

# Focus on IFA's work

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## Ergonomics at call-centre workplaces

### Problem

The number and significance of call-centre workplaces is constantly rising. In their design, they mostly resemble standard office and computer-screen workplaces, although the work and tasks involved are often quite different. It is thus essential to determine the specific strains found at call-centre workplaces. The findings should result in concrete ideas for deriving an optimised and worker-friendly workplace and an optimised workplace layout.

### Activities

An ergonomic analysis of call-centre workplaces was conducted in the framework of the CCall project directed by the Institution for statutory accident insurance and prevention in the administrative sector. Body postures and movements of eleven employees were recorded in four call-centres using the IFA measurement system CUELA (computer-supported recording and long-term analysis of the musculoskeletal load). This person-centred measurement system records the posture and motion data using sensors affixed to the clothing.

Measurements were also taken at five typical computer-based workplaces. This was to identify the typical postures related to call-centres as these differ from normal office workplaces.



Posture measurements with the CUELA measurement system at a call-centre workplace

### Results and Application

It was shown that call-centre workers work considerably longer in the seated posture than do normal office workers. The higher the proportion of telephoning there is in the job, the longer the workers sat. Workers who telephoned particularly long – at over 80% of the working day – also spent 85% of their working day seated.

The spinal column has a natural S-shape when a person stands upright. When seated, the pelvis is tilted backwards. In a long-term seated posture, the relaxed muscles can even lead to a permanently rounded back in extreme cases.

The measurements gathered by IFA showed that the negative pelvic tilt and thus the risk of getting a rounded back increased with a rise in the proportion of telephoning activities at work.

Preventative measures for these situations include using office chairs that permit a forward, centre or back seating position as well setting up both standing and seated workplaces so as to promote a variation of work postures.

As a set of self-help tips for call-centre managers, the results were presented in a report and in a set of guidelines with concrete suggestions for ergonomics at call-centre workplaces. A checklist was also devised for call centres, which is available on the Internet – as is the CCall report and the self-help tips.

### **Area of Application**

All call-centre operators.

### **Additional Information**

- Arbeitsumgebung und Ergonomie. CCall Report 4. Ed.: Verwaltungs-Berufsgenossenschaft, Hamburg 2001
- <http://www.ccall.de>, Sector “Ergebnisse, Reports“
- Benninghoven, A.; Bindzius, F.; Cramer, J.; Ellegast, R.P.; Flowerday, U.; Genz, A.; von der Heyden, T.; Pfeiffer, W.; Schittly, D.; Schweer, R.; Stamm, R.: CCall – Healthy and Successful Work in Call-Centres. International Journal of Occupational Safety and Ergonomics (JOSE) 11 (2005) No. 4, pp. 409-421

### **Expert Assistance**

IFA, Division 4: Ergonomics – Physical environmental factors

German Social Accident Insurance Institution for the administrative sector

### **Literature Requests**

IFA, Central Division