

Die [Working Time Society](#) (WTS) hat insgesamt neun Consensus Papers rund um die Themen Arbeitszeit, Gesundheit, Sicherheit und Leistungsfähigkeit erstellt (Veröffentlichung im Journal [Industrial Health](#) im Frühjahr 2019). Diese Consensus Papers resultieren aus einer Initiative der International Commission on Occupational Health (ICOH), um aktuelle Informationen und Empfehlungen für eine globale Leserschaft zusammenzutragen.

Das Sachgebiet Beschäftigungsfähigkeit der DGUV hat auf Anfrage der WTS zu den Empfehlungen eines der Consensus Papers (Titel "Individual differences in shift work tolerance and recommendations for research and practice" von Ritonja, Aronson, Matthews, Boivin und Kantermann) Stellung genommen.

#### Key Statements:

1) Individuals vary in their sleep requirements and preferences with regard to both duration and timing (e.g. observable as different chronotypes). They also vary considerably in the impact of sleep loss and circadian misalignment on their alertness and cognitive functioning. Long-term health consequences and risks associated with shift work vary among individuals as well.

#### Agreement/concerns

This statement talks about general facts known from the sciences. These are already used as a basis when designing healthy shift work. There are no recommendations provided.

Long-term health consequences are particularly noticeable in people who work either frequently or permanently at night; these effects do not depend on chronotype but mainly on other factors.

2) Employers should consider flexibility in individuals' work hours where operationally feasible. Employers should work with experts, regulators, worker representation, and employees to develop flexible work schedules, specific to occupation or workplace.

#### Agreement/concerns

Based on findings from occupational sciences, creating flexible, and possibly even customised to the individual, shifts can be very effective in reducing the stress and strain associated with shift work. Presumably, creating individualised work schedules is feasible in far more companies than company owners or managers think.

However, even more important than worker participation in the preparation of such work schedules is taking into consideration insights from the occupational sciences. It is well known that if workers themselves are allowed to schedule working hours, they tend to 'self-exploit' and misjudge. For example, they are inclined to skip breaks in order to finish work earlier. In consequence, for these (non-health-promoting) wishes of workers, the appropriate employee representatives are often involved. Since health problems often occur only after a long period of time, self-assessment is also difficult.

Working together to plan work schedules should be done in conjunction with the people responsible for safety and health at work. These include safety specialists, the company doctor and the representative from the statutory accident insurance institution.

3) Consideration should be given to allowing employees to take a nap in the workplace if they need it (sanctioned napping). And if naps are deemed appropriate, adequate facilities and worker guidance should be provided.

Agreement/concerns

Power napping should definitely be promoted, and we agree with this statement.

4) Caffeine is useful as a fatigue countermeasure and may positively impact alertness, although it also has the potential to disturb both nighttime and daytime sleep. Workers should be made aware that caffeine's effects depend on the dose and timing of administration, and that sensitivity to caffeine varies considerably among individuals.

Agreement/concerns

We have some concerns about this statement. Although it does not directly recommend consuming caffeine to improve alertness, it starts by describing this substance in a positive way.

It is important to point out that:

- 1) Caffeine is a doping agent and can lead to addiction. Thus, caffeine principally belongs to the same group as drugs, medications, etc.
- 2) Whether the effect is positive or negative depends on the dose.
- 3) Brain doping (neuroenhancement) is not an alternative to getting enough sleep.

Coffee and tea should not be consumed during the final hours of a night shift in order to avoid difficulties falling asleep.

5) Individuals vary considerably in their ability to adapt to shift work. Healthy eating patterns and physical activity may help to promote shift work adaptation and improve long-term health outcomes. Employers should consider providing shift workers with healthy food options at all times of day/night and opportunities to get physical activity/exercise.

Agreement/concerns

In our opinion, the ability to adapt to shift work, especially to early or night shifts, depends primarily on the chronotype. This is to a large extent innate or age-dependent and can only be influenced to a limited extent by external factors such as diet or physical activity

Physical activity per se should not be considered positive. It must be:

- adapted to the relevant work activity. Workers who are already physically active in their job do not need additional physical activity but rather specific activities that counterbalance their work posture.
- offered as close to the workplace as possible, otherwise it is not likely to be taken up. Night-shift workers are particularly unlikely to take up the offer of physical activity that occurs outside of their work hours or takes place away from the workplace.

6) Workers differ in the work and home demands on their time and attention, and the optimal state of work-life balance. Workers should be encouraged to discuss their individual work-life balance needs with their employers, and employers should be encouraged to make accommodations where possible.

Agreement/concerns

This applies to all workers, regardless of what kind of working hours. We believe that it always makes sense for both employers and workers to discuss their needs with one another. Both sides must have the opportunity to express themselves and voice their concerns and wishes.

The question is: who exactly should encourage the employer and who should encourage the employee?

7) Shift work operations tend to interfere with normal social support systems (family, friends, colleagues, etc.). To help shift workers cope, support groups and events could be organized to promote social support, reduce feelings of isolation, and reduce conflicts between work and home demands.

Agreement/concerns

To a certain extent, this statement is a sub-item of 6) because social systems are a part of work-life balance.

We agree that social contact can suffer as a result of shift work. Weekend work is possibly even more detrimental in this regard. However, this loss of social contact can only be somewhat counterbalanced by support groups or events organised by the company. These might be effective in reducing feelings of isolation but they are unlikely to help address conflicting demands between work and private life. More helpful are facilities such as company creches, care facilities for family members, etc. Shift work may even help improve work-life balance, for example, in terms of childcare.

8) Light is a key modulator of shift worker alertness, well-being and health, and a useful fatigue countermeasure, and workers should be educated on the effects of light. Individuals differ profoundly in their responses to light and darkness, making it difficult at present to design individualized lighting solutions for shift workers.

Agreement/concerns

Light is an important factor that is currently gaining in importance with regard to occupational safety and health regulation. However, it is important to specify which type of light causes which effect in humans. Germany is one of several countries to have started providing recommendations, from an occupational health and safety point of view (e.g., a DGUV Information Guide), on how lighting should be designed in the workplace so that it influences the circadian rhythm of workers as little as possible.

It is particularly important to distinguish between behavioural and setting-based prevention when talking about lighting because workers have little influence on workplace lighting in a factory or open-plan office.

Generic aspects:

- 1) To a certain degree, the recommendations are a mix of behavioural and setting-based prevention. Our experience with occupational safety and health in Germany shows that it is advisable to make a distinction between these two when considering specific measures so that these clearly address the individuals to which they are aimed.

- 2) In our opinion, some of the key statements listed here could be fleshed out more for companies, so that they are more specific. Germany's statutory accident insurance system prefers to give companies recommendations that are specific and can be directly put into action. Nevertheless, the statements made here are very valuable as a basis for providing practical recommendations.

Sachgebiet Beschäftigungsfähigkeit - 11/1/2019