

The impact of different intensities of physical activity on serum urate & gout



Implication for clinical practice: a two-sample mendelian randomisation (MR) study

Moderate physical activity may have a protective, preventive effect against gout, independent of serum urate level changes.

Exercise recommendations for gout prevention could include regular moderate-intensity activities (e.g., brisk walking, cycling).

Further studies are needed to understand mechanistic pathways, especially regarding the anti-inflammatory role of exercise.

This study supports incorporating non-pharmacological lifestyle interventions in gout management strategies, particularly emphasising exercise intensity.

Context

To assess whether physical activity causally impacts serum urate concentration and the incidence of gout.

To explore the effects of different physical activity intensities (walking, moderate, vigorous) independently.

Methods

- The researchers used a genetics-based method called Mendelian Randomization (MR) to study if different levels of physical activity (low intensity walking, moderate, or vigorous exercise) can cause changes in uric acid levels or reduce the risk of gout.
- The large genetic database, UK bio-bank, with information from hundreds of thousands of people was utilised

Results

- Moderate physical activity might lower the risk of getting gout.
- The data showed a 40–45% lower risk in people genetically inclined to do more moderate activity.
- Walking and vigorous exercise did not show strong effects on gout or uric acid concentration levels.
- None of the activity levels had a clear or consistent effect on uric acid levels in the blood.
- In conclusion, the study supports and emphasises the preventive role of moderate physical activity against gout.

Reference

Yang, T., Bi, S., Zhang, X., Yin, M., Feng, S., & Li, H. (2024). The impact of different intensities of physical activity on serum urate and gout: A Mendelian randomization study. *Metabolites*, 14(1), 66.