

Lifting

When considering lifting, it is necessary to divide the discussion into body function and correct lifting procedures.

Correct Body Function

Many injuries thought to be lifting injuries are not lifting injuries at all. In reality, some type of abnormal body function was present prior to the lifting procedure. It's the old story of an accident looking for a place to happen. This is usually the case when an individual's back "slips out" as he bends over to pick up a pencil, or some other innocuous activity which he does on a daily basis without problem. Suddenly, in this particular instance, injury develops. Why?

In the last several years, a much greater understanding has been developed of why these paradoxical injuries happen with minimal or limited stress. Doctors can now examine why the body becomes susceptible to injury from ordinary lifting through research in chiropractic. Chiropractic studies motion of the body and uses the muscles to evaluate different body energy patterns. Through this study, it has been found that sometimes muscular balance is lost, which causes structural instability. For example, the muscles of the lower back are very important when bending at the waist to lift some object. Your doctor can test these muscles to determine if they have adequate integrity for normal lifting. Even more important is the muscle which is usually strong, but for some reason becomes weak during the lifting activity. This obviously causes poor stability of the lower back at its various joints. This poor support leaves the back vulnerable to injury. A vertebra can be misplaced, or fibers and ligaments can be torn.

You can, possibly, see muscular imbalance in yourself or in people you observe. If an individual has muscular imbalance for a long time, there are usually significant postural deviations. He may have a sway back, one hip higher than the other, knock knees, flat feet, protruding abdomen, shoulders rolled forward, or many other postural deviations.

As you look at an individual who has one hip higher than the other, or an excessively swayed back, you can easily liken them off-balance muscular pull to imbalanced cables on a 10-ton crane. If a cable on the right side of the boom becomes frayed and weakened, it obviously no longer has its 10-ton capacity. Any attempt to lift will cause a breakdown in the equipment, possibly bending the boom and causing severe damage. The boom, like the spine, is no stronger than its supporting structures. In the crane, the

cables perform exactly the same function as the muscles do in the back.

Some of the muscles in the lower back - which are very important muscles for stabilization as you bend forward at the waist - can actually be weak as a result of a problem clear up in the neck. Chiropractic has shown that when an area of the upper back is not functioning normally, these lower back muscles can be weak - but not necessarily all the time. For example, your muscles may be basically strong, however, a certain type of tilt, turn, or bend of your neck can cause additional nerve involvement controlling the muscles in your lower back, and they become weak right in the middle of the lifting procedure. This is especially true when an individual is lifting and tilts his head back to look up - or turns his head around to talk to someone behind him.

Another factor learned from chiropractic research is that certain muscles of the body become weak with specific health problems. In other words, there is association between organs and muscles within the body. If an organ or system is under considerable stress with a particular health problem, a muscle which is very important in lifting can be generally weak.

Let's take a specific example. The adrenal gland is a very important gland in the body's mechanism for handling different forms of stress. If you're under excessive stress, the adrenal gland can become nearly exhausted from taking care of the stress. Stress is not necessarily emotional; it can be chemical, physical, or thermal. This near exhaustion of the adrenal complex can cause a general weakness of the sartorius muscle (a muscle which holds the front of the pelvis and is important in lower back stability). The sartorius may be adequately strong for you to function on a near normal basis. However, if any one of the hundreds of types of additional stress should come along, it could cause a severe weakness on a temporary basis; this would make you very vulnerable should you happen to put strain on your lower back-pelvic area at that particular time. This is only one of many organ-muscle combinations that could develop, causing you to be vulnerable to a lifting-type injury - which might not have happened yesterday or might not happen tomorrow from the same type of lifting. Correction of the factors predisposing a lifting injury should be made before the lifting injury occurs. This can be accomplished by having your doctor correct any postural deviations. You should also consult him if you feel weakness, and have difficulty in lifting from different positions. Second, a periodic maintenance health

examination by a chiropractor will often uncover imbalanced energy patterns which affect muscular balance. These imbalances could, in turn, cause lifting injuries. Preventive maintenance for your body is much more important than preventive maintenance for your automobile. You can always replace the bearings in your automobile, but you cannot get a new back.

Correct Lifting Principles

This portion of the discussion on lifting injuries is one with which more industrial workers are familiar. Insurance companies, industrial commissions, and plant safety programs demonstrate lifting in their safety programs. A review of some of the basic principles is of value here.

The most common lifting injury from improper procedures occurs because the body is not used to its best advantage. The object to be lifted should be kept near the vertical axis of the body. This is best done, when lifting something from the floor, by bending at the knees, keeping the spine toward vertical. To accomplish this lifting procedure, it is important that the individual not spread his knees wide and place the object to be lifted between them. This position, although good for the spine, makes the individual vulnerable to a hernia because of poor support to the lower abdominal cavity. When lifting a heavy object from a table, scoot the object close to the table's edge so that it can be lifted close to the vertical axis of the body. The whole question of keeping items close to the vertical axis of the body is one of leverage. When an item is held away from the body, leverage is magnified. This is also true when the body is bent down from the hips while the knees are kept straight.

If an item is close to your maximum ability for lifting or carrying, get help or use lifting or carrying tools. Frequently a back is injured when, within a few feet, there was a bar for leverage, a hoist, a dolly, or a plank for sliding the material. Also, the lifted amount can be limited by dividing the material - put it in two boxes instead of one.

Lifting should be accomplished with the muscles in their middle range of motion. When the muscles are almost fully contracted, ability to lift is limited. When the muscles are stretched out to their full length, they are much more vulnerable to injury, especially if there is a sudden, impacted jar. When carrying and lifting, the muscles should be in a partially contracted position.

Rules for Lifting

There are a few simple rules to remember when lifting any object. These rules will keep the possibility of strain muscles, pulled tendons, or stretched ligaments to a minimum. Of course the possibility always exists of pulling a muscle, even when using the proper lifting technique, if the object is too heavy. The incidence of pulling or straining

muscles increases proportionately to the incorrect technique used.

These simple rules are as follows:

1. Always keep the object you are lifting near the vertical axis of your body.
2. Keep the object as near to the center of your body's gravity as possible.
3. Use the greatest number of muscles possible to lift the object.
4. Always use the large muscles of your body to lift with, such as the leg muscles and the arm and shoulder muscles.
5. Always lift in a vertical direction.
6. When lifting anything from a table, always bring it close to the edge as possible before lifting.
7. Never have your muscles extended when lifting.
8. Have your muscles partially flexed (contracted) when lifting an object.
9. Never try to lift a heavy object by yourself when two of you can lift it easily.
10. Never lift an object when you can slide it along the floor or on the table more easily.
11. Never carry heavy objects any great distance when you can use a wheelbarrow, a wagon, or a dolly.
12. Avoid twisting your body when carrying an item; instead, turn your whole body, using your feet.