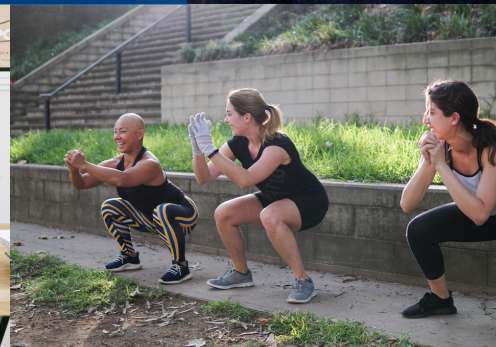




# SPORT & TECHNOLOGY

SPGM



PADEL TENNIS

CHANGE WORK

HEALTH TRAINING

## NEWS, NEWS, NEWS

*News of the professorship*

Each semester, the "Methodenseminar Sporttechnologie" course takes 15 students to the Zugspitze for three days. They stay at the "Schneefernerhaus" research station, located at 2,650 meters, to conduct sports technology research. This involves using prototypes and new products for practical tests in outdoor sports like cycling, skiing, and running, analyzing both objective and subjective data. The focus this semester was on winter sports, facilitated by a substantial snow depth on the Zugspitze.

To be continued [here](#)



# PROFESSIONAL PADEL TENNIS: CHARACTERISTICS AND EFFECTIVENESS OF THE SHOTS PLAYED TO THE FENCE



*by Sánchez-Alcaraz, B. J., Martínez-Gallego, R., Ramón-Llin Mas, J., Crespo, M., Muñoz, D., López Martínez, J. M., & Sánchez-Pay, A.*

This study investigates the impact of various court surfaces on the playability of padel tennis, focusing on how different materials affect ball response. The research specifically examines the characteristics of shots played towards the fence in professional padel tennis. A total of 489 fence shots by the top eight pairs of male and female players in an international professional tournament were analyzed using observational methods. Key variables like shot distance from the net, court side, shot trajectory, and type were examined, comparing gender differences and shot effectiveness. The findings reveal distinct gender-based strategies: women significantly favored overhead shots (48.4%) for fence plays, whereas men predominantly used volleys (39.5%). Crosscourt shots proved to be more effective (24.2%) compared to down the line shots (16.8%). Groundstrokes resulted in the highest number of both winners (25.2%) and errors (31.1%). Additionally, shots to the fence became less effective as the distance from the net increased. These insights are valuable for padel players and coaches for tailoring training sessions to match competition characteristics.

Read the publication [here](#)

More on the topic [here](#)

# CHANGING THE WAY WE WORK: ELEVATING ENERGY EXPENDITURE WITH WORKSTATION ALTERNATIVES



*by Tudor-Locke, C., Schuna, J., Frensham, L., & Proence, M.*

This review explores the use of alternative workstations, like stability balls, sit-stand desks, and treadmill or pedal desks, to increase energy expenditure and reduce sedentary behavior in office settings. The study finds that active workstations (treadmill and pedal desks) significantly boost energy expenditure compared to traditional sitting. While these alternatives generally don't impact task performance, some issues with tasks requiring fine motor skills are noted.

Read the publication [here](#)

More on the topic [here](#) or [here](#)

# BETWEEN DATA AND INTUITION: COMMON SENSE FOR HEALTHY TRAINING



*by Heinrich, J.*

The article on ISPO.com discusses the integration of smartwatches and AI in sports training. It highlights how these technologies enhance training efficiency and performance, with smartwatches shown to improve running efficiency and energy usage. The article also explores the balance between relying on technology and listening to one's body, emphasizing the importance of intuitive training. It suggests that while digital tools are beneficial, it's crucial to maintain a balance and not let them dominate the training process. The future possibilities with AI in sports, including personalized coaching and new forms of training analysis, are also discussed.

Read the [publication](#)