

INFLUENCES OF PHYSICAL EXERCISE IN FOOT POSTURE AND CHANGES IN PLANTAR PRESSURE

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Background and aims: The regular practice of physical activity to improve people's physical condition such as running or jogging, can damage the lower limb in 79% of the people who practice it. The aim of this study was to determine if foot posture and gait can be modified after 45 minutes of running.

Method. The sample consisted in 116 healthy adults (92 men and 24 women) with non-pathological feet. The mean age of the participants was $28,31 \pm 6,01$ years, BMI of 23.45 ± 1.96 kg/m² and training hours per week of 11.02 ± 4.22 . Outcome measures were collected at baseline and after 45 minutes of running at an average speed of 12 km/h, and included the Foot Posture Index (FPI) and a pedobarography analysis with the system Biofoot (IBV, Valencia (Spain)).

Results: The results show foot posture can be modified after 45 minutes of running. The FPI changed from $6,14 \pm 2,61$ to $4,86 \pm 2,65$. Furthermore, maximum pressure peak was reduced in the forefoot and increased in the midfoot. The pedobarometric measurement in the heel contact was reduced in the internal area of the foot. The average of maximum pressure was reduced in the internal area and in the forefoot.

Conclusion: The findings suggest that, after running, pronated foot tends to change its posture into a neutral position, and a decrease in maximum pressure forces in the forefoot and in the area internal the foot is presented.