

本集内容

3D printing human anatomy 用 3D 打印技术制作出的人体解剖模型

学习要点

有关 “human biology 人体生物学” 的词汇

边看边答

What is the problem with plastic models of the body?

文字稿

Medical students attempting what many of us might see as impossible - trying to learn and memorise human **anatomy**. It really is no mean feat.

医学专业的学生在尝试做一件我们很多人认为是不可能的事情：他们在学习并记住人体的**解剖构造**。这真是了不起。

Professor Reddy Mogali, Head of Anatomy, Lee Kong Chian School of Medicine

There are so many structures in the body. The **organs** in the **abdomen** - they're relatively easy - but the head and neck anatomies, I felt, is a more complex because of the intricate structures.

雷迪·莫加利教授 解剖学主任 李光前医学院

“人体内部有很多结构。**腹部器官**学起来相对容易，但我觉得头部和颈部解剖结构更复杂，因为结构更精密。”

Traditionally, students have used plastic models to learn about the body, but they're rigid and generally not anatomically accurate. There're also plastinated **cadavers**, real human bodies injected with Plasticine, but they also have their drawbacks.

一直以来，学生们用塑料模型来了解人体的构造，但它们很硬，而且解剖结构也普遍不准确。还有一种模型是被塑化过的**尸体**，就是注入了橡皮泥的真人尸体，但它们也有它们的缺点。

And because they're actual human bodies, they are very hard to come by. Professor Mogali was searching for a better way.

而因为它们真正的人体，所以很难找到。莫加利教授在寻找更好的方法。

Professor Reddy Mogali, Head of Anatomy, Lee Kong Chian School of Medicine
So, when I was reading, I learnt about 3D printing technology. I thought, 'OK, we can also use this technology.'

雷迪·莫加利教授 解剖学主任 李光前医学院

“所以，我在看书的时候得知了 3D 打印技术。当时我想：‘好吧，我们也可以利用这项技术’。”

Others in the field were 3D printing models of human body parts. Professor Mogali took this a step further. He realised if they used multiple different materials, they can make parts of the body, such as the veins or bones, feel different and even be different colours. Here, after 15 hours on the printer, you have an anatomically correct model of the heart.

该领域的其他研究者用 3D 打印机制作出了人体器官模型。莫加利教授则进一步利用了这项科技。他意识到，如果使用多种不同的材料，就能给血管或骨骼等人体器官模型带来不同的触摸感甚至不同的颜色。这台打印机打印了十五个小时后，就做出了一个解剖结构正确的心脏模型。

Relatively cheaper and easier to replicate, they can be used in countries that might otherwise, perhaps for religious reasons, not have access to real human cadavers, helping to better educate the next generation of doctors.

相对便宜又容易复制，这些模型可在因宗教等原因而无法接触真人尸体的国家使用，以助于更好地培养未来的医生。

词汇

anatomy (动植物的) 解剖结构

organs 器官

abdomen 腹部

cadavers 人类尸体

视频链接: <https://bbc.in/2tm5zxX>

问题答案

They are rigid and generally not anatomically accurate.