

High Blood Pressure and Poor Posture

THAT office job might be raising your blood pressure in more ways than one.

A link between the muscles in the neck, blood pressure and heart rate has long been suspected. Now Jim Deuchars and colleagues at the University of Leeds, UK, have found a direct neural connection between these neck muscles and a part of the brainstem - called the nucleus tractus solitarius (NTS) - which plays a crucial role in regulating heart rate and blood pressure.

Deuchars's team was using mice to investigate how the brain responds to a variety of stimulatory and inhibitory proteins. They noticed that a group of brain cells connected to the neck muscles kept firing in response to both types of proteins, suggesting the cells played a very active role in the brain.

"The cells lit up time and time again, so we looked at what they were doing," says team member Ian Edwards. It turned out that these cells are also connected to the NTS (*The Journal of Neuroscience*, DOI: [10.1523/jneurosci.0638-07.2007](https://doi.org/10.1523/jneurosci.0638-07.2007)).

Edwards says the finding could explain why blood pressure and heart rate sometimes change when the neck muscles are injured - through whiplash, for example. Similarly, it is possible that hours spent hunched over a computer may raise blood pressure. "The pathway exists for bad posture to really have an effect," Edwards says.

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