

Seeing through the eyes of the other

This magical ability — to see through each other's eyes, to feel what the other experiences, perhaps even to share thoughts — has stunned neurologists, and makes these tiny girls unique in the world.

EYES: Their sensory connection allows them to see through each other's eyes.

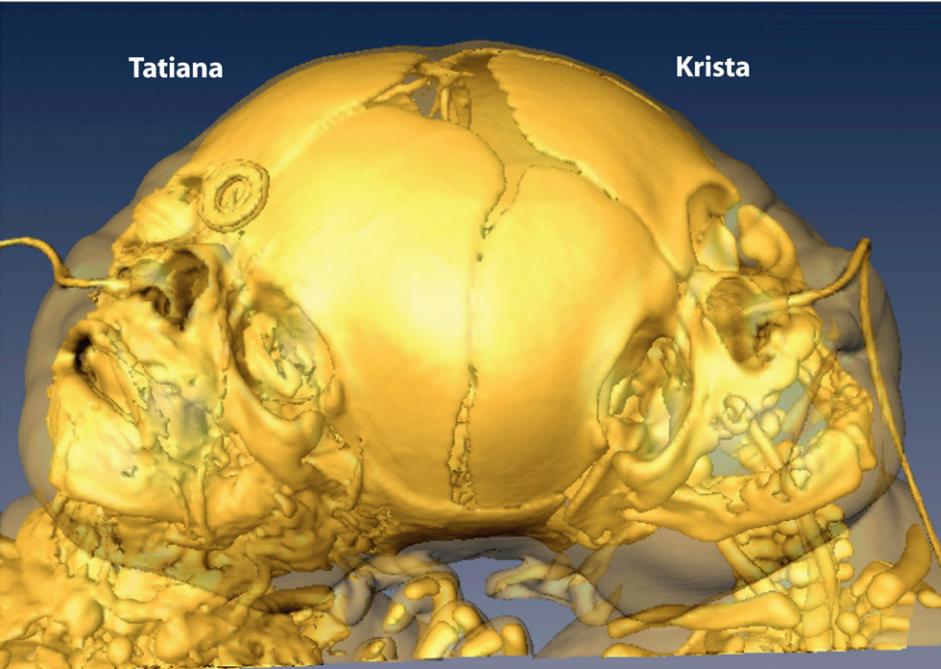


ARMS: One twin can feel sensation in her own arms and the inside arm of her sister.

HANDS: The latest functional MRI has shown that stimulation of Krista's inner hand is received in the outer hemisphere of Tatiana's brain.

LEGS: An MRI has shown that one girl can feel sensation not only in her own two legs, but the inside leg of the other.

FEET: Stimulation of Tatiana's inner foot is received in the outer hemisphere of Krista's brain.



How their brains are connected

A CT scan (at left) of the twins at birth shows how their skulls are fused. The digitally added forehead marker identifies Tatiana.

The image below shows the individual cerebral structures of the twins.



The girls are conjoined by more than flesh and bone

Their brains are "zipped" together by a bridge of white matter between the thalamus, the central hubs of their brains through which sensory information is transmitted and relayed to each other.

"The amazing thing about the girls is that they do have a connection in the brain, a bridge of white matter that connects the mid brain and the thalamus in both twins," says pediatric

neurologist Dr. Juliette Hukin.

When the girls are old enough to have MRIs unsedated, further testing will be done to determine whether they share motor functions, as doctors suspect.



Thalamus bridge

