Warning: This story is not for the squeamish.

Say you lose a finger. And let’s assume you’ve elevated your injured hand and compressed the blood flow. If a digit or other body part is dangling or detached, your body kicks into damage control and floods the wound with blood clots—the semisolid stuff of scabs—which will further limit blood flow; in time, they’ll harden up and fill in while you heal.

Trouble is, all that clotting works against the doc who’s stitching you back together. Because pretty soon, your hand has already cut its losses, so to speak, and said “peace out” to that finger. With all that clotting hindering blood flow, the re-stitched digit can die.

Drugs can stop the clotting, but those have side effects. So what’s a doc to do?

Send in the parasitic worms!

Leeches have been used by healers dating at least as far back as ancient Egypt, 2,500 years ago. Today, the parasites at the UPMC Presbyterian inpatient unit (a European species known as Hirudo medicinalis) are all too happy to latch onto reattached body parts, skin grafts and transplanted tissue. (They’re also helpful for people with circulation problems caused by diabetes.)

Once there, leeches hold onto the patient’s skin using sucker-tipped faces and sucker-tipped tails. And then? Chow time, to the tune of five times their body weight (15 milliliters, or about a tablespoon, of blood).

Each leech has three jaws that leave a tiny Y-shaped wound—but no scar. Leeches secrete more than 50 different proteins: Some are numbing, some help widen blood vessels and some quash clotting. Altogether, this super saliva works better than a lot of drugs. In fact, leeches are so effective at this job that they’re approved by the Food and Drug Administration as a medical device.

Not bad for a blood-sucking fiend. —Elaine Vitone

Thanks to Pitt’s Alfred L’Altrelli (PharmD ’06), administrative director of pharmacy at UPMC Presbyterian and adjunct professor of pharmacy at Pitt, for helping us latch onto this topic.