

Work **Safe!** Bulletin

ERGONOMICS IN THE GARMENT MANUFACTURING INDUSTRY

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Ergonomics is the study of the relationship between a person and their work environment. The objective is to adapt the workplace for the worker in order to decrease the risk of injury and improve the link between the worker and their environment.

Awkward body postures are a major ergonomic concern in the garment industry. Awkward postures take the body away from a comfortable position, which reduces efficiency and increases the use of energy. Another major concern are static postures. Static means to hold in place, so these are postures where the body is held in one position for a long period of time. An example is when you work with your arms above shoulder height for long periods of time. These types of postures require constant muscle use for the time the body is held in the position. This reduces rest and recovery time, which leads to muscle tiredness. The following are recommendations which will help to reduce the risk of injury due to the above concerns.

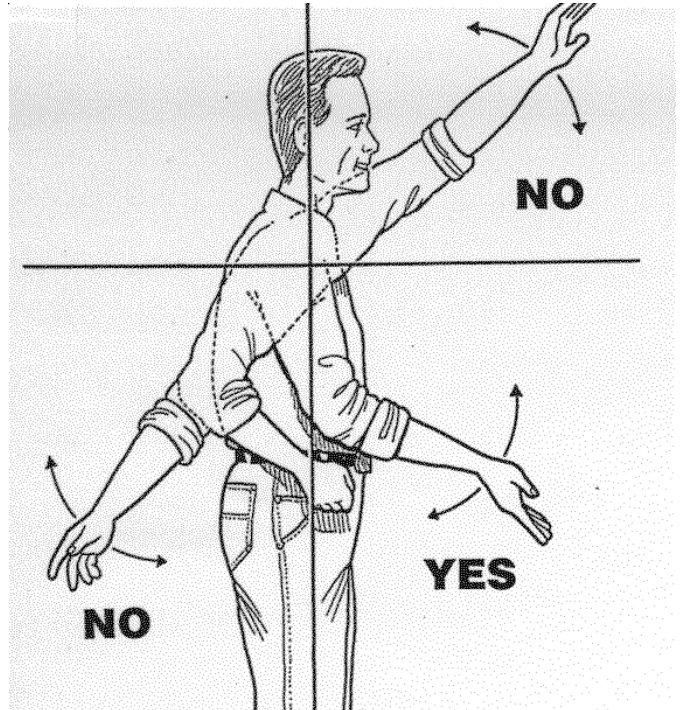
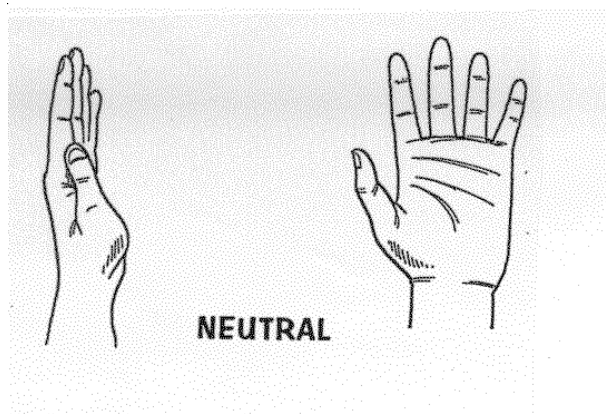
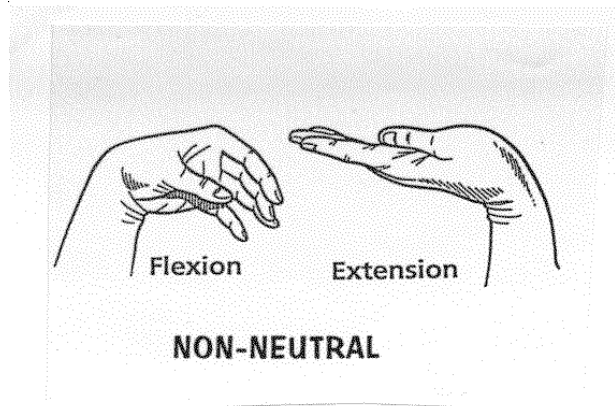
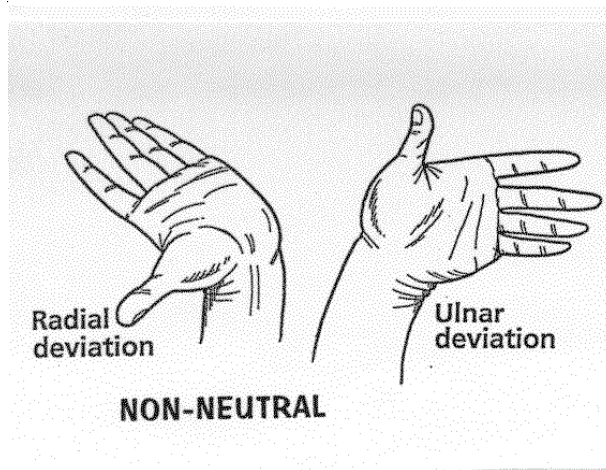


For seated and standing work, the height of the workstation should allow workers to function with elbows at 90 degrees. If the workstation is too low, the worker is forced to bend at the waist to reach the work being done. This puts stress on the lower back. If the station is too high, the worker is forced to lift their shoulders or move their elbows away from the body to reach their work. This puts increased stress on the shoulders which may lead to injury.

During seated work, if a good back support is not present or used, static postures occur which results in constant use of the back muscles. It is important to adjust the workstation in order to allow the worker to use the backrest. It is also important to adjust the worker's chair to allow duties to be performed with their bodies in comfortable positions. The workstation and chair should be positioned so that the worker's knees, hips, and elbows are at 90 degrees, which will reduce stress on the body. There should also be enough room to allow the worker to change their sitting position throughout the day.

Static postures can also occur during standing work. If the worker stands in one position for long periods of time, muscles of the back and legs will be constantly activated. This can lead to increased fatigue, and decreased blood circulation to the legs. During the day, workers should try to walk around to allow their blood to flow. As well, workers should try and sit for short periods of time while working to give their leg and back muscles a rest.

Awkward wrist postures are one of the major causes of cumulative trauma disorders (CTD) such as carpal tunnel syndrome (CTS), tendinitis, and muscle strains. Awkward wrist postures are those which take the wrist away from the neutral position. Neutral position is when the hand is in line with the forearm. The workstation should be adjusted and the worker educated on awkward wrist postures, their harmful effects, and the signs and symptoms of CTD's.



Workers should not constantly work with their arms above shoulder level. Work above the shoulders increases the use of the shoulder muscles. With this constant use, the muscles do not have time to rest and thus tire more rapidly. The majority of work should be done between knuckle height and shoulder level.

Workers should try not to twist their upper body when placing objects besides them. By keeping their feet in place and only moving their upper body, workers are putting large stresses on their backs, which may lead to injuries. Workers should move their feet, instead of twisting at the waist, in order to face the area where the object is going to be placed. If the worker is sitting, they should try to swivel in their chair, instead of twisting their upper body.