

# TECH TALK

## Salute to the makers of Hirudin

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### THE SCENE

SICU, 8pm, with every suggestion of a light call. One impending OR admission, still there after 12 hours. At 2am, the facial-reconstruction-with-TRAM-flap, an eighteen-hour, two-team operation, comes directly to the SICU, no stopping in the recovery room, no collecting \$200. The plastic surgeon is close in tow.

### THE CHALLENGE

Recognizing a worker bee, Dr. Plastics says those memorable words: “Order some leeches!” Now, in NYC you can get sushi at 2am, so perhaps leeches aren’t a far cry. But even sushi can’t be delivered at that hour. Turns out the leeches company not only delivers, but also has an 800# and accepts credit cards.

### THE RISE TO THE CHALLENGE

Dr. Plastics has an 800# from his last order. (Yours truly does the intern scurry and calls.) No answer.

Fortunately, since his last order, the Internet evolved (you may have read about it, it was in all the papers). Old meets new, and within a few minutes, [www.LeechesUSA.com](http://www.LeechesUSA.com) is on the screen. Turns out, there’s a different phone number after hours—an emergency delivery service called, get ready for this, Quick.

### THE CALL

A professional-sounding voice answers, on the second ring (I can’t even get my local pizzeria to do that). Twenty leeches? No problem. On their way within minutes, and guaranteed arrival within four hours.

### THE PAYMENT

Dr. Plastics tells them, “Bill the hospital.” Yeah, that works. I think he conned them out of 20 leeches—smooth.

### THE DELIVERY

The little intricacies of the world never cease to amaze me.

Your friendly neighborhood food delivery person can’t make it through any door of the hospital. But carry twenty worms and it’s “Please, sir, to the end of the hall, make a left, and take the elevator to the third floor. No visitor’s pass required.”

### THE WARNING

Leeches are not returnable.

### THE LECTURE

Members of phylum *Annelida*, class *Hirudinea*, leeches secrete an anticoagulant, Hirudin, which directly inhibits thrombin and is not dependent on anti-thrombin III or anti-heparin-PF4 (they actually secrete many things, including an anesthetic, which is why the bite doesn’t hurt). Hirudin has been synthesized, (r-hirudin/Lepirudin, desirudin/Refludan) but not the delivery method or the combination with other substances, hence medicinal leeches persist.

Leeches ingest an average of 5cc of blood within 45 minutes, and disengage after engorged. The bites ooze for up to six hours providing an alternative outflow tract, simulating additional venous outflow, and relieving venous congestion. Note that sufficient in-flow must exist and they do nothing to help arterial insufficiency. In fact, if the leech is less than enthusiastic about attaching, suspect poor arterial supply and worry about the flap’s survival.

### THE ECONOMICS

I know you’ve been wondering, how much? Less than \$10,000, and less than \$1,000, but more than three easy payments of \$19.95. Twenty leeches go for about \$150, plus shipping.

### THE NOSTALGIA

To describe leeches, perhaps it is best to borrow from H.G. Wells in *The War of the Worlds*, “the humblest thing that God in His wisdom put upon this earth.” ■

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