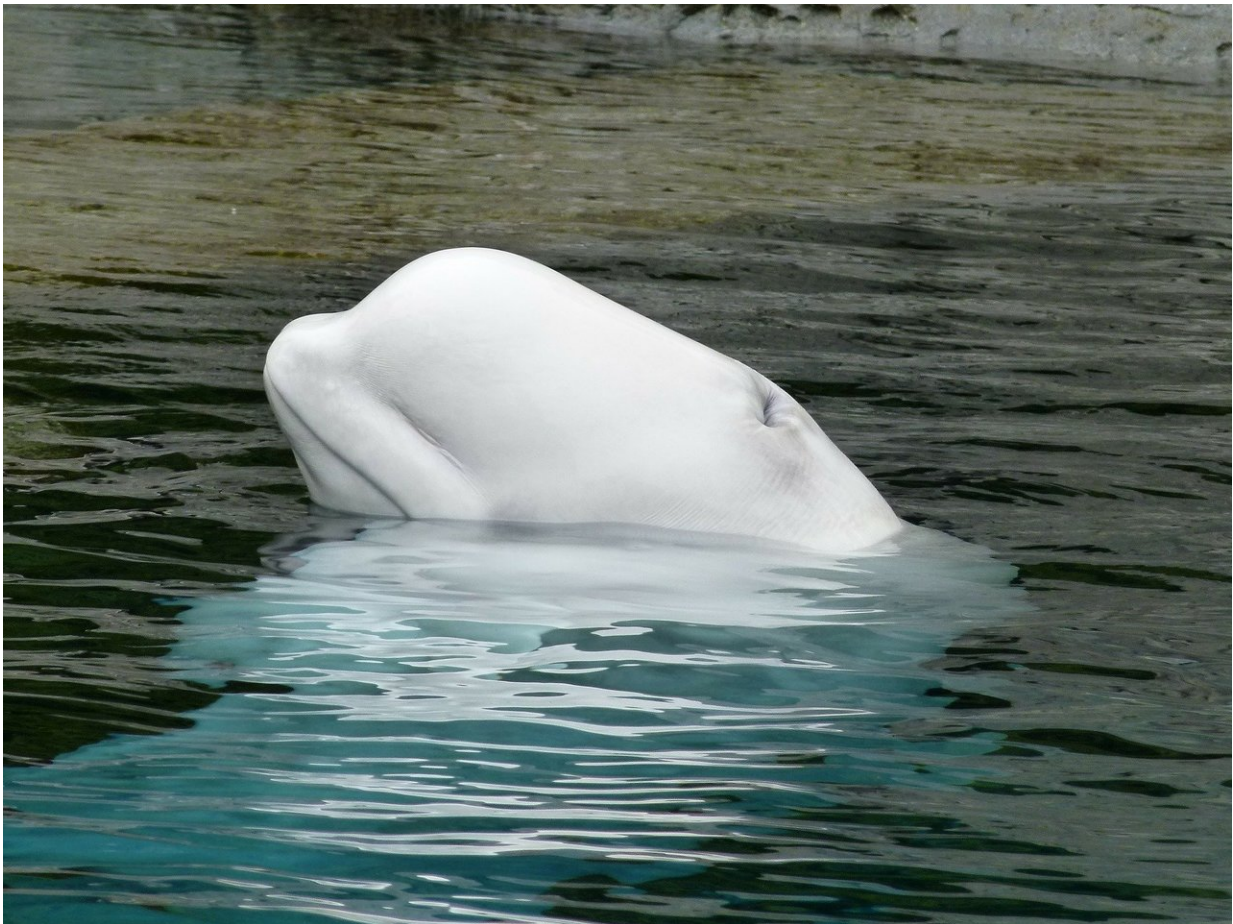


# Beluga whales and narwhals go through menopause

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Scientists have discovered that beluga whales and narwhals go through

the menopause—taking the total number of species known to experience this to five.

Aside from humans, the [species](#) now known to experience [menopause](#) are all toothed whales—belugas, narwhals, [killer whales](#) and short-finned pilot whales.

Almost all animals continue reproducing throughout their lives, and scientists have long been puzzled about why some have evolved to stop.

The new study, by the universities of Exeter and York and the Center for Whale Research, suggests menopause has evolved independently in three whale species (it may have evolved in a common ancestor of belugas and narwhals).

"For menopause to make sense in evolutionary terms, a species needs both a reason to stop reproducing and a reason to live on afterwards," said first author Dr. Sam Ellis, of the University of Exeter.

"In killer whales, the reason to stop comes because both male and female offspring stay with their mothers for life—so as a female ages, her group contains more and more of her children and grandchildren.

"This increasing relatedness means that, if she keeps having young, they compete with her own direct descendants for resources such as food.

"The reason to continue living is that older females are of great benefit to their offspring and grand-offspring. For example, their knowledge of where to find food helps groups survive."

The existence of menopause in killer whales is well documented due to more than four decades of detailed study.

Such information on the lives of belugas and narwhals is not available, but the study used data on dead whales from 16 species and found dormant ovaries in older [beluga](#) and [narwhal](#) females.

Based on the findings, the researchers predict that these species have social structures which—as with killer whales—mean females find themselves living among more and more close relatives as they age.

Research on ancestral humans suggests this was also the case for our ancestors. This, combined with the benefits of "late-life helping—where older females benefit the social group but do not reproduce—may explain why menopause has evolved.

Senior author Professor Darren Croft said: "It's hard to study human behaviour in the modern world because it's so far removed from the conditions our ancestors lived in.

"Looking at other species like these toothed whales can help us establish how this unusual reproductive strategy has evolved."

Although individuals of many species may fail to reproduce late in life, the researchers looked for evidence of an "evolved strategy" where [females](#) had a significant post-reproductive lifespan.

The paper, published in the journal *Scientific Reports*, is entitled: "Analyses of ovarian activity reveal repeated evolution of post-reproductive lifespans in toothed [whales](#)."

**More information:** Samuel Ellis et al, Analyses of ovarian activity reveal repeated evolution of post-reproductive lifespans in toothed whales, *Scientific Reports* (2018). [DOI: 10.1038/s41598-018-31047-8](https://doi.org/10.1038/s41598-018-31047-8)

Provided by University of Exeter

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