

Printed cartilage can be a perfect fit for the knee

By Sarah Knapton

PRINTABLE synthetic cartilage which can be perfectly shaped to fit a knee joint has been designed by scientists in the US.

Duke University in North Carolina said the breakthrough will allow surgeons to print 3D replacement parts which are an exact match for a patient's anatomy.

The new hydrogel-based cartilage is the first to match human cartilage in strength

and elasticity while also remaining 3-D-printable and stable inside the body.

"We've made it very easy now for anyone to print something that is pretty close in its mechanical properties to cartilage, in a relatively simple and inexpensive process," said Dr Benjamin Wiley, an associate professor of chemistry at Duke.

The research was published in the journal *ACS Biomaterials Science and Engineering*.

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