

The Back

Chiropractors understand the value and the power of the adjustment. We understand that it makes good sense to establish a regular routine so that the body is continually conditioned for the incredible benefits, much of which we still do not understand. The two operative phrases are "good sense" and "continually conditioned."

Patients understand that exercise, nutrition and strength conditioning are valuable tools to control their own health. But your patients must be helped to understand that keeping the body strong, flexible and well nourished also enhances the ability of the body to hold and maximize the chiropractic adjustment.

The best method to develop muscular strength is by weight-resisted exercise. This does not mean that each person must strive to develop a hulking, muscular body. Common sense must be developed as it relates to weightlifting exercises. Weightlifting is an overall program of fitness that includes cardiovascular training and wise nutritional choices.

Barbells, dumbbells and apparatus such as cables, pulleys and modern day cam and digital machines, are used to put resistance on a muscle or groups of muscles during repetitive exercise. The purpose of this is to tone and strengthen muscles. As a by-product of lifting weights, muscles hypertrophy and also increase their capacity for endurance. An added bonus is that the skeletal system which supports the muscles becomes thicker and more dense.

Common sense dictates that increased stress on the muscular system is what we need to enhance the skeletal system, including the strengthening of the joints and ligaments. It also makes good sense that you instruct your patients to acknowledge beginning, intermediate and advanced levels in weightlifting. It is necessary to develop solid fundamentals to ensure proper results and to stay virtually injury free. The fundamentals of lifting require common-sense mechanics and are usually the simplest exercises in theory and practicality.

This series of articles will highlight each of the body parts that are exercised in weightlifting. We will begin with the muscle complexes which contain the larger and most powerful of the body's muscles: the back, chest and legs. Later articles will address exercises emphasizing the shoulders, biceps and triceps.

When we read or hear of the back muscles in standard muscle or fitness magazines or in the gym environment, the terms are "lats" (latissimus dorsi), "traps" (trapezius), rhomboids and "erectors" (erector spinae). To clarify, the lats, traps and rhomboids are considered muscles of the shoulder and shoulder girdle. This will explain why you always feel shoulder involvement while doing the vast majority of back exercises.

Instruct your patients that there is a potential for injury while doing any weightlifting exercises. Overtraining can cause muscle spasms, muscle strains and possible joint sprains. Incorrect mechanics may also lead to a segmental dysfunction of the lumbar vertebrae and put the spine out of alignment. Further misalignment may also occur in the pelvic region, specifically the sacroiliac joints. If I have patients or clients with acute or long-standing low back problems, I strongly

suggest they do back exercises that don't directly affect the injured region until such time when these movements can be more beneficial.

Other necessary terminology includes sets and repetitions. A repetition is the amount of times the weight is lifted throughout a specific movement. When I move a weight up and down, that is considered one repetition. A series of repetitions makes up a set. The following is a list of exercises that may be used to strengthen the back. I will discuss only two of the most common exercises. The template for mechanics and method will be virtually the same. For general strengthening and muscle tone, do these exercises no more than twice per week, preferably every fifth or sixth day with a moderate degree of intensity. Choose two or three exercises from the following to cover the entire back. Since the back muscles have supporting muscle groups, you will notice that the rear deltoids and the biceps will also be called into play with virtually all back exercises.

Exercises

- *Lat pulldowns*
- *Bent-over rows -- barbell*
- *Supported rows -- special bench*
- *T-bar rows*
- *Dumbbell rows -- one arm, bent-over*
- *Seated rows -- cable*
- *Dead lifts*
- *Pullovers*
- *Standing pulldowns*
- *Hyperextensions*
- *Power cleans*
- *Pull-ups/chin-ups*

Lat pulldowns are done using a station constructed with cables and pulleys. There are also a variety of stationary machines that achieve the same kind of motion. All other cable variations are dependent upon the handle or grip used. The most popular are: 1) wide grip behind the neck; 2) wide grip to the chest; and 3) close grip. The different grips change the angle slightly, which, in my view, should all be used at one time or another during the strengthening cycles. The mechanics of movement are the same. (Other upper back exercises include pull-ups, chin-ups, power cleans, dead lifts and pullovers).

The basic lat pull down exercise (wide grip to the chest) is done seated facing the apparatus. Three sets are adequate, with the first set being a warmup. The warmup set should be done with relatively lighter weights for 15-20 repetitions. This ensures that the muscles will have an increased blood flow established and the muscle fibers will be prepared for the specific movement. The remaining sets may be performed doing from 8-12 repetitions. With each set, try to add a little more resistance (pyramid up) and make sure the rest period is from 60-90 seconds between each set. One way to increase intensity without increasing the amount of weights is to reduce the time of the rest period. To decrease the intensity, do the opposite (increase the rest period).

Pull the weights to the front of the body touching as high on the chest as possible while contracting the muscles before returning to the starting position. The benefit of this strengthening is not just in the upper back. You will notice that, if done properly, there is much "stretch-flexing" for the shoulder girdle, especially the upper lats and the pectoralis majors (pecs).

Seated rows, as in all back exercises, work the entire back, but it tends to emphasize the lower and middle back. Caution should be used with this exercise due to the forces on the lower back. With proper mechanics and common sense, this is a good exercise for keeping the lower back muscles

strong and establishing spinal support. The added tone will do much to aid the body in holding an adjustment for a longer time. (Other low back exercises include supported rows, bent-over rows, T-bar rows, one arm dumbbell rows, dead lifts, and power cleans.)

Remember that it is important to start your warmup set with lighter weights. Progressively add resistance, if you choose, or establish a working weight, slightly higher than the warmup set, and finish the remainder of the sets and repetitions. Use up to 15-20 repetitions for the warmup set. The next 3-4 sets should be done using from 8-12 repetitions. Each repetition should be performed with the maximum range of motion necessary to encompass the eccentric and concentric contraction of the muscles.

Seated rows are generally done on a bench built specifically for this movement, with a cable pulley system and a stack of weights that are adjusted by a pin. Sit on the bench with feet on the platform. This movement is almost always done with a close grip handle. The knees are slightly bent. With the grip in hand, lean forward as far as comfortably possible, feeling a stretch as you bend and as you slowly exhale. As you come to a seated position, inhale while pulling the bar toward your body. Contract the back muscles while lifting the chest slightly to exaggerate the back in an upright position.

As you release the arms to a straight position, the body should again be leaning forward toward your feet to get a stretch in the hamstrings and the lower back. Exhale just before you reach end range of motion. This is the end of one repetition. Repeat the motion. Remember, go slowly into the seated position and slower into the forward position. The entire activity gives the appearance of rowing a boat.

Chiropractic works best when patients take charge of their own health. Part of that responsibility includes a reasonably consistent routine of strengthening and stretching. This, coupled with cardiovascular exercise and proper nutrition, is the most powerful combination of health care in existence.

Reference

Leone M. *It's Time to Play Weights.*

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