

EXERCISES ANALYZED

Please take a moment and read the explanation of the exercises that we do in class: why we do them, the muscles they exercise, the right and wrong ways of doing them, and any precautions that should be noted.

The warm-up period is very important because it prepares your body for activity. Stretching is an important part of warm-up and is included as part of the warm-up period. When you arrive late to class, spend a few minutes warming up before trying to catch up with the class.

As long as you're coming to class you might as well get the most out of the exercises. Although talking and socializing is good, sometimes the attention and interest of talking prevents the exercise from being done beneficially.

BACK EXERCISES

The 4 Back exercises that we do first "on your back..." are excellent for individuals with low back problems and are also excellent for the prevention of back problems. If you suffer from low back pain then you should do the 4 exercises slower than we do (we use them as a warm-up). These are modifications of the famous "Williams" back exercises.

STARTING POSITION: The starting position for all 4 exercises is the same. Both legs are never straight down together, one leg is always bent.



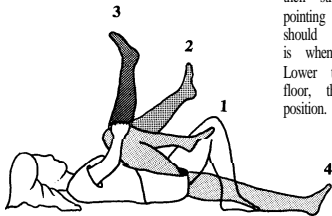


SINGLE KNEE: From the starting position the knee is pulled to the chest, using the hand pulls it a little closer to the chest. **IMPORTANT:** Keep the buttocks on the floor, this stretches the hamstrings (back of thigh).

Straighten the leg until its flat on the floor then return to the starting position. Repeat with the other leg.

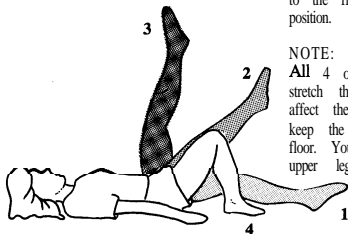


DOUBLE KNEE: From the starting position pull both knees to the chest. **KEEP THE BUTTOCKS ON THE FLOOR...Once** gain this is for the hamstrings which are being stretched. Don't roll up.

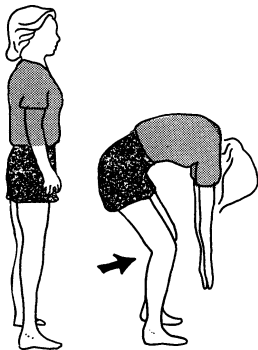


HAMSTRING STRETCH: From the starting position pull one knee to the chest, then straighten the knee so that the foot is pointing to the ceiling. This is when you should feel the hamstrings stretching. This is when the exercise is doing the most good. Lower the leg in the straight position to the floor, then bend it returning to the starting position. Repeat with the opposite leg.

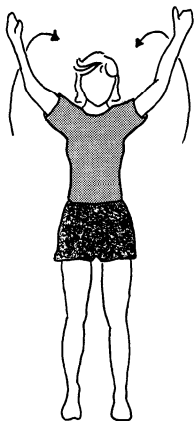
SINGLE LEG RAISE: From the starting position straighten the one leg so that is flat on the floor. Raise it straight as high as it will go, (don't jerk or kick it up). Return it to the floor and then to the starting position.



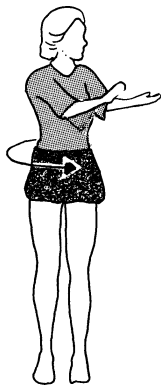
NOTE: All 4 of these exercises are designed to stretch the hamstrings which get tight and affect the low back. In all the exercises keep the hips (buttocks) in contact with the floor. You should feel the back of the upper legs being worked.



TOE TOUCH: This is the main exercise given in all back programs. The main precautions are: don't lock your knees, don't bounce or drop down into the toe touch position, don't keep the back straight. The idea is to slowly roll down starting by putting the chin on the chest, curling the upper trunk and hanging loosely from your hips. Slide the hands down the thighs; this helps to prevent dropping. Hang and relax, then return to the standing position.



ARM CIRCLING: The arm circles (all of them in all directions) are to put the shoulder joint through its full range of movement. They should not be done too fast or they do the opposite of what they are intended to do. Make the circle as big as you can.

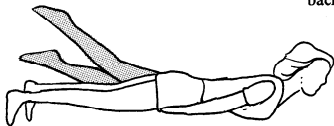


TRUNK TWIST: This twisting, stretches the abdominal muscles that go around the side and back (obliques). By keeping the knees straight (although not locked) and the elbows high (shoulder level) the waist is more effectively stretched.



SIDE STRETCH: This is a difficult exercise to do correctly. The purpose is to stretch the abdominals located in the side and the rib cage. Maximum stretching occurs when the trunk does not bend forward, keep the hips straight. The hand above the head is just used for ballast for additional stretching. The hand should slide down the side of the leg preventing bouncing. The 3 count is not to bounce but to slowly slide down lower, lower, and lower, each time relaxing a little more. There is a tendency to bounce. The bouncing is not harmful in this case, but sudden stretching stimulates stretch reflexes which counteracts the stretching.

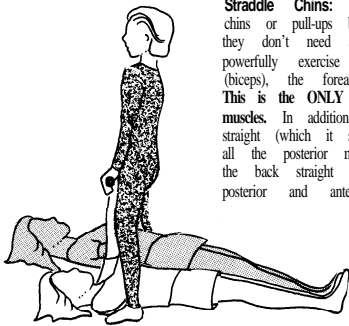
Front Flutters: These are back exercises. The exercise is done on your front, with the hands under the thighs, the head is up so you're looking 5 feet in front of you, the back is arched, and the knees are straight. The legs are alternately moved up and down like the flutter kick when swimming the crawl stroke. The exercise is excellent for **the upper and lower back, the buttocks, and the posterior thighs.** This exercise is only done after several weeks of preparatory back exercises.



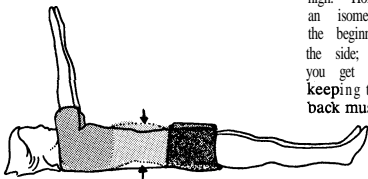
Chest Raising: This is the strongest of the back exercises. This is not done until 12 weeks of lead-up back exercises are used. Chest raises strongly exercises the upper and lower back, the buttocks, and the posterior thighs. The precaution is not to jerk or try to go up too high. The height of the raise is a function of your back's flexibility. The feet should be held by the partner **FIRMLY**. It doesn't matter where the arms and hands are. If they are behind the head the exercise is a little stronger. Putting the arms behind you and holding the hands together makes the exercise a little easier.



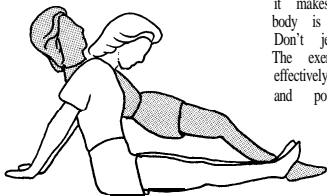
Straddle Chins: These are like regular chins or pull-ups but not as powerful (and they don't need a chinning bar). Straddles powerfully exercise the upper, anterior arms (biceps), the forearms, and anterior chest. **This is the ONLY exercise we do for those muscles.** In addition if the body is kept straight (which it should be) it also exercises all the posterior muscle groups which hold the back straight (low back, buttocks, posterior and anterior thighs).



Back Arch: The back arch is an excellent exercise for the low back, buttocks, and posterior thighs. The exercise is done lying on the back, then arching up so that the shoulders and heels support the arched body. The knees are straight. The arching should be done smoothly and not with a jerk. The height that you come up depends on your flexibility. Don't try to come up too high. Holding that position for awhile adds an isometric component to the exercise. At the beginning of the class the arms are by the side; which allows the elbows to help you get up. After 12 weeks we convert to **keeping** the arms up out of the way so the **back muscles** do more of the work.



Reverse Push Up: This is another back exercise. The exercise starts in the sitting position. The feet may be together or apart, it makes no difference to the exercise. The body is arched upward until it is straight. Don't jerk, but do the movement smoothly. The exercise is not strenuous although it effectively exercises the low back, buttocks, and posterior thighs.



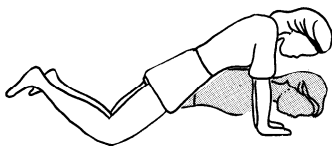
Abdominal Crunches (Half sit-ups): Half sit-ups are for the abdominal muscles. These are 4 large flat muscles covering the region from the pelvic girdle to the rib cage. They do not cross the hip joint and are not used when the body jack-knives, but only when the spine curves forward (flexes).

Sit-ups can be done with the hands behind the head, next to the ears, across the chest, across the abdomen, or at the side. Where the hands are does not change the muscles being used. The more toward the head the hands are the more difficult the exercise. The action of the muscles is to curve the spine against gravity. Some exercise leaders don't like the hands behind the head **because** they tend to jerk the head forward putting stress on the neck, this is primarily a hype, since a strong neck is also an objective of exercises and the neck (unless injured) is not that brittle. Put your hands in a **position** that is comfortable to you.



Important: The spine must flex (curve). The rib cage must come toward the pelvic girdle. Putting a rolled up towel or mat under the hips (low), helps to raise the hips, taking the stress off the back and makes the exercise mechanically easier--- it does **not** lessen the value of the exercise.

After 25 sit-ups the abdominals should be easily felt working. If not, roll up a little higher. It is easy to cheat doing sit-ups so don't slip into easy ways and lose their value. The reason for the knees and hips being bent is to eliminate all muscles except the abdominals.



Knee push-ups: Knee push-ups are strong exercises for the posterior upper arm, the anterior chest, the anterior shoulder. The exercise firms and strengthens these muscles.

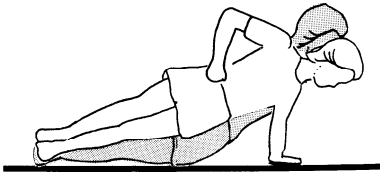
These are the same muscles that are used in the full push-up. Full push-ups are stronger, but put a stress on the low back. We add full push-ups after January, and then start with jack-knife push-ups to protect the back.



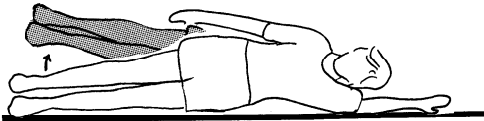
Steps: Steps can be done anywhere, hotel rooms, at home; anywhere a bench or stool can be found! If the chair is higher than you normally use, step less and slower. Even an upholstered chair can be used.

Steps exercise the anterior thighs, the buttocks, the **calves**, and the low back. Although not continued long enough to be considered a good aerobic exercise, they also exercise the heart, lungs, and circulation.

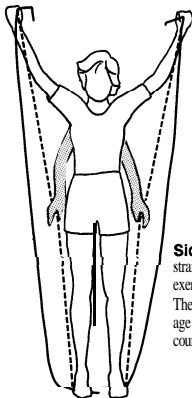
Hip Lowering: Hip lowering exercises the lateral portion of the abdominals (which wrap around the waist and sides), and the outside of the thighs. The arm works to support the body and takes the stress of that weight, however, the arm is not the focal point of the exercise.



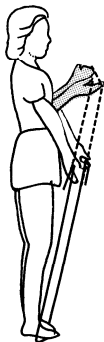
Because of the stress of the body weight, an alternate exercise is shown which exercises the same muscle groups. This exercise is a little difficult to do well, since the legs tend to want to come apart but should be kept together.



Rubber Tubing Exercises (Women Only)

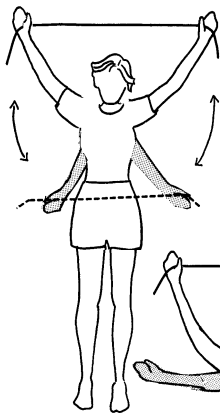


Side Arm Raise: Elbows (arms) are kept straight, or as straight as possible. Strong exercise for the deltoid (shoulder) muscles. The deltoids tend to become **untoned** with age since there is little we do during the course of the day that uses these muscles.

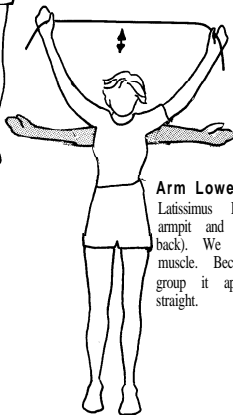


Front Arm Raise: A variation of the above exercise which emphasizes the anterior shoulder muscles. Keep arms straight for best results.

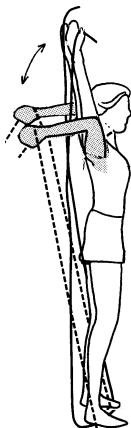
Curls: This is an excellent exercise for the anterior, upper arm. However, the tubing does not give enough resistance. Changing your grip to shorten the tubing helps to make this stronger. This uses the same muscles as straddle chins. Keep the elbows at the side and fully bend the elbow.



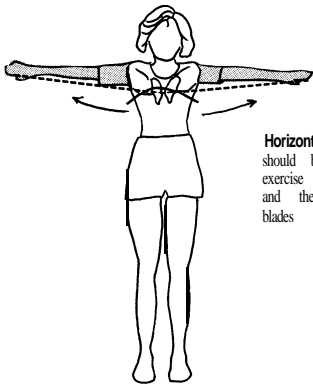
Side Arm Raise: This is a variation and repeat of the first side arm raise, with one exception, pull the rubbers apart as you raise and lower them above your head. This exercises the shoulders. Keep the tubes close to the body.



Arm Lower-sideways: Exercise for the Latissimus Dorsi (the muscle under the armpit and making up most of the lower back). We do no other exercise for this muscle. Because this is a large muscle group it appears easy. Keep the arms straight.



Elbow Extension: This is an excellent exercise for the posterior upper arm (a susceptible area for flabbiness). Exercises the same muscles as pushups, although considerably easier. The only movement should be straightening the elbows.



Horizontal Arm Abduction: The arms should be kept straight. This is a strong exercise for the posterior shoulder muscles and the muscles between the shoulder blades (good for posture).

Ab and Adduction of the Legs: This partner exercise is excellent for the inside of the upper thigh (squeezing in) and the outside of the upper thigh (pressing out). The legs should be straight and about 20 inches apart. The value is a function of how hard your squeeze and press.

