

Reducing Physical Stress in the Workplace

nora academy technology develops appropriate ideas for solutions

Physical stress caused by unfavorable body posture or heavy lifting and carrying at the workplace presents a health hazard for workers. For this reason, it is important to create working conditions in departments with high physical stress, such as on the production side, that reduce physical strain. Many – sometimes small – measures often have a big impact: Healthy, ergonomically favorable conditions or good indoor climate can prevent workplace absences and increase productivity.

Health report as a foundation

The third session of the nora academy technology, which presented its final results to the steering committee and management on March 5, 2018, **also focused on the identification and reduction of physical stress factors in the workplace.** At the end of September 2017, the team started with a total of ten participants from various technical departments, such as Production, Maintenance, Development and Logistics. For eleven days over a period of six months, the participants gained first-hand knowledge of the entire production process as well as the adjoining departments. During this time, 40 internal experts provided interesting insight into their areas of responsibility, thus ensuring that the participants gained a better understanding of nora's internal processes.

The participants of the academy technology were invited to develop a concrete solution to the aforementioned topic. On the basis of a detailed health report from BKK Freudenberg, which clearly indicates that a very high proportion of musculoskeletal disorders and illnesses were evident in some production areas. The participants of the academy technology were invited to develop a concrete solution to this issue. "It was our mission to find new, innovative ways and solutions to promote good health and to achieve this vision together with satisfied, motivated employees," said the academy technology participants. Physical strain is even more pronounced at an advanced age, so successful prevention of musculoskeletal disorders and illnesses is becoming even more important as the workforce ages.

Various approaches were presented

At the final event, the participants first presented various technical, organizational and personal suggestions that could significantly contribute to reducing physical strain in production. The increased use of technical aids, such as an electric pallet truck or other lifting aids for moving equipment would be useful in the technical field. From an organizational point of view, it would be advisable to create a well-functioning rotation plan, so that the same people are not always working at the stations in production where there is the highest physical stress. In terms of a personal approach, maintaining a healthy lifestyle is very important; i.e. sports and healthy nutrition contribute to the health of the body or its recovery in a major way.

Innovation for the future – working with the exoskeleton

Although it is possible to reduce physical strain caused by the factors mentioned above, in some cases this is not sufficient enough, and the use of an exoskeleton could be considered to make everyday work easier. A

distinction is made between active and passive exoskeletons. Passive exoskeletons mechanically support the wearer exclusively; for example, by means of spring or cable pull systems. Active exoskeletons are driven by motors and sensors. Especially when lifting heavy loads, the burden for the worker can be reduced by up to 40 percent.

“As part of the first step towards implementation, the most important thing is to merge the relevant departments into a working group,” explained the participants of academy technology. “The responsibility of this team is to analyze and optimize workplaces in terms of ergonomic and organizational conditions and to adapt the changes in other areas,” the participants concluded.



From left to right: Josef Maugeri, Dennis Dillmann, Jan Bauer, Robert Drost, Ertan Atav, Matthias Stockmann, Steffen Bormuth, Peter Schura, Klaus-Peter Lenz. Who's missing: Alexander Decker

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