Seals protect brain during icy dives

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Norwegian scientists say they've determined seals cease shivering during long icy dives to conserve oxygen and, therefore, minimize brain damage.

The researchers from the University of Tromso say their finding provides insight into how seals allow their bodies to become hypothermic during a dive, presumably to better cope with hypoxia -- a lack of oxygen.

The researchers note shivering is an involuntary response that consists of muscle contractions that produce warmth. Mammals and birds are physiologically programmed to shiver when body temperature drops below a certain point.

By shutting down the shivering response, a seal allows its body temperature to drop and achieve the benefits of hypothermia: a slower metabolism and lowered oxygen requirements that extends the dive time.

The researchers presented the study Tuesday, in Virginia Beach, Va., during an American Physiological Society conference.