

High levels of pollutants may decrease sexual organ size in polar bears

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Exposure to high levels of environmental pollutants called organohalogen compounds (OHCs) seems to reduce the size of sexual organs in male and female polar bears, researchers report in an article scheduled for the Sept. 15 issue of the ACS journal, *Environmental Science & Technology*. OHCs include dioxins, polychlorinated biphenyls and some pesticides.

Christian Sonne and colleagues checked 55 male and 44 female East Greenland polar bears for a correlation between OHC levels in body tissue and size of sexual organs. Sonne's group did the study to close gaps in knowledge about the OHC's possible effects on reproduction in polar bears, a vulnerable population because of their low reproductive rates.

The bears have elevated OHC levels, due to a diet that includes seals, which accumulate large amounts of OHCs in their blubber. Past studies have linked OHCs to various health effects in the bears.

The new study reports a connection between OHC levels and reduced size of the uterus in female bears and reduced size of the testis and baculum (penis bone) in males. A large baculum is critical for successful mating in an arctic climate, the researchers note, and even slight decreases may interfere with reproduction. "Furthermore, similar physiological impacts from organohalogen-pollutant exposure may be manifested on the reproductive tract of humans relying on OHC-contaminated food resources," the study states.

Source: American Chemical Society

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