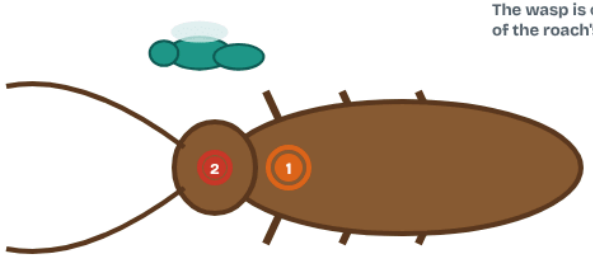
That is why

How does a wasp turn a cockroach into a zombie?

Two precise stings: one calms the front legs, one blocks the roach's urge to move. Then it walks the roach home.

A Two stings, two targets



The wasp is often a fraction of the roach's size.

Simplified drawing, not to scale.

1 Thorax

Between the first pair of legs. Briefly paralyzes the front legs (venom rich in calming GABA).

2 Brain

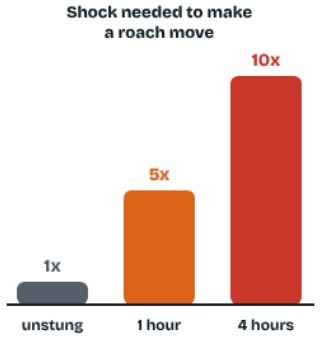
Steered by touch and chemical cues into two areas of the head ganglia. Blocks octopamine.

B Walking the roach

1. **Grooms** about 30 minutes
2. **Antennae cut** the wasp drinks blood
3. **Led by an antenna** like a dog on a leash
4. **Sealed in a burrow** with one egg glued on

After 3 to 4 days the larva hatches and eats the organs in an order that keeps the roach alive about 4 more days.

C Unwilling to move



1 Body works

It can right itself; wing muscles respond.

2 Wears off

Normal again after about 72 hours.

No chains, no paralysis: just a blocked urge to move.

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