

Now we're going to have a look at the way in which an amputated limb grows over the course of about 90 days in a salamander. That's a time lapse movie, watching that thing grow. And now we're going to see what's really going on. Here's the salamander and it's got a completely new limb, it looks perfect. It has inside bone, it has nerves and muscle, and it can even wiggle. In fact, it's perfect. Now we're going to cut it off, but here's the good news: it grows back. So don't be too scared. First, wound healing - did you see that wound heal? Now we're watching what the newt can do that we cannot do. Cells are streaming out of the surrounding tissues into the area of the wound and forming what we call a blastema, which is a group of undifferentiated cells that are in fact really just like stem cells. And they're multicolored because they come from skin, from muscle, and even from cartilage. And these have a miraculous memory of what they used to be, and are able to form a perfectly functional limb. And that happens all within anywhere from 30-90 days depending on the size. Those little guys would do it faster.