ABSTRACT

Background:

Norway conducts commercial hunts for seals and whales, and since marine mammal meat and products are distributed to the public, these products are covered by the general hygiene control regulations. The control of meat from marine mammals is based primarily on organoleptic and microbiological spot tests.

There is a general lack of knowledge available on the presence of potential zoonotic pathogens in marine mammal meat and products and on the potential risk for humans. The Norwegian Scientific Committee for Food Safety (Vitenskapskomiteen; VKM), Panel of Biological Hazards (Faggruppe hygiene og smittestoffer) took the initiative to develop this risk assessment in order to identify possible risks associated with human consumption of meat and products from seals and whales. The risk assessment is based on scientific publications and reports, and documents that have been used for training of veterinary personnel in meat control. Animal welfare is not within the scope of this assessment.

*Corresponding author: Email: tron.gifstad@vkm.no;
Main Conclusions:

It is documented in this assessment that marine mammals may harbour several pathogens with the potential of giving disease in humans, and there are some reports on the transfer of such agents via meat from seals and whales.

The Panel of Biological Hazards has not been able to document that human consumption of meat from seals and whales is associated to a risk of exposure to human pathogens in Norway, but the data on which this conclusion is build, is scarce and are too limited to draw firm conclusions. There are almost no data documenting the microbiological status of seal and whale meat that is distributed for human consumption and the control is ad hoc, based on spot tests and few animals.

The general trend of increased consumption of raw or lightly cooked food may increase the risk for transmission of pathogens to humans. Considered suboptimal conditions for hygienic treatment of meat on board, as compared to abattoir conditions, as well as a long storage time in a non-frozen state (whale meat), it is crucial to secure the hygienic quality of the meat.

The training of personnel in slaughter hygiene should be strengthened, and if meat is not frozen, an unbroken cold-chain should be documented through the production line from the slaughter to the retail level.

A more systematic meat control practice (routine control) should be established. Broad-scale research projects, focusing on human pathogens in seals and whales, as well as monitoring and collating of data on contamination, are needed to further explore the risks of transmission of human pathogens from marine mammal meat.

Keywords: Whales; seals; zoonoses; pathogens; bacteria; virus; parasites; food-borne; meat hygiene; commercial hunt.

Available: https://vkm.no/download/18.a665c1015c865cc85babc29/1501511523056/2d1eef41a7.pdf

ISBN: 978-82-8259-018-1

NOTE:

This work was carried out in collaboration between all authors. The opinion has been assessed and approved by the Panel on Biological Hazards of VKM. All authors read and approved the final manuscript.

Competence of VKM experts: Persons working for VKM, either as appointed members of the Committee or as external experts, do this by virtue of their scientific expertise, not as representatives for their employers or third party interests. The Civil Services Act instructions on legal competence apply for all work prepared by VKM.


COMPETING INTERESTS

Authors have declared that no competing interests exist.