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Eye Control Hints and Tips

by

the Network of Excellence on
Communication by Gaze Interaction

www.cogain.org



Environmental and ergonomic issues

DART, Västra Götalands läns landsting, Sahlgrenska University Hospital, Sweden

Eva Holmqvist

Margret Buchholz

Council Certified Specialists in Occupational Therapy



DART, Sweden 2007

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The content of this presentation is translated from, or inspired by the book *“Be active using a computer – possibilities for people with physical disabilities”* (Lidström and Zachrisson 2005)



Seating and positioning

Functional sitting position



There are 3 core elements to good positioning:

- Stability
- Mobility
- Comfort

Ergonomics



For people with physical disabilities,
follow the same ergonomic
principles as for anyone else.

Apply the same basic principles of
seating and positioning but adapt
them to meet individual needs





An example of a bad ergonomic seating!

- The screen is too high
- The mouse is too far away
- No stable seating in the chair
- The feet are not positioned on the floor – giving you bad posture and poor balance





This is an example of a person who has the screen too high.
Having to look up can make the eyes tense and tired.
It can also cause pain in the neck.



Interesting findings with eye gaze



However...

when using an eye gaze system we have found that some users may benefit from having the computer screen at bit higher than is generally advisable

This may be because the user opens his/her eyes more when looking up, allowing the eye gaze system to recognise where the user is looking more easily...

... It is therefore important to be attentive to the user's neck to avoid pain.

Use a good neck rest!



All new methods of computer access should be linked to an assessment of seating and positioning



An electric wheelchair can allow the possibility for seating to be easily changed



Adjustable screen

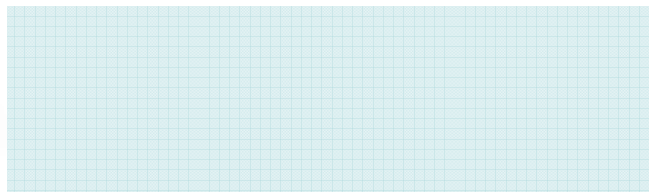


- Giving more choice for comfortable positioning



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There are a wide variety of mounts



Light



- Consider the positioning of the screen
- Avoid reflections and direct sunlight



Summary



- Use your knowledge of ergonomic issues whether or not the user has disabilities
- Use some kind of protocol or check list
- A good sitting position is essential for making special access methods successful
- Consider the benefits of having a good chair, an adjustable height table, appropriate lighting and the ability to reposition the computer screen
- Inform and educate the user and others in the environment
- Use video and photos to help you to evaluate your success
- Continuously follow up the effectiveness



References:

- Lidström, H. and G. Zachrisson, Eds. (2005). [Aktiv med dator - möjligheter för personer med rörelsehinder.](#) Stockholm, Hjälpmedelsinstitutet.
- <http://www.osha.gov/SLTC/etools/computerworkstations/index.html>

For more information...



... about this presentation, please contact:

Margret Buchholz, DART

margret.buchholz@vgregion.se

Eva Holmqvist, DART

eva.holmqvist@vgregion.se

For more information about eye control, see www.cogain.org