Biking revealed to be associated with less knee pain later in life

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A study published in *Medicine & Science in Sports & Exercise* reveals that
people who participated in regular bicycling over their lifetime had a lower prevalence of frequent knee pain, radiographic osteoarthritis (ROA) and symptomatic radiographic osteoarthritis (SOA).

Rheumatologists often encourage regular physical activity for the prevention of osteoarthritis, the most common form of arthritis. However, some exercises are more effective than others. In this study, researchers were interested in studying the relationship between a history of bicycling and symptomatic and structural outcomes of knee osteoarthritis.

Dr. Grace Lo, associate professor of medicine—allergy, immunology and rheumatology at Baylor and first author of the paper, conducted a retrospective, cross-sectional study using participants in the Osteoarthritis Initiative, a multicenter observational study of knee osteoarthritis of people ages 45 to 79.

A self-administered questionnaire asked about leisure physical activity over a lifetime, including bicycling activities (outdoor or individual stationary cycling) or spinning over four age periods of their lives: ages 12–18; 19–34; 35–49; and age 50 and older. For each period, they indicated the number of years, months per year, and times per month they engaged in their top three bicycling activities. More than 2,600 participants completed a questionnaire with over half of the participants recording a consistent history of biking.

The study revealed that people who biked at any point in their lives reported less knee pain, ROA and SOA than those who never biked. Moreover, those who did bike and did so across age periods throughout their lives reported even fewer instances of all three.
"Compared to non-bicyclers, bicyclers were 17% less likely to have frequent knee pain, 9% percent less likely to have ROA, and 21% less likely to have SOA compared to non-bicyclers," said Lo. "Additionally, each increase in the number of age periods engaged in bicycling resulted in lower likelihood of reporting knee pain, ROA and SOA."

The main limitation to the study was that the information regarding bicycling was retrospectively ascertained. However, the respondents were not aware of the hypothesis when recording their biking history, reducing the probability of recall bias.

Data gathered from the Osteoarthritis Initiative also has been used to evaluate running and swimming as forms of activity that may lead to less knee pain, SOA and ROA.

"The natural history of osteoarthritis is very long, making it difficult to track the different exercises you'll do throughout your life as well as their impact on joint health," Lo said. "The big takeaway from this observational study is that if people are concerned about knee pain, ROA and SOA later in life, biking may serve as a way to prevent this and that the more often they do it throughout their lives, the higher the probability of better knee health."


Provided by Baylor College of Medicine

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