

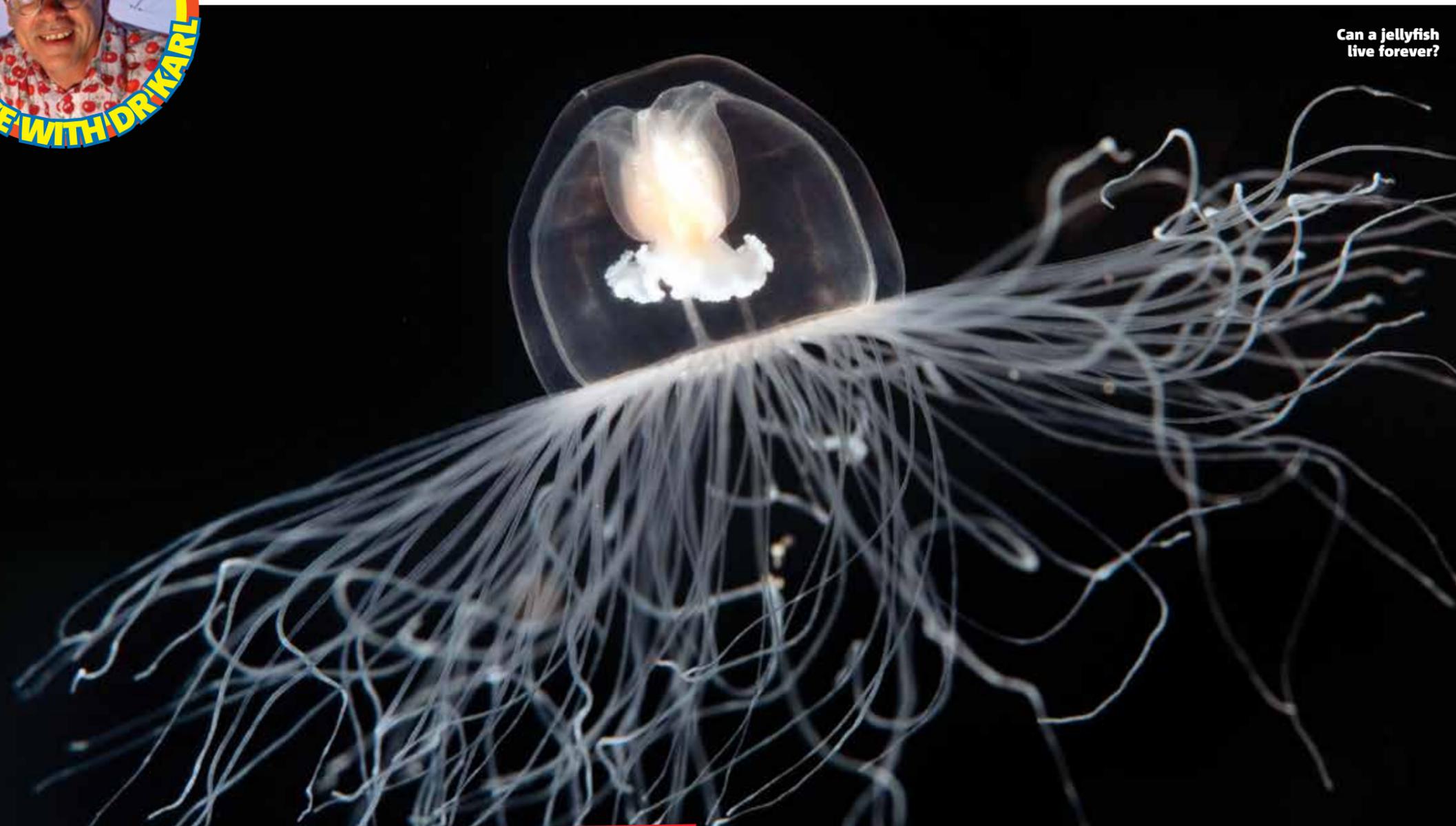


**AWE AND WONDER!**

**SCIENCE WITH DR. KARL**

**DID YOU KNOW?** *T. dohrnii* are spreading through the oceans of the world. Experts think they are getting free rides in ships that are docked at ports.

Jellyfish do not have a brain or a heart. They have only a single opening through which food comes in, and waste comes out.



Can a jellyfish live forever?

# IMMORTAL JELLYFISH!

**Marine biologists** have found a creature that comes close to living forever – a tiny transparent jellyfish, called *Turritopsis dohrnii* or *T. dohrnii* for short.

**HOW ARE THEY BORN?** After eggs are fertilised by male and female jellyfish, they then turn into tiny **free-swimming larvae** called **planula**. After a while, the planula give up swimming and dive down to the sea floor and attach themselves to a rock. They then change shape entirely into long

branching tubes called polyps. After a few days, the tiny jellyfish ‘bud’ off from the tips of the polyp and, like **miniature umbrellas with tentacles**, float through the ocean. After 2-4 weeks, they become mature males or females.

**CAN THEY LIVE FOREVER?** Now these jellyfish can be eaten by bigger creatures – so **they are not truly immortal!** But when they suffer a physical attack or some kind of environmental stress, instead of dying, they **change firstly into a tiny blob**,

and then back to the polyp stage within three days. Did that original jellyfish die? Not really. It’s kind of like a **butterfly** that instead of dying **changes back to a caterpillar** – or a chicken turning back into an egg.

So technically it’s more like ‘regeneration’ than immortality. But, once we learn how *T. dohrnii* does it, we could apply this knowledge to medical science for humans!

*Next month we look at why ancient fly’s eyes make great solar panels.*

## WILD CITIES!

Exploring the urban habitats of animals, plants and people...

### Slow clothing: good for people and good for the planet!

Every year Australians buy more than **one billion new items of clothing**. On average, that’s around 43 items per person each year! Do we need that many new clothes? There’s a **movement of people** who say ‘no way!’ and want to encourage us to think more carefully about our clothing choices. They’re part of the **slow clothing movement**. Let’s find out why it’s cool to be slow...



Jane runs school workshops to show kids how to ‘upcycle’ old clothes into cool new items

### Go slow...

Jane Milburn runs **Textile Beat**, an organisation that promotes **ethical, environmentally friendly** clothing choices. Jane’s a natural-fibre champion: she wants people to embrace clothes made from **natural fibres** rather than synthetic fibres and reduce waste by upcycling pre-loved garments into new creations. “Slow clothing is the opposite of fast fashion and the ever-changing cycle of buying and shedding clothes in a way that is neither ethical nor sustainable,” Jane says.



### Top Tips!

- 1. Go natural:** Choose clothes made from quality natural fibres (such as cotton and wool) rather than synthetic fibres like polyester and acrylic which are plastic products, made from **petroleum**. They shed microplastic particles every time they are washed, can make their way into the ocean and in the food chain!
- 2. Hip hand-me-downs:** Make use of clothing that’s already in circulation – hunt out treasures at **local op shops**, vintage stores or online – and learn to use a needle and thread to customise them to suit yourself!

**3. Use the sniff test:** A big part of our clothing footprint is washing. We tend to wash clothes too often! Try to wash them only when they’re stinky or visibly dirty.

After unloading their cargo, ships suck in water to fill their ballast tanks, so they ride better at sea. **DID YOU KNOW?** There may be more than

one species of immortal jellyfish. We are not entirely sure, but it seems likely that the jellyfish *Laodicea undulata* and *Aurelia* can also change back to the polyp stage. **DID YOU KNOW?**

Dr Karl photo: © Karin Kett. Immortal Jellyfish: Alamy. Slow clothing images: © Shellee Burdick. All other pictures: © Getty Images.

To find out more, visit [textilebeat.com](http://textilebeat.com)