



TDCJ Risk Management's *Training Circular*

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OFFICE ERGONOMICS

The TDCJ is one of the largest state agencies in the country. Along with this identity comes the notoriety of also having one of the largest agency administrations. Large administration equals offices — lots and lots of offices! In those offices amidst all of the computers, filing cabinets and desks are our most valuable assets, our employees. Ensuring the safety and health of all staff is one of the highest priorities of the agency.

Keeping track of nearly 40,000 employees and over 150,000 offenders is no easy task. There is no margin for error when dealing with the records of either. The attention to detail necessary to accomplish this task on a daily basis often requires that staff spend long periods of time in front of a computer working with a

seemingly never ending volume of data. This can be stressful and physically exhausting to the employee working in an office environment.

At this point, some might be thinking, "What was that? A job where you sit at a desk all day in the air conditioning can be physically exhausting! That person's never worked in an area where you stand all shift long and there's no air conditioning!"

Nobody's debating which one is harder to do. Most all jobs have their stressors and can be physically demanding. Some physical requirements are more obvious than others. But statistics show that a growing number of office workers are developing conditions that have historically been most commonly associated with physically intensive labor. These conditions in-

clude musculoskeletal disorders (MSDs) that cause joint and muscle aches as well as chronic lower back pain. One of the most important things a person can do to keep from becoming an office worker injury statistic is prevention. Part of prevention is being able to recognize factors that contribute to these conditions and then taking action to avoid falling victim to them. Some of the most common conditions responsible for poor office ergonomics involve how people set up their computer workstations.

While the Information Technology (IT) Division is responsible for making sure that your machine is working properly, it's your responsibility to ensure that you are "working properly." That is, are you maintaining correct posture, sitting at proper distances from the monitor, etc.? You might start out the day "working properly," but as

the day wears on you might become fatigued and then gravity takes hold! You slump at your workstation. This causes improper posture which leads to little aches and pains which leads to decreased work productivity. You can see how this, if left uncorrected, can snowball into some things much worse. Two of the most important conditions to be vigilant of when working at a computer are repetition and posture.

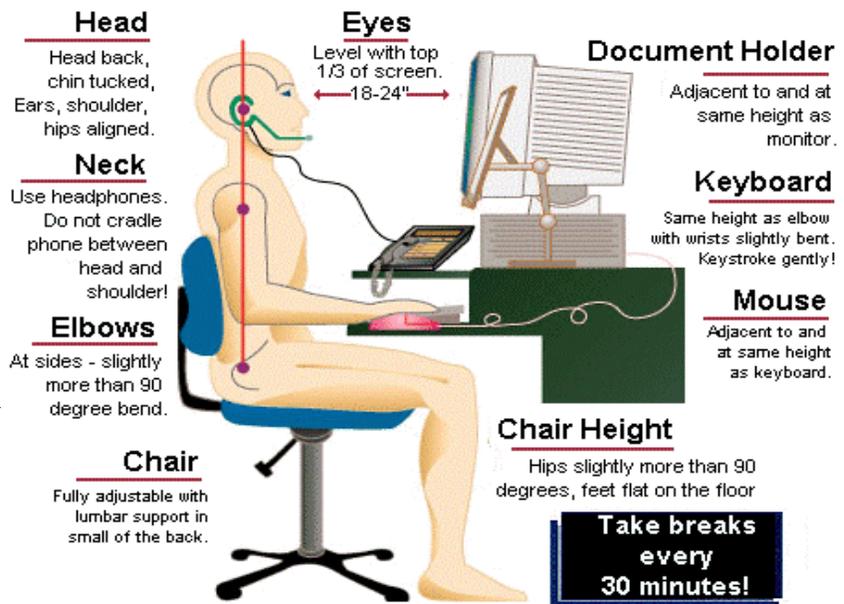
Repetition and Posture

Many computer workstation tasks are highly repetitive. You may perform the same motions repeatedly at a fast pace and with little variation. When motions are isolated and repeated frequently for prolonged periods, there may be inadequate time for your muscles and tendons to recover. Combining repetitive tasks with factors such as awkward postures and force may increase the risk of injury.

- Computers require little task variation. Old typing activities, such as adding paper or mechanically advancing pages, have been reduced or eliminated. Users can stay in their chairs and type or perform mouse work for an almost unlimited amount of time. Under these conditions, a proficient typist can easily

perform more than 18,000 keystrokes per hour. These repetitive motions can lead to tendon and tendon sheath injuries, especially if the wrist is bent during the activity.

- A poorly designed workstation may cause you to repeatedly reach to use a mouse or answer the phone. This can fatigue the muscles of the shoulder and irritate the tendons.



- Similar repetitions occur when using a pointing device such as a mouse. Here, the hazard may be greater because the motions are often concentrated in only a few fingers of one hand.
- A computer operator may remain in essentially the same posture for an entire shift. This forces a few isolated muscles to repeatedly activate to accomplish a task such as holding the head up or focusing on a computer screen.

You can reduce repetition by properly arranging the workstation and its components. For example, a mouse that is placed close to the keyboard should minimize repetitive reaching. However, even the best designed workstation can not eliminate all highly repetitive motions, especially for data input. For this reason, it is extremely important to maintain good posture by providing adequate adjustability at the workstation. You should perform all hand tasks with the wrist in a straight, neutral posture to allow the tendons to slide easily without interference.

The following work process suggestions may also help reduce repetition.

- **Task Rotation or Job Enlargement** - If you must perform a variety of tasks, when possible, intersperse them throughout the work day. Minimize long blocks of uninterrupted computer time by doing other non-computer tasks such as photocopying, phone work, cleanup, etc.



- **Micro Breaks or Rest Pauses** - Build short micro pauses into computer use sessions. Frequent short breaks are desirable. Every hour, take a five-minute break from computer tasks. Look away, stretch, get up, or walk. These brief pauses provide time for muscles and tendons to recover.

Although the focus has been on office workers, the points made in this circular are not limited to the office environment. Any task involving repetitive steps and/or motions can be applied. Skilled workers often perform repetitive tasks with their hands as part of their job. For instance, electricians, mechanics and locksmiths must often perform tedious and repetitious motions with their hands for extended periods of time. Security staff working gates might also perform repetitive actions. No matter what your job duties are, you should take the time to assess the task at hand (no pun intended!) to ensure that you aren't subjecting yourself to injury. Curb your tendency to always use one hand. Studies indicate that people use their favored side of their body to complete tasks over 95% of the time. This might explain why you can throw a ball with your 'favored arm' fairly well but when asked to throw a ball with the other arm, people around you duck and take cover!

So, the next time you're assigned a task involving repetitive actions, whether it be assembling the 'big report', re-wiring an electrical panel or controlling traffic at the turnout gate, remember to make sure that you are not subjecting

yourself to a condition that could lead to injury. Learn to use your "less favored side" of your body to accomplish tasks.

Please take care of your health, the agency wants and depends on you everyday!

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