

bild der wissenschaft

Weltraum
Medizin
Naturwissenschaften
Technik&Umwelt
Geowissenschaften

SEARCH Los

Advanced >

NEWS

BACKGROUND

PODCASTS

HEALTH TIPS

CURRENT ISSUE

CONTENTS

PREVIEW

BDW NEWS

MEDIA info

BOOK RECOMMENDATIONS

ISSUE ARCHIVE

FULL TEXT

ANNUAL INDEX

BDW PLUS

FORUMS

JOBS + INTERNSHIPS

NEWSLETTER

RSS FEED

CONTACT

ABO & SERVICE

BDW SHOP

NEWS

18/02/2011 - Biology

Nice and warm despite saving mode

Black bears while driving down their metabolism during hibernation, their body temperature but hardly

Bears can regulate their body temperature during hibernation independently of metabolism. This was discovered by U.S. researchers, as they watch American black bears using radio transmitters and cameras in their months of hibernation. Here they noticed that the furry animals drove down their metabolism to 25 percent of the normal state of the summer months, their body temperature lowered at the same time but not more than five to six degrees. When the bear awoke after the winter break, they did have back erreicht the normal body temperature, but their metabolism was still working up to three weeks, only half as strong. Hence, the researchers that the animals can decouple their body temperature by metabolism. How do they do it is, however, still unclear, the team reports to Ä~ivind TÄ, ien from the University of Alaska.

DISPLAY

The researchers began their study, several

More news about:

09.02.2011
Pump idle
Grizzly bears in hibernation reduce their cardiac output

07.01.2009
Winter sleep in chunks
Australian bag mouse traps at night in a special standby mode

30.08.2007
Diet Tip: hibernation
New drug metabolism in humans to artificially shut down the

Other recent news:

02.03.2011
What do toilets have impulse buying with
People with a full bladder in the long term meaningful decisions

02.03.2011
As the range of goods examine bats
The Chiroptera first evaluate the size of potential prey and then adjust their foraging behavior accordingly

02.03.2011
The infectious laughter
Behavior researchers observe: Laughter has also contagious in chimpanzees

02.03.2011
Pressure reduction in bed

JOBS

Clinical Research Assistant m/w

Köln

Key Account Manager (m/f)
European Sales
HVAC OEM

Your challenges and tasks The mission of this position is to focus on renewable accounts in Europe, but as for all our Key Account Managers, we expect the business to be linked to and pursued all over the globe. Your main

direktabo.de

Urania
NEUES WISSEN ERLEBEN



Museums to be discovered between Bonn and Nijmegen.

PARTNER

new-worXs.de

DAMALS

natur.kosmos

responsibility will be to
...
deutschlandweit

**Bau- und
Projektleiter (m/w)
Ausland**

Mitarbeit bei der
Angebotsbearbeitung;
Leitung, Überwachung
und Kontrolle von
Bauausführungen im
Nahen Osten und/oder
in Osteuropa;
Optimierung der
Baustellenabläufe
Berlin

stellenanzeigen.de

American black bears and for the people in Alaska during the late autumn had come close to.

The researchers wanted to find out how animals metabolism, heartbeat and body temperature during hibernation regulate.

They built for the bears cave-like boxes made of wood and equipped these infrared cameras, detectors and other instruments with.

The bears themselves, they implanted radio transmitters, body temperature, heart rate and muscle activity measure to be able to.

Then they brought the animals to the boxes in the woods, where they winter in the natural environment could catch hold of their privacy.

The researchers monitored the hibernators day and night for the next five months.

Nap helps fight the
pressor response to
stress

As already shown in previous studies, the cardiac output was the Bears cut back significantly, led to the evaluation: While the heart of the summer, 55 times a minute strikes were in it in his sleep just 14 shots.

"Sometimes there were even up to 20 seconds between the heartbeats," says TÄ,ien.

In addition, researchers determined the that bears metabolism to 25 percent of normal performance went down their.

They lowered at the same time the body temperature by just five to six degrees.

This is very unusual: Normally body temperature and metabolism depend inextricably linked in animals, the rule of thumb is that a metabolic reduction of 50 percent of the temperature by 10 degrees is at.

The body temperature of bears, however, was not constant but varied in intervals of two to seven days of 30-36 degrees.

These fluctuations in body temperature have been no other hibernating animals observed, the researchers say.

the bears from hibernation awoke, body temperature was although again at its normal value of 37 degrees, but the metabolism is not yet in full swing: After waking up he was half the normal power limitation, and it took two to three weeks until he reached the level of the summer months.

The researchers assume, therefore, that bears the metabolism and body temperature, surprisingly, not linked to each other are at.

"When the bears woke early from hibernation in, they had no muscle or bone mass lost - as would be expected in people that have such a long period of time not to move one," said Brian Barnes, who led the study.

Therefore, his guess would be it possible in future, for osteoporosis and muscle atrophy to develop new therapies if the molecular and genetic basis of sophisticated protection mechanism of the bears could be solved.

Äivind TÄ,ien (University of Alaska, Fairbanks), et al: [Science](#)