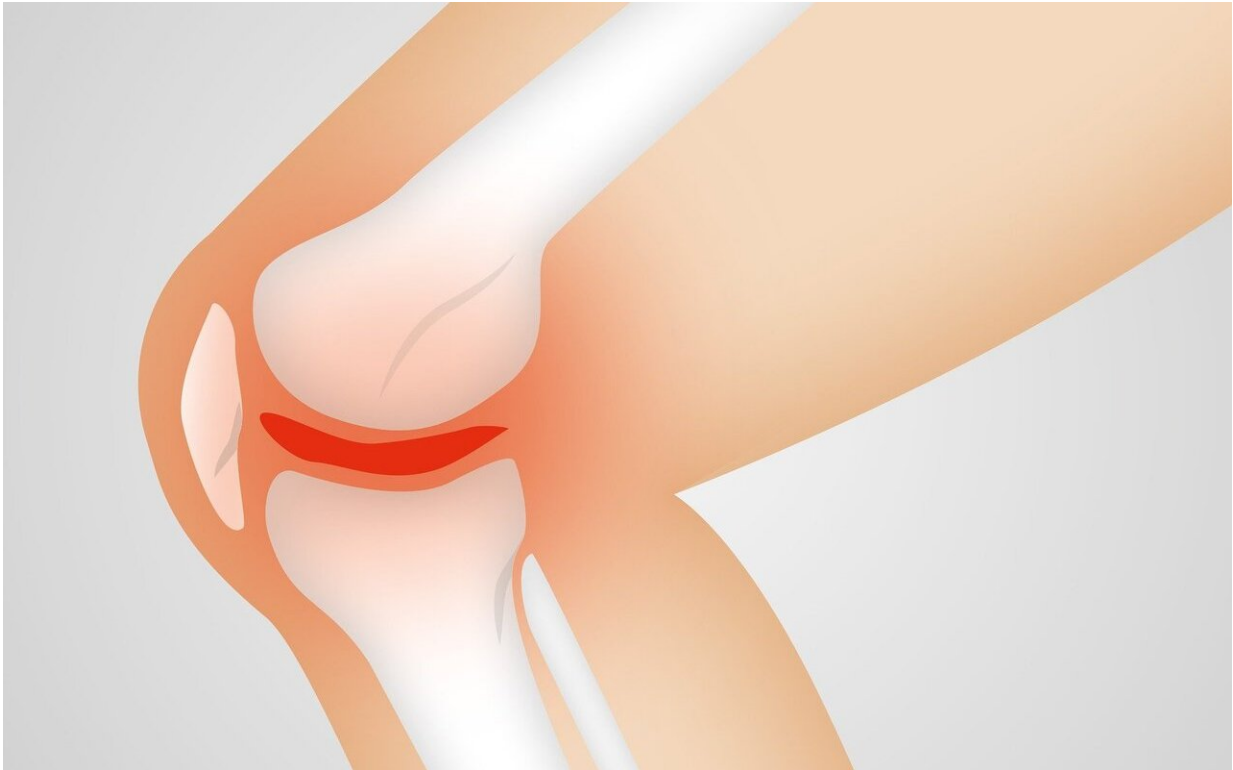


## 3-D printing may help treat osteoarthritis

January 24 2019

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In a *Journal of Orthopaedic Research* study, scientists used 3-D printing to repair bone in the joints of mini-pigs, an advance that may help to treat osteoarthritis in humans.

Specifically, the investigators used 3-D printing with a needle-array to generate [articular cartilage](#) and subchondral bone using constructs

composed of mesenchymal stem cells derived from fat tissue.

Printed constructs were implanted into osteochondral defects created in the knees of six mini-pigs. Computed tomography and magnetic resonance imaging tests revealed significant repair within the defects at three and six months post-implantation.

**More information:** Atsushi Yamasaki et al, Osteochondral regeneration using constructs of mesenchymal stem cells made by bio three-dimensional printing in mini-pigs, *Journal of Orthopaedic Research* (2018). [DOI: 10.1002/jor.24206](https://doi.org/10.1002/jor.24206)

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