

# I'm a mirror twin with opposite traits to my sister

ABC RN / By Elizabeth Kulas

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Elizabeth and Jen Kulas are identical twins. *(Supplied: Elizabeth Kulas)*

## PERSPECTIVE

Neither Jen or I had ever paid much attention to the fact that there were two of us.

When we were born, in the late 1980s, we each had our own placenta and amniotic sac. Doctors told our mum this meant it was highly unlikely we were identical twins.

But anecdotally, it was a different story. Growing up, even though we were never dressed the same and we were always placed in separate classes at school, just about everyone struggled to tell us apart.

Very often, we'd catch extended family members or random passers-by at the supermarket doing furtive double takes, as their eyes registered just how similar we looked, moved and talked.



zabeth (R) and Jen's (L) mum, Chris was told from her pregnancy that she was having fraternal twins. (*Supplied: zabeth Kulas*)

My understanding of our 'twin-ness' all started with a visit to a grand old medical building on the fringes of Melbourne's CBD. We were six at the time and I remember marvelling at the huge staircase in the dimly lit lobby, before being told that we were here to have a cheek swab taken.

Jen, remembers that part, too: "I remember being very scared that the cheek swab was going to hurt and then the anticlimax," she recalls, "it was vaguely uncomfortable for a millisecond."

The swab would be used for a zygosity test, to confirm whether we were fraternal or identical.

We were part of a research study being run by the University of Adelaide looking at the genes, teeth and faces of Australian twins.

"My most distinctive memory is of the dental researcher sticking his gloved hand in my mouth and being absolutely fascinated by us," Jen says.

"Realising, hang on, maybe being a

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## **Fraternal vs identical**

- Fraternal twins are the result of two eggs being fertilised by two separate sperm.
- These twins share the same amount of DNA as single-born siblings, or singletons, as they're

twin is something unique."

A few months after that cheek swab was taken the results confirmed what our mum had suspected for a while — Jen and I were, in fact, identical.

known in the twin research world.

- Identical twins form when a single fertilised egg splits to create two embryos, so their genetic profile is a much closer match.
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## **Our teeth are linked**

Soon, we started contributing to the research in another way: by collecting our baby teeth. It sounds gross now, but at the time, deep in the bowerbird phase of childhood, it seemed perfectly normal.

We were each given a plastic pathology jar with a yellow lid. Inside was a little slip of paper with a drawing showing two neat semicircles of teeth. Whenever either of us lost a tooth, we were asked to store it in the jar and to write the date that it had fallen out next to the corresponding tooth on the diagram. We did this over a few years, collecting, dating, sealing the teeth away.

And eventually, an eerie pattern emerged.

I would lose a baby tooth on one side of my mouth. And sometime between a day to two weeks later, Jen would lose the same tooth, but on the opposite side.

My left eye tooth would wiggle and fall, then Jen's right eye tooth would do the same. My right front tooth would go, then Jen's left front tooth.



Elizabeth (L) and Jen (R) have opposite traits like their left and right handedness. (Supplied: Elizabeth Kulas)

As we started primary school other signals became clear. Whenever Jen picked up a pencil, threw a ball in the playground or took a sip from a water bottle, she always did it with her left hand, where I worked on the right.

"[Looking back] There were these kind of breadcrumbs that we are linked in some quite extraordinary way," says Jen.

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## The mirror of me

Somewhere in these data-collecting years the researchers told us all of this had meaning. We're what's known as **mirror twins**.

Professor Jeff Craig is Deputy Director of Twins Research Australia and he says identical twins can run their own mirror twin 'diagnosis' at home.

"When we look in the mirror as a singleton, we see ourselves. Oh, that's my left side, that's the mirror of it," he says.

"Well, with [mirror] twins, it's like the mirror is not there and twins are looking at each other. So it's a good kind of an experiment for twins to do, to see how similar they are on the opposite side."

There aren't any official diagnostic criteria for identifying mirror twins and mirrored traits can vary widely between pairs. Some exhibit mirrored birthmarks, handedness or hair whorls, and in extreme cases, organs can even be positioned on opposite sides of their bodies. But because these traits aren't consistent across twin pairs, reproducible studies have eluded researchers.



Twinning! on Science Friction

So for now, mirror twins remain a bit of a mystery, even to science.

"We really don't know much about it at all," says Professor Craig.

"We know it happens in around one in four identical twins and everything else is guesswork.

"We assume it's because when the identical twins split is maybe just after the time where the genes that determine left and right start being switched on, but we just can't prove that."

## We continue to discover new traits

For our part, Jen and I are still discovering the mysterious and intricate ways that our bodies are mirrored or unique.

We still marvel when we discover a new shared freckle, the same size, shape and position, just mapped on opposite sides of our bodies. At times, it's weird to reflect on the fact that we may never know all the ways, big and small, visible and unseen, that our two selves dovetail and differ.

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in sisters pose in a restaurant booth

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are best friends'. (Supplied: Elizabeth Kulas)

What I do know is that my twin is absolutely singular in my life. She's my best friend and my guiding light.

No, we don't feel each other's pain (though there was one time in high school where I claim to have felt a sharp sting in the exact spot where Jen had just popped a pimple!).

No, we've never played any tricks on people with our twin-ness (a missed opportunity, we know).

But the question we get more than any other: do we know what the other twin is thinking? Jen answers that one best.

"Yes and no," she says.

"Yes, I can tell what you're thinking. I know what will make you laugh. Not because we were in utero at the same time. I don't think we share ESP.

"But I know you better than anyone, so odds-on I probably have a fairly good read of what's going on in your noggin."

Elizabeth Kulas is the host of the [ABC podcast Days Like These](#) and first told this story on an episode of [Science Friction](#).