

Part II:

Activities and Outcomes

The Rehabilitation Engineer spoke with William about the essential functions of his position, areas of pain and discomfort and the resulting functional limitations, and the arrangement of his workstation. Preliminary recommendations were developed and the Rehabilitation Engineer asked an Occupational Therapist as well as a vendor to meet him on-site. The vendor brought several ergonomic chairs for William to try. After a thorough on-site analysis and meetings with William and his supervisor, the following recommendations were made.

ACCOMMODATION RECOMMENDATIONS

Seating:

It was first observed that William had a low back task chair, which did not fit him well or provide him the support he needed, particularly in his upper back and neck. Several highback chairs with neck supports were tried and William found one that fit him well and provided him the needed support. The **highback chair selected also has a swing arm option**, which can be adjusted to provide his arms with support, enabling him to maintain the recommended 90-degree angle at the elbows.

Workstation:

William had **placed his mouse on the left side of the keyboard** to lessen strain on the right wrist. It was determined a **separate keypad** would also allow him to use the left hand for entering numbers, further decreasing use of his affected right wrist.

The workstation is L-shaped with the computer in the corner. There is a keyboard cutout, which is only wide enough for the keyboard, so William places the mouse up on the desktop. This requires him to over reach for the mouse. The separate keypad, recommended above, would also have to be placed up on the desk top with the same resulting problem. In order to have the keyboard, mouse and separate keypad all next to each other on the same surface level, it was **recommended that the keyboard tray be raised so it is flush with the desk surface**. To properly accommodate his height, **the entire work surface needed to be lowered by two inches**.

While William had a copyholder on his desk, he did not use it because he was simply not in the habit of doing so. It was recommended that he begin using the **copyholder** in order to place his documents in a better viewing position so his head and neck will be in a more neutral position when reading source documents. A neutral position does not require him to look up or down. The lighting was also poor, not properly illuminating the material he was referencing. A **halogen task light**, fully adjustable with two light levels, was provided.

Computer:

Lowering the work surface provided an additional benefit since the **height of the monitor was originally higher than recommended** causing noticeable neck and shoulder strain. A **trackball** would be less stressful on his arm and shoulder than the standard mouse he was using. However, he has a strong preference for a mouse, based on past trials, so he was asked to reconsider attempting the trackball if the above accommodations did not provide sufficient relief to his wrist and neck.

Other:

William admitted he would not remember to take breaks as recommended, and would tend to delay any break until his pain level forced him to stop. **The Private Practice Vibration Reminder Disk**, was recommended, which can be worn on the body and set to vibrate at specific intervals throughout the day. It can be clipped under clothes, worn on the wrist or just placed in his pocket.

Williams' supervisor was closely involved in the evaluation and follow up of all recommendations. The employer paid all costs, including the professional time of the Rehabilitation Engineer, who spent 3 1/2 hours in the evaluation, travel, and report documentation. William has only been using this assistive technology for three months but reports a significant decrease in pain.

COST ANALYSIS

The following is a summary of items recommended for William. Most items can be found at standard office supply stores.

Reimers Ergonomic Office Chair	\$660.00
22-key Keypad-Serial	\$ 39.95
PS/2 Adapter	\$ 4.95
Private Practice Vibration Disk (www.alimed.com)	\$ 29.99
Halogen Light	\$ <u>39.99</u>
	\$774.88



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