

# ELEPHANTS EARS

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It may surprise you to learn that elephant ears are absolutely vital to their survival!

I've been studying elephants since I was eight years old and this is one of the most fascinating features of an elephant's anatomy. We've all seen elephants flapping their ears but one of the reasons they do this is to regulate their body temperature. You can see the network of blood vessels in an elephant's ear. One of the most remarkable things about them is their ability to shunt ALL of the blood from their body into its ears.

Then, when they flap their ears it cools down the blood held in the massive network of blood vessels before pumping the cooled blood back into their bodies, therefore, cooling down their overall body temperature.

The opposite is true when an elephant is cold. Instead of flapping its ears, they press them against the sides of their head, which acts as a mini-heater, warming the blood in its ears before pumping it back into its body and raising its body temperature.

Hi everyone I'm Debbie Ethell, executive director of The KOTA Foundation for Elephants as well as a conservation research scientist.

Lesanju is an elephant who was rescued when she fell down a waterhole. The cattle herder who rescued her cut a specific pattern in her ears, the same as he did with his cattle as a way of marking them as his own. But he didn't realize at the time he was in fact creating an enormous disability. How do you think Lesanju is able to regulate her body temperature missing so much mass from each ear?

Elephants can communicate with each other and the other elephants know she has been given a massive disability. When near water they keep cool by splashing themselves with water using their trunks. But what if the elephants are nowhere near water? Then they do something else quite extraordinary.

They stick their trunks inside their own stomachs and suck out water to spray on Lesanju, therefore keeping her cool. It is another extraordinary example of how elephants work together to help their disabled.

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