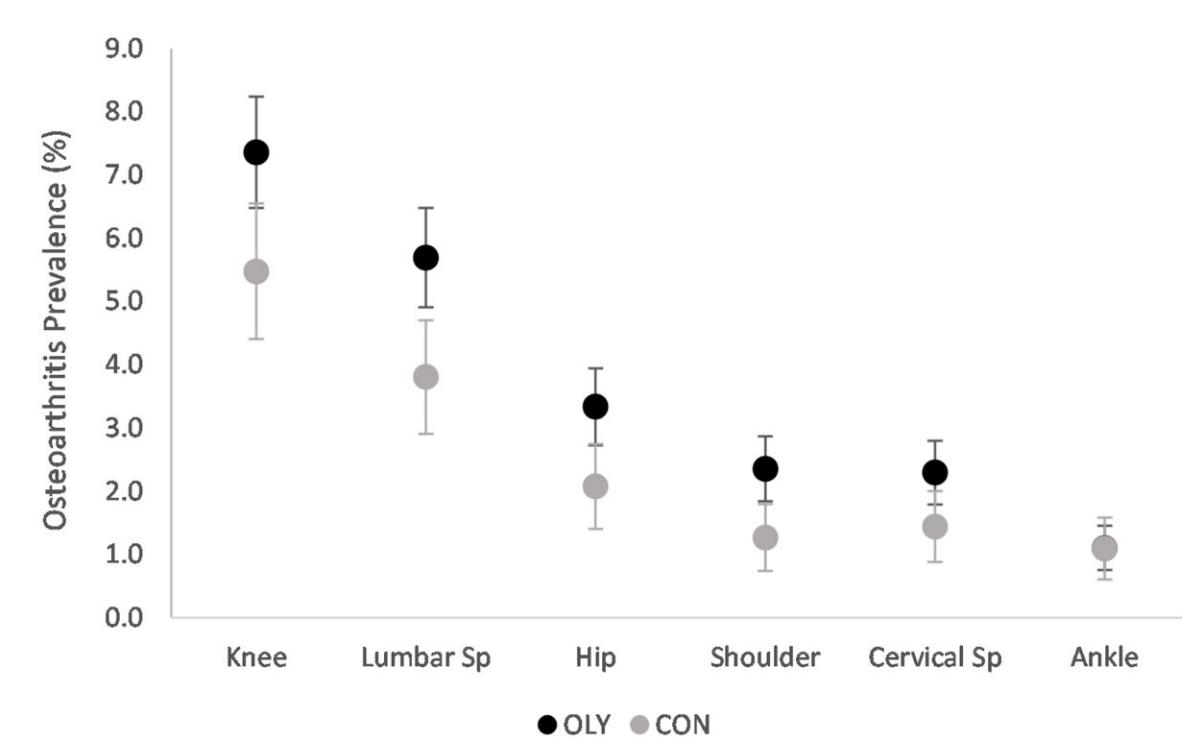


Elite sports linked with osteoarthritis risk

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OA prevalence (with 95%CI) by body joint/region for Olympians and general population controls. OA, osteoarthritis. Credit: *British Journal of Sports Medicine* (2022). DOI: 10.1136/bjsports-2021-104762

Competing at the elite level in sports is linked with an increased risk of developing osteoarthritis and joint pain in later life, a study suggests.

One in four retired Olympians reported a diagnosis of [osteoarthritis](#), the

form of arthritis that causes changes in the joint and can lead to discomfort, [pain](#) and disability, the research found.

Retired Olympians

The athletes—who had competed at an Olympic level in 57 sports including athletics, rowing and skiing—also had an increased risk of lower back pain overall, and shoulder osteoarthritis after a shoulder [injury](#).

Researchers hope the findings will help develop new approaches in [injury prevention](#) for the benefit of athletes now and in retirement.

The study is the largest international survey of its kind, and the first to observe the consequences of osteoarthritis and pain in different joints from retired elite athletes across different summer and winter Olympic sports.

Researchers quizzed 3,357 retired Olympians aged around 45 on injuries and the health of their bones, joints, muscles and spine. They were also asked if they were currently experiencing [joint pain](#), and if they had an osteoarthritis diagnosis.

Population comparisons

For comparison, 1,735 people aged around 41 from the [general population](#) completed the same survey.

Researchers used statistical models to compare the prevalence of spine, [upper limb](#) and lower limb osteoarthritis and pain in retired Olympians with the general population.

The team considered factors that could influence the risk of pain and osteoarthritis such as injury, recurrent injury, age, sex and obesity. They found that the knee, lumbar spine and shoulder were the most injury prone areas for Olympians. These were also among the most common locations for osteoarthritis and pain.

After a joint injury, the Olympians were more likely to develop osteoarthritis than someone in the general population sustaining a similar injury, the research found

The sportspeople also had an increased risk of shoulder, knee, hip and ankle and upper and lower spine pain after injury, although this did not differ with the general population.

"High performance sport[s] is associated with an increased risk of sports-related injury and there is emerging evidence suggesting retired elite athletes have high rates of post-traumatic osteoarthritis. This study provides new evidence for specific factors associated with pain and osteoarthritis in retired elite [athletes](#) across the knee, hip, ankle, lumbar and cervical spine, and shoulder, and identifies differences in their occurrence that are specific to Olympians," says Dr. Debbie Palmer, Moray House School of Education and Sport.

The research was published as two articles in the *British Journal of Sports Medicine*.

More information: Debbie Palmer et al, Prevalence of and factors associated with osteoarthritis and pain in retired Olympians compared with the general population: part 1—the lower limb, *British Journal of Sports Medicine* (2022). [DOI: 10.1136/bjsports-2021-104762](https://doi.org/10.1136/bjsports-2021-104762)

Debbie Palmer et al, Prevalence of and factors associated with osteoarthritis and pain in retired Olympians compared with the general

population: part 2—the spine and upper limb, *British Journal of Sports Medicine* (2022). [DOI: 10.1136/bjsports-2021-104978](https://doi.org/10.1136/bjsports-2021-104978)

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