your heart. When you exercise consistently you lower your resting heart rate, which makes your hearts job easier on a daily basis.

Any type of aerobic activity that makes your heart rate go up and makes you breathe harder is the best type of exercise. This includes a variety of different activities such as biking, swimming, aerobics, cycling, or using an elliptical machine. Both men and women benefit from endurance training. In order to make exercising effective you must train in the range of 40% to 70% of VO₂ max (maximal oxygen consumption). To compute a target heart rate range, subtract your age from 220 and multiply by .4 and 0.7 (Example: If you are 65 years old: $220 - 65 = 155$ x .7 = 108.5). This gives you your lower and upper heart rate range. It is very important that you warm-up and cool-down properly during your physical activity. Here is a little way to remember optimal conditions:

Frequency: 3 - 5 days/week

Intensity: 40 – 70 % maximal heart rate

Time: 20-60 minutes

Type: Cardiorespiratory activities

Enjoyment: Select enjoyable activities

Resistance: Resistance training (>2days/week)

Stretching: Stretching (daily)

Resistance training should be very light with high repetition; heavy resistance training is not recommended for a hypertensive individuals. Circuit weight training has been proven to have great results. It is recommended to use light-weights (like dumbbells) or a series of exercises with machines such as Nautilus or Cyber-type.

It is very important if you have not been exercising regularly to ease into a program. It is recommended that you start out slowly, for example walking for 20 minutes a day at a relaxed pace and gradually building up to a longer time and greater heart rate. If you are at a high risk of heart disease it is recommended that you talk to your physician before exercising and have an exercise graded or stress test.

Exercise also has a positive effect on other cardiovascular risk factors such as: high blood fats (lipid levels), body weight, and type II diabetes (insulin resistance).

WATER

By Marlene Avitia

Water is an essential nutrient for our bodies, without which we cannot survive. A human being can live for up to 2 months without food, but can only survive a few days without water. Water lubricates joints and organs, as well as maintains muscle tone. Water regulates body temperature, filters out impurities, and keeps the brain working properly. The body cannot store water; therefore, a constant supply of fresh water is necessary to function. When you take in the improper balance of sodium and potassium and/or do not drink enough water, your body increases a hormone to try to “retain” water by keeping your kidneys from filtering it. People who do not drink enough water experience symptoms such as headaches, muscles aches, and cramps. When too much water floods your system at once, your body will pass most of it on to your bladder, and only absorb a small amount. The best way to intake water is steadily throughout the day. You should eat plenty of fruits and vegetables because most produce is filled with water, which the body can efficiently process. A good estimate of how much water you need in ounces is to take your body weight in pounds and divide that number in half. For example if you weigh 130 pounds, you should drink at least 65 ounces of water per day. When you exercise you should drink an additional 8 ounces of water for every 20 minutes you are active. Drinking more water is also recommended when you are exposed to extreme temperature, pregnant, sick, or eat a high fiber diet.



Below are a few suggestions to aid you in increasing your water intake:

- Take water breaks during the day instead of coffee breaks.
- Drink water with all meals and snacks.
- Drink water before, during, and after physical activity.

Travel with a bottle of water or keep one handy on you desk while working.

Remember that caffeinated beverages and alcohol cause dehydration so you must drink water to re-hydrate yourself.

Tap Vs. Bottled

The source, taste, and treatment methods used are some of the main differences between bottled and tap water. Public and private water utilities often use chlorine to disinfect tap water, leaving a noticeable aftertaste. The long-term effects of trace amounts of chlorine in the water are unknown, but anytime you can limit toxins in your body is a plus. Bottled water disinfects water by use of ozone or ultra-violet disinfection.

Bottled water: What is better the Alps, ground, or Spring?

Today there are more than 100 different waters out that claim to increase things such as hydration, brainpower, or serenity. The price of bottled water ranges from 79 cents to \$5.77. So what does this mean? Here are a few key words found on labels and what they mean. **Artesian** – This water originates from a confined aquifer that has been tapped and the water level stands at some height above the top of the aquifer. **Fluoridated** – This type of water contains added fluoride within the limitations established by the FDA, often classified as “for infants” or “nursery”. **Ground** – This type of water is from an underground source that is under pressure equal to or greater than atmospheric pressure. **Mineral** – Contains at least 250 parts per million total dissolved solids. It comes from a source tapped at one or more bore holes or springs and originates from a protected (geologically and/or physically) underground water source. No minerals may be added to this water. **Purified** – This water has been produced by either distillation, deionization, reverse osmosis, or any other suitable processes. **Sparkling** – contains the same amount of carbon dioxide that it had at emergence from the source. The carbon dioxide may be removed and replenished after treatment. **Spring** – This water comes from an underground formation from which water flows naturally to the Earth’s surface. **Sterile** – This water meets the requirements under “sterility test”. **Well** – taken from a hole tapping, this hole may be bored, drilled, or otherwise constructed in the ground.

It all comes down to your pallet. Some say that water has become like fine wine, either full, fluffy, or that it can be paired with meals. Water not only comes with added nutrients and electrolytes, but with flavor as well. Smart Water has added electrolytes, just like sports drinks. Evamor, made in Louisiana, is high in calcium bicarbonate and has the nutritional value of 6 apples. Metromint, flavored water has added natural mint, which claims to aid in digestion and that the smell is a great pick-me-up. When it comes down to it, they are all just water. Flavor, or in this case the lack of flavor, is what the person is buying. Some prefer certain tastes, while others prefer appearance, whatever water choice you make is okay, just make sure there is no added sugar, because then you are just drinking soda in clear form. Whether you prefer a short bottle, a square bottle, a narrow bottle, or just a glass of water make sure you stay hydrated.