Ergonomic considerations in relation to physical well-being

When working from home during COVID-19

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Background

- Declaration of COVID-19 as a pandemic by WHO has brought changes to working life in South Africa

- A number of containment measures for COVID-19 has been put in place such as hand washing or sanitising, wearing masks, respiratory hygiene and social distancing

- In order, to limit the spread of the virus workers have been asked to work from home

Working from home

- Can be defined as use of information and communication technologies (ICT) such as smartphones, tablets, laptops and desktop computers for the purpose of working outside the employers premises

- The term is used synonymously with teleworking, telecommuting and remote working

- According to the ILO about 18% of workers in countries with infrastructure have occupations suitable for working from home (ILO, 2020

- Of importance, is to have business continuity, maintain productivity, and preserve jobs while safeguarding the well-being of workers

Working with ICT

- ICT may affect the well-being of workers including their physical well-being

- Exposure to ergonomic risks emanating from the design and layout of ICT equipment and workers' work practices as well as the organization of work (psychosocial factors) may lead to adverse health effects such as eye problems, musculoskeletal disorders, diabetes and cardio-vascular disease

- Application of ergonomic principles in the home-based ICT workstation and environment is critical in ensuring the well-being and productivity of workers

Systems approach

- System elements
  - Home based worker
  - ICT equipment
  - Operating ICT equipment
  - Home environment
  - Work organization
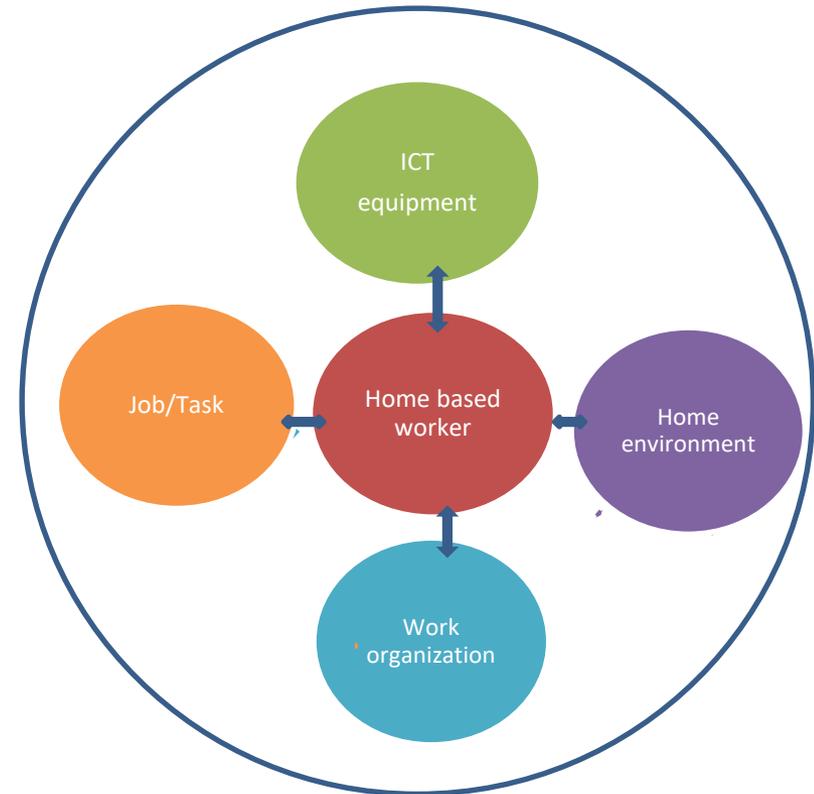
Home based worker

- Centre of focus

- Fit ICT equipment to worker

- Offer training on computer ergonomics

- Preservation of well-being

- Productivity

ICT equipment design

- Features[2]

-<u>Desk</u>

     Big enough
     Rounded edges
     Matt surface

-<u>Chair</u>

     Adjustable height,
     backrest and armrests
     Breathable material

-<u>Seatpan</u>

     Rounded front edge

-<u>Base</u>

     5-star with casters

-<u>Swivel</u>
-<u>Controls</u>

ICT equipment design cont'd

- Monitor screen
  - Detached from keyboard
  - Elevate laptop on stand

- Keyboard
  - Detached from monitor

- Mouse
  - Fit hand
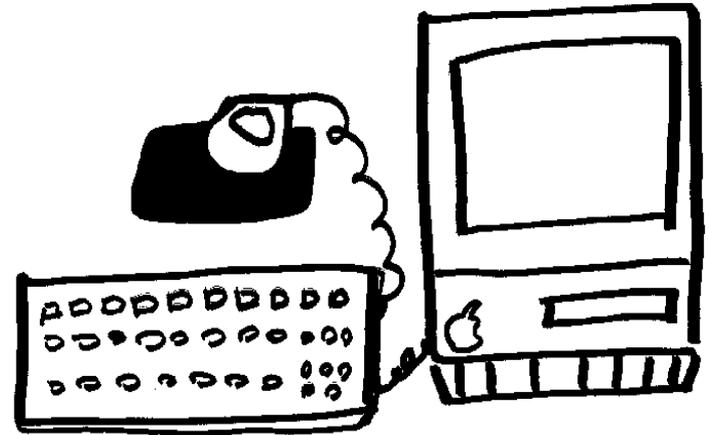
Laptop design

- Compact with keyboard attached to screen and mouse integrated into the keyboard
- Suitable for use for short periods of time
- Not suitable to use as primary computer
- However, it can be modified by elevating it on a stand and connecting a separate keyboard and mouse
- This configuration allows for adjustment to fit the worker

Accessories

• The use of accessories allows for the adjustment of aspects of the workstation to fit the worker
  – Document holder

  – Wrist rest

  – Foot rest

  – Screen filter

  – Task Lamp

ICT workstation set-up

- Workstation parameters are set at suitable positions
  - Working height achieved by adjusting the desk, chair, keyboard and mouse at level at which work is done

  - Viewing distance achieved by placing the screen at a distance where the screen can be viewed without difficulty

 - Viewing height achieved by alignimg eye-level and height of screen

ICT workstation set-up cont'd

– Viewing angle
  - Screen can be angled to achieve suitable viewing height

– Leg room
  - Necessary to allow feet freedom of movement

– Thigh clearance
  - Necessary to allow thigh freedom of movement

– Foot rest necessary to support legs holder

Properly set-up ICT workstation

- Purpose
  - To adjust the different components to fit your body
  - Proper set-up achieved when
    - Head is straight
    - Shoulders are relaxed
    - Arms close to the body
    - Elbows, hips and knees at 90^0
    - Forearm and thighs horizontal to the floor
    - Hands and wrists in line
    - Feet supported
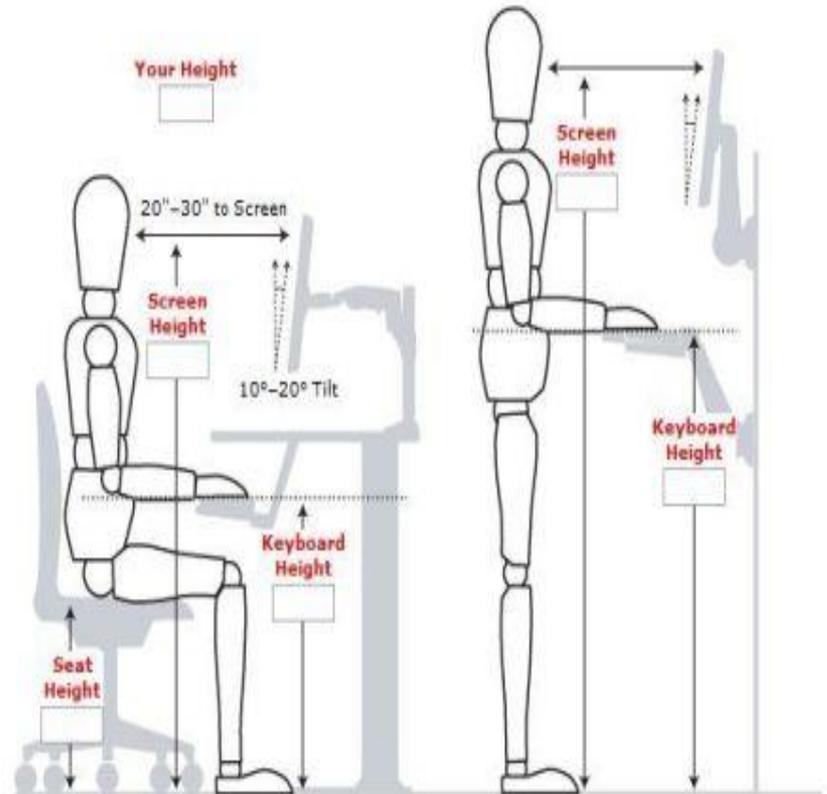
Temporary set-up of home environment
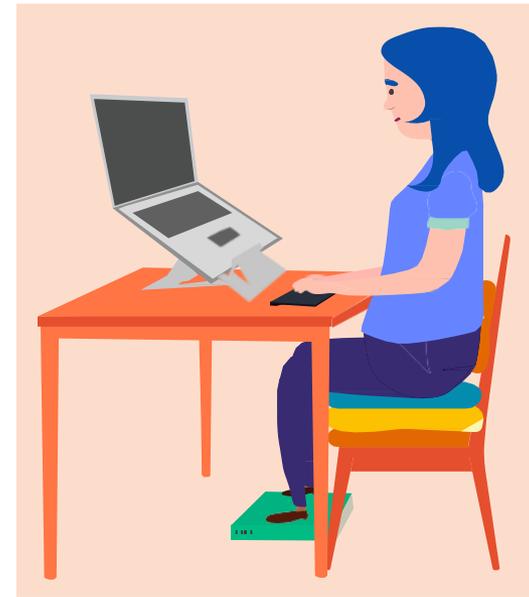
Home environment

- Physical factors
  - Lighting
  - Temperature
  - Noise

Work organization

- Work organization is the way work is organised and the perception of the worker of his/her work
  - Work organization factors include job demand and control, lack of decision latitude, job insecurity, job dissatisfaction, social support, working under pressure, piecework, working on target
  - The presence of these factors may interact with the other ergonomic risks enhancing the development of adverse health effects.

Prevention of ergonomic risks in the home environment

- A number of ergonomic risks may be involved depending on the on the situation at hand
  - Identification of ergonomic hazards
  - Analyse, assess and evaluate the risk and prioritize
  - Implement control measures
  - Monitor and review
  - Medical surveillance

Offer training on computer ergonomics

- It is critical to promote awareness on various ergonomic risks associated with adverse health effects and educate ICT workers on healthy work practices
  - Taking rest breaks
  - Performing exercises
  - Being mindful of posture
  - Adjusting the workstation appropriately

- It is important to note that availability of adjustable ICT equipment alone is not going to prevent the occurrence of adverse health effects
  - For instance, ICT equipment may not be adjusted due to lack of knowledge
- Ongoing education is recommended for reinforcement

Conclusion

- Workers working from home should be provided with appropriate ICT equipment
  - To enhance their well-being and productivity
  - A win-win situation for both workers and employers
- This should continue beyond COVID-19