

Risk Factors

Risk factors are the physical stresses associated with a task or job that have the potential to cause an injury. The primary factors associated with experiencing a back disorder include *Posture, Force, Repetition, and Duration*.

Posture/Position

The physical demands of a task can increase or decrease according to positions of the body. People choose postures based on habit, physical limitations, or the way the job or activity is designed. Nearly all postures are okay for a limited amount of time. It is when people stay in these postures for extended periods that problems begin to develop. People can minimize the demands on their back simply by changing their posture periodically during the day.

Force

Forces on the back are affected by posture. A weightlifter keeps the load within their center of gravity and maintains perfect posture and balance when lifting. If he or she bends forward or backward, the weight shifts and they can no longer support it. The weight has changed because of the change in posture. There are always forces acting on the body, they can be minimized by maintaining better postures, particularly during demanding activities.

Repetition/Frequency

Repetition or frequency refers to the number of times an activity is performed without adequate rest and recovery. Human beings have limitations and body parts wear out. Athletes will attest to this. Many athletes cross-train to minimize this risk. They perform different training activities to spread the demands to different body parts, muscles, or muscle groups. In a work setting, this means looking at different ways a job can be performed. If a job is repetitious, it is important to work in the best possible posture and compensate by performing brief stretches.

Duration

Duration is the length of time a movement or series of movements occur without a rest break. As duration increases, recovery decreases. This can lead to higher levels of fatigue in some workers. Recovery time is the absence of work and provides the body with an opportunity to repair and recover from the physical demands placed on the body.

Increasing the number of risk factors increases the likelihood of experiencing discomfort, pain, or an injury. Lifting something in a poor posture once may not cause an injury, but, lifting it several times in a poor posture for a long period increases your chances of experiencing a back injury.



RISK FACTORS

Talking Notes

POINTS TO REVIEW

1. Changing positions frequently reduces the demands on the back.

The body is designed to get into a variety of positions. The problem is that people often stay in one position too long. Changing postures frequently is one way to compensate for this problem.

2. The position you are in can be more harmful than the load you try to lift.

Forces exerted on your body, and particularly your back, are affected more by the position of your body than by the weight of the object. The better your position when working, the easier it is on your body.

3. The more times you do something, the more demanding it becomes.

While shock absorbers on cars are designed to absorb the shock, we generally choose to avoid pot holes to minimize how much we use the shocks. By varying postures that can be harmful, and by periodically doing something helpful, such as a simple stretch, it keeps our discs or “shock absorbers” from wearing out. While our bodies are designed to do work, we need to try to minimize the demands to keep our bodies from wearing out.

QUESTIONS FOR DISCUSSION

1. What jobs require awkward or demanding postures? How can we compensate for these demands?

2. How can we minimize the effects of repetition in our work environment?

3. How can the forces be minimized on some of our jobs? Can some work postures be modified and still accomplish the same job?

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