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Infertile Mice Give Birth, Thanks To 3D-Printed Ovaries

A similar technique might help restore human fertility

By [ALEXANDRA OSSOLA](#) Posted APRIL 4, 2016

Whether it's because of a treatment like chemotherapy, a result of age, or for other reasons, women's bodies can stop producing the eggs that, when fertilized, can become babies. Now researchers have developed a 3D-printed scaffolding that could restore that function. When they implanted it in female mice that had their ovaries removed, the moms gave birth to healthy pups. The scientists [presented their research](#) last week at the annual meeting of the Endocrine Society in Boston.

In order to work properly, the prostheses would need to be rigid enough to be implanted during surgery, but flexible enough to allow eggs to develop. So the researchers printed a scaffolding out of gelatin. The scaffolding was doped with cells cultured from humans--follicles that produce estrogen, as well as contain the structures that eventually mature into eggs.

In the study, the researchers removed mice's ovaries and implanted the 3D-printed prosthetic ovaries in their place. The mice were able to ovulate, give birth to healthy pups, and nurse normally.

This is the most recent of [several scientific efforts](#) in which researchers have turned to the cells that create eggs as a treatment for infertility. If this bioprosthesis can be made to work in humans, it might be address both the hormonal and egg-producing facets of infertility. The researchers specifically designed their prosthesis "with downstream human applications in mind," according to the press release.

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