

# Benefits of Anti-fatigue Matting

In many industries, employees are required to work while standing, walking and/or carrying loads. Experts agree that matting can significantly improve productivity and employee satisfaction while reducing absenteeism and chronic illnesses related to long term standing.

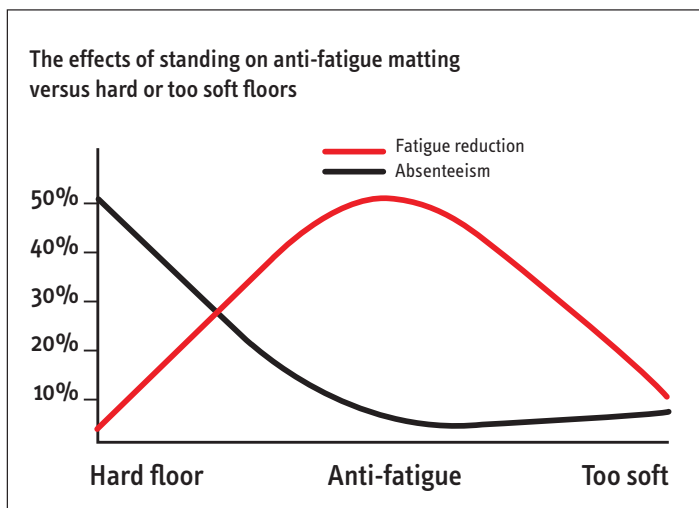


## How Anti-Fatigue Matting Works

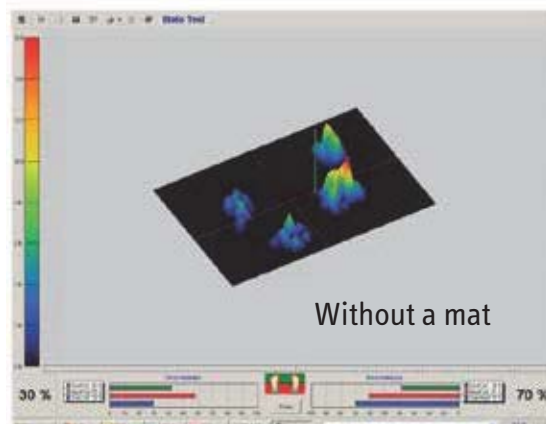
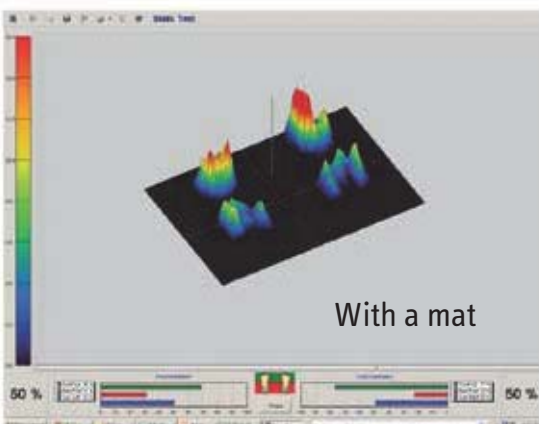
How an anti-fatigue mat works is well described in an article that was published in the April 1999 issue of "Occupational Health & Safety", written by James M. Kendrick: "Anti-fatigue mats are engineered to make the body naturally and imperceptibly sway, which encourages subtle movement by calf and leg muscles. This promotes blood flow and keeps it from stagnating in the veins, which causes workers to feel fatigued."

Standing on hard surfaces for long periods causes muscles to constrict, which reduces the blood flow. This makes muscles and joints hurt, and it causes blood to stagnate. Long-term standing causes pronation, or excessive flattening of the foot and can also lead to plantar fasciitis. Lower back pain is highest in workers who stand 4 hours or more per day.

As noted by Mr. Kendrick, the cushioning effect of anti-fatigue matting allows continuous micro-movements of the feet, which minimizes blood pooling in the legs. There is good reason to believe that reduction of fatigue also reduces the possibility of accidents and improves general work efficiency. There are fewer days lost to injuries, fewer medical claims, and compliance with new health and safety requirements.



Too much cushioning can have a negative effect. Too great an amount of softness or "give" will actually cause excessive fatigue because it overworks the muscles. Think of it like jogging on the beach. Notrax® floor mats are made of specific formulations and designs that provide fatigue relief which will contribute to increased productivity and employee satisfaction.



## Scientific Support

Early studies such as Morgora (1972) showed that the incidence of lower back pain was highest in those workers who stood regularly for periods of more than four hours and Bousseman et al. (1982) brought to light that long term standing is a direct cause of pain and discomfort.

Subsequent research carried out by Dr. Mark Redfern and Dr. Don Chaffin at the Centre for Ergonomics, University of Michigan in 1988, and Paula Hinnen and Stephan Konz at the Department of Industrial Engineering, Kansas State University, 1994, made observations of the difference between standing on hard floors versus standing on soft floors. Both their studies concluded that mats significantly affect fatigue and comfort in different body regions.

More recent studies by Prof. Dr. Redha Tairar (2011, 2015, 2017) at the University of Reims in France illustrated how human mechanics in a working environment are impacted through the use of anti-fatigue mats. By observing workers' posture and measuring foot pressure for employees standing for long periods, Prof. Tairar was able to identify two causes of fatigue and therefore a two-pronged approach in combating the muscular-skeletal disorders associated with long-term standing.

Firstly, the worker should vary foot pressure while standing to eliminate the overuse of the same muscles (Cinderella Fibers). Secondly, using an anti-fatigue mat eliminates pressure points from the floor and spreads weight evenly to correct balance. Prof. Tairar's findings confirmed that pains are substantially reduced with the use of anti-fatigue mats compared to the initial situation without mats.

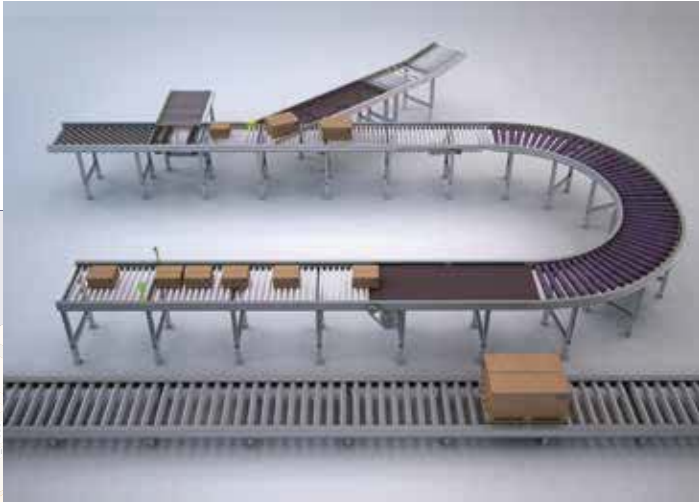
To request a copy of Prof. Tairar's research, Standing Smart, visit [www.notrax.eu](http://www.notrax.eu).



# Workplace Solutions for Dry Areas

Working environments and conditions vary for different companies and industries. An effective plant layout can increase efficiency and reduce cost. Notrax® has created several modular, linear and standalone anti-fatigue matting series that are completely customizable, thereby reducing fatigue, increasing productivity and reducing the risk of musculoskeletal disorders that lead to long term absence.

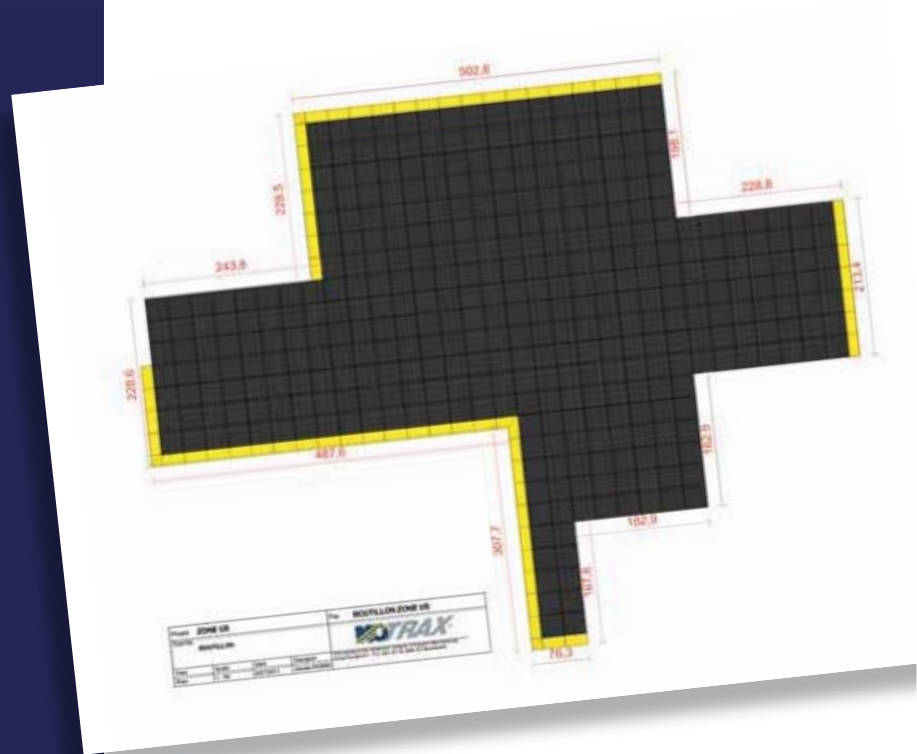




Many facilities have moved towards cellular manufacturing layouts within larger process layouts. This includes automated material-handling equipment, specially automated storage and retrieval systems, automated guided vehicle systems, automatic transfer devices, turntables and other product to person solutions. Layouts are being redesigned for quality and flexibility, the ability to quickly shift to different product models or to different production rates.

Workstation ergonomics have therefore become even more important as work has become more specialized and repetitive. Anti-fatigue matting can be used as a freestanding mat or customized into just about any size to fit specific areas around machinery or following assembly lines to create the most efficient and effective layout while ensuring the most efficient and ergonomic workstation for workers.

Notrax® matting solutions are manufactured in specialized compounds to meet the distinct needs of various industrial environments such as oil resistance, ESD electro static discharge protection, fire retardant for welding areas, or a combination thereof.



## Guide for Ordering Custom Size Matting

- Custom designs for any specific workstation are possible.
- To order, simply provide a sketch that illustrates the shape, dimensions, and where the ramp edges are required.
- You will receive our CAD drawing for approval.
- Oversized mats are made in sections that interlock on site, to facilitate shipping and handling.