



## Why W neurons decreases and C neurons increases in fever?

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**ABSTRACT** : As you aware, if temperature increases (Absence of fever) after 31 degree Celsius, Warm sensitive neurons increase their firing rate and inhibit Cold sensitive neurons as core temperature increases. As temperature drops, the firing rate of Warm sensitive neurons decreases, reducing their inhibition, and Cold sensitive neurons which respond by increasing their firing rates.

On the contrary to increase of temperature, in fever the firing rate of Warm sensitive neurons decreases, the firing rate of Cold sensitive neurons increases as core temperature increases. inhibit warm sensitive neurons. The temperature increasing and decreasing controlled by the brain. The firing rate of Warm sensitive neurons and Cold sensitive neurons also controlled by the brain.

When the disease becomes threat to life or organs, blood circulation decreases. Temperature of fever will emerges to increase prevailing essential blood circulation.

If the aim of Cold sensitive neurons increasing their firing rates in hypothermia is to increase temperature, then the aim of Cold sensitive neurons increasing their firing rates during fever is also to increase temperature



**Biography** A practicing physician in the field of healthcare in the state of Kerala in India for the last 30 years and very much interested in basic research. My interest is spread across the fever, inflammation and back pain. I am a writer. I already printed and published nine books in these subjects. I wrote hundreds of articles in various magazines.

1. Mitchell D, Labum HP: Pathophysiology of temperature regulation. *Physiologist* 28:507-517, 1985

2. Fever: basic mechanisms and management. 2nd ed. Philadelphia: Lippincott-Raven, 1997:467-78.

3. R.S. Satoskar, S.D. Bhandarkar, Nirmala N. Rege- Pharmacology and pharmacotherapeutics – Revised XIV edition, p.159, 160, 163, 170). “Our understanding of the neural basis of thermoregulation and fever is still rudimentary. In fever, the thermostatic mechanism is set at a higher level even though it is not completely deranged. The role of fever in the defense reaction is not clear.”

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