
Tailored exercise ensures a healthier workforce

FROM THE SPECIALTIES

OLOV BELANDER

olov.belander@helsedir.no

Olov Belander, senior adviser at the Norwegian Directorate of Health. The author has completed the ICMJE form and declares no conflicts of interest.

TINA DALAGER

Tina Dalager, associate professor at the University of Southern Denmark. Research in the implementation of physical activity and health monitoring in working life.

The author has completed the ICMJE form and declares no conflicts of interest.

GISELA SJØGAARD

Gisela Sjøgaard, emeritus professor at the University of Southern Denmark. Research in muscle physiology and motor control used within physical activity and health in working life.

The author has completed the ICMJE form and declares no conflicts of interest.

KAREN SØGAARD

Karen Sjøgaard, professor at the University of Southern Denmark. Research in the maintenance of work ability and the physiological effect of physical exercise in the prevention and rehabilitation of musculoskeletal pain.

The author has completed the ICMJE form and declares no conflicts of interest.

People who exercise at or after work will improve their health. Employers should invest more in their employees, and a new tool can offer employees a free research-based exercise programme adapted to their everyday working life.

Many people are too sedentary at work. This is damaging to health if not compensated for with extra physical activity [\(1\)](#). Meanwhile, studies have demonstrated that people with high occupational physical activity, often with low intensity and monotonous activities, have poor health [\(2\)](#). For example, the proportion of Swedish employees with low physical fitness increased from 26 % to 46 % in the period 1995–2017 [\(3\)](#).

The prevention of occupational health damage benefits employees, employers and society as a whole. In Norway, loss of productivity due to musculoskeletal disease was estimated to be NOK 54 billion in 2013. On top of this, there are the disability and healthcare costs [\(4\)](#). Physical activity can prevent and treat this, as well as more than 30 other conditions [\(5\)](#), and conservative estimates demonstrate a potential annual welfare gain in Norway of 400,000 quality-adjusted life years if the population became more physically active [\(6\)](#).

Intelligent Physical Exercise Training in the Workplace

Tailored exercise can improve the health of employees. This has been demonstrated in a report that the Norwegian Directorate of Health and several stakeholders in working life commissioned from the Research Unit of Physical Activity and Health in Working Life at the University of Southern Denmark [\(7\)](#). The report summarises over 40 randomised controlled trials, and the findings are confirmed by other researchers [\(8\)](#).

Following the report, a web application was designed, '*Smart mosjon i arbeidslivet*' [Intelligent Physical Exercise Training in the Workplace] [\(9\)](#). This offers employees a free research-based training programme, with exercises tailored to the employees' work profile, physical fitness and any possible symptoms. The tool is available via helsenorge.no [\(10\)](#).

Working with the Intelligent Physical Exercise Training in the Workplace web application is one example of how the labour and employers' associations and the authorities in collaboration with researchers can help improve health in the workplace – if provisions are made for this.

REFERENCES

1. Helsedirektoratet. 2. Voksne og eldre – generelle råd. www.helsedirektoratet.no/faglige-rad/fysisk-aktivitet-i-forebygging-og-behandling/voksne-og-eldre#voksne-bor-kompensere-for-stillesitting-ved-a-vaere-ekstra-aktive-den-ovrige-tiden/ Accessed 2.2.2023.
2. Holtermann A, Schnohr P, Nordestgaard BG et al. The physical activity paradox in cardiovascular disease and all-cause mortality: the contemporary

Copenhagen General Population Study with 104 046 adults. *Eur Heart J* 2021; 42: 1499–511. [PubMed][CrossRef]

3. Ekblom-Bak E, Ekblom Ö, Andersson G et al. Decline in cardiorespiratory fitness in the Swedish working force between 1995 and 2017. *Scand J Med Sci Sports* 2019; 29: 232–9. [PubMed][CrossRef]

4. Helsedirektoratet. Samfunnskostnader ved sykdom og ulykker 2013. https://www.helsedirektoratet.no/rapporter/samfunnskostnader-ved-sykdom-og-ulykker/Samfunnskostnader%20ved%20sykdom%20og%20ulykker%202013.pdf/_/attachment/inline/of795e61-89ed-44db-ad28-9a7904f7c367:cb36fc55427770166822de297293217171cb319f/Samfunnskostnader%20ved%20sykdom%20og%20ulykker%202013.pdf Accessed 10.3.2023.

5. Sundhedsstyrelsen. Fysisk træning som behandling. <https://www.sst.dk/-/media/Udgivelser/2018/Fysisk-traening-som-behandling.ashx> Accessed 10.3.2023.

6. Helsedirektoratet. Kunnskapsgrunnlag fysisk aktivitet. https://www.helsedirektoratet.no/rapporter/kunnskapsgrunnlag-for-fysiskaktivitet-innspill-til-departementet/Kunnskapsgrunnlag%20for%20fysisk%20aktivitet%20innspill%20til%20departementet.pdf/_/attachment/inline/d7fb591e-ded4-4da9-b1c4-6dcbe82d8442:75b205e5b7403320a38acbb145b7af32ac726393/Kunnskapsgrunnlag%20for%20fysisk%20aktivitet%20innspill%20til%20departementet.pdf Accessed 10.3.2023.

7. Dalager T, Faber, Hansen A et al. Intelligent motion. https://findresearcher.sdu.dk/ws/portalfiles/portal/178418893/IntelligentMotionDK_Smart_MosjonNO.pdf Accessed 10.3.2023.

8. White MI, Dionne CE, Wärje O et al. Physical Activity and Exercise Interventions in the Workplace Impacting Work Outcomes: A Stakeholder-Centered Best Evidence Synthesis of Systematic Reviews. *Int J Occup Environ Med* 2016; 7: 61–74. [PubMed][CrossRef]

9. Helsedirektoratet. Smart mosjon i arbeidslivet. <https://www.helsedirektoratet.no/tema/fysisk-aktivitet/smart-mosjon-i-arbeidslivet> Accessed 2.2.2023.

10. Helsenorge. Tren riktig med "Smart mosjon" i arbeidslivet. <https://www.helsenorge.no/trening-og-fysisk-aktivitet/smart-mosjon/> Accessed 20.3.2023.

Publisert: 8 May 2023. Tidsskr Nor Legeforen. DOI: 10.4045/tidsskr.23.0098
Received 7.2.2023, first revision submitted 20.3.2023, accepted 29.3.2023.

