



Solutions for Occupational Health

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MAKING IT RIGHT ERGONOMICALLY WITH WHAT YOU HAVE!

Ergonomic workstation design is the most cost effective way to create a productive work environment and reduce worker injury risks. The goal of ergonomic design is to fit the job or task to the employee and the best way to achieve this in a department with more than one employee is adjustability of the workstation equipment.



Current exam room equipment designs incorporate more ergonomic features. As ultrasound departments replace older equipment or purchase additional equipment, they will be able to choose products that have been designed with the sonographer's comfort as a priority. However, until current equipment needs to be replaced, there are a number of ways that it can be either made more ergonomic or can be used in a more ergonomically correct way. Injury risks can be minimized in a number of ways.

Let's start with the exam room chair. The preferred ergonomic features include height adjustability, an adjustable seat pan that encourages movement, a foot rest and lumbar support. But if the exam room doesn't have an adjustable chair, see if there is one that might be available from another department in your facility. Or, you can easily make any chair more ergonomic by adding an air-filled cushion to the seat. These cushions encourage a more upright posture and subtle movements and help improve circulation while you are seated. A third option if your chair is not height adjustable is to alternate between sitting and standing throughout each exam. This is especially important in preventing abduction of your scanning arm.

Next, let's look at the exam room table. Ergonomic features include electric height adjustability, retractable side rails, easy mobility, and features specific to the type of exams you perform, such as stirrups for OB-GYN exams and drop-out section for cardiac exams. But if your exam room tables don't have these features, consider standing to scan, especially if you find that your arm is consistently abducted more than 30 degrees. Move the patient close to you to avoid overreaching. You can add or subtract a mattress in order to change the height of the table. You can also add a cushion to the table which is designed with a cut-out section that allows you access to the patient's cardiac apex.

Now we'll address the ultrasound transducer. Newer designs include lighter weight cables and more comfortable grip surface and width. However, your current transducers can be used more ergonomically by changing your grip from one that uses just your fingers to one in which you are using more of your hand. Some equipment manufacturers have adaptors that can be put on narrow transducers to make them a little wider. To eliminate the torque on your wrist caused by the cable-transducer connection, you can utilize a cable brace armband that supports the transducer cable.

Even older ultrasound systems can be used more ergonomically. Ideally, the monitor should be height adjustable with swivel and tilt capability. The newer flat-panel monitors mounted on articulated arms allow the sonographers to position the monitor in multiple different positions. If your equipment's monitor has limited adjustability, consider installing a second monitor on a moveable stand that can be freely positioned to be more in line with your vision. If your equipment's monitor has no height adjustability, you might consider changing from sitting to standing in order to be in a better position to view the monitor. Finally, by installing a monitor at the foot of the exam table for the patients to view, you can eliminate the need to twist your neck in order to share your monitor with the patients. The keyboard should be height adjustable, independent of the monitor, and should tilt and swivel. However, if your system's keyboard has none of these features, you can adjust your chair to be at a more appropriate height to access the keyboard or you can stand up to scan during the exam. Positioning yourself close to the system decreases your need for excessive reach. You can also position the ultrasound system at an angle which might place the keyboard in a more comfortable position.

Newer, lighter, more compact ultrasound systems make bedside exams less strenuous. But with your current systems, you can still minimize injuries. Share these exams with others in your department. No one should be doing all the bedside exams. Take the time to move the furniture in the patient's room so that you can position the ultrasound system in the most optimal way. But more importantly you should perform bedside exams only on those patients who absolutely cannot be transported to the ultrasound department.

As you can see, there are a number of ways you can make your work environment more ergonomic. By also making changes in your scanning postures, you can be well on your way to reducing your risk for injury.