

English Title: **Physiological responses of Naimey sheep to heat stress challenge under** semi-arid environments.

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Abstract:

The effect of **heat stress** on body temperature, heart rate, respiration rate and haematological and serum biochemical parameters was evaluated in 8 **Naimey** [Ne'imi] **sheep** (51.0 ± 2.66 kg body weight). The **sheep** were divided into 2 groups which were placed in 2 rooms. One room (control) had an average temperature (23.6°C and 50% relative humidity), while in another room (experimental) the temperature was gradually increased from 23.6 to $33-38.5^\circ\text{C}$. The study lasted for 5 weeks. It was shown that **heat stress** significantly reduced the daily average heart rate and increased rectal temperature, respiration rate, skin temperature and haematocrit. Serum triiodothyronine and thyroxine levels were also affected by **heat stress**, though not significantly. In conclusion, **heat stress** affects some **physiological** parameters of **sheep**.

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