

News article

News

▸ Work in NINA

(<https://www.nina.no/english/news/work-in-nina>)

Long-term side-effects of abdominal implants in brown bears

Publisert 15.10.2018

A recent study from the Scandinavian Brown Bear Research Project has shown serious side effects from radio transmitters implanted into the abdominal cavity of brown bear



A recent study has shown serious side effects from radio transmitters implanted into the abdominal cavity of brown bears. Photo: Jan Gjærnschaug, NINA

The 19-yr study (<https://www.frontiersin.org/articles/10.3389/fvets.2018.00252/abstract>), carried out in Sweden and Norway led by Professor Jon M. Arnemo at the Inland Norway University of Applied Sciences and the Swedish University of Agricultural Sciences. A total of 305 individual bears were instrumented with a widely used type of implantable radio transmitter.

“Our study is the first long-term assessment of the technical stability and pathological effects of this type of transmitter” Prof Arnemo says.

The study showed that the coating of the implants was not biocompatible, causing a serious inflammatory response and a body reaction in many of the bears. Due to an ineffective moisture barrier, the researchers found that the internal metal parts could corrode. They also documented that implants could overheat and disintegrate, that that this caused the death of two of instrumented bears after 10 and 13 years.

Professor Arnemo highlights the importance of these results; “Hopefully, our study will improve wildlife welfare in the future. We have concluded that this type of implantable radio transmitter should not be used in brown bears. We also have highlighted the general need for long-term health assessment of instrumented wild animals and recommended that standards similar to those used in human medicine be adapted for the development and use of implantable devices in wildlife.”

Contact:

Jon M. Arnemo, DVM, PhD Professor

Phone: +47 99585019 Email: jon.arnemo@inn.no