

**Mayo Clinic Medical Edge**

**3D Printer Helps Hips**

Intro: Joint replacements have been around for a long time. Most people with conditions such as osteoarthritis can expect good results if they have one. But what about those who have complicated cases or unusual deformities that a standard replacement can't fix? In the past that's meant few options. Now, doctors at Mayo Clinic are using 3D printers to enable customized joint replacement surgeries. Many patients, who were out of luck, can now have a successful surgery and better quality of life.

**Video**

**Audio**

<b>TRT 1:36</b>	Brook Hayes was in her 20's when the hip pain started.
<b>Voice of Vivien Williams</b>	
<b>Brooke Hayes</b>	"I stopped doing a lot of things."
	Going up and down stairs hurt, Walking hurt. No matter what she did, her hips hurt.
<b>Brooke Hayes</b> <b>Had hip arthritis</b>	"I was cutting out everything. And you know, that's not where I'm supposed to be."
<b>Christopher Beauchamp, M.D.</b> <b>Mayo Clinic orthopedic surgeon</b>	"She is 70 pounds had severe deformities affecting her hips with arthritis at a very young age."
<b>Voice of Vivien Williams</b>	Mayo Clinic orthopedic surgeon Dr. Christopher Beauchamp [Bow-Shahmp'] says surgery to fix her hips would be complicated. Standard hip replacement implants wouldn't work. She needed a custom designed surgery and custom designed implants.
<b>Christopher Beauchamp, M.D.</b>	"You press print and a 3-D model is made."
<b>Voice of Vivien Williams</b>	This is a printing press that takes information from a CT scan, and layer by layer, prints out a three dimensional model of the patient's hip joint.
<b>Christopher Beauchamp, M.D.</b>	"We are able to take these models and actually do the planned surgical procedure on the patient's model first."

<b>Voice of Vivien Williams</b>	A practice run that increases accuracy during the real procedure. Then they send the model of the patient's joint to a manufacturer who makes custom designed implants.
<b>Christopher Beauchamp, M.D.</b>	"It took a very complex reconstructive surgical procedures to a level that its actually quite a lot easier to do once we have a reconstructive plan that is firmly in place preoperatively.
<b>Brooke Hayes</b>	"I couldn't wait to heal up so I could go do the things I've been wanting to do for the last several years."
<b>Voice of Vivien Williams</b>	Back at life thanks to 3-dementional printing technology. For Mayo Clinic News Network, I'm Vivien Williams

Anchor tag:

The use of 3D printing is growing in the medical world. It's also used in other areas of manufacturing, such as building prototypes of new machinery.

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