

Healthcare for the US Navy's animal warriors could help people stay healthier

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Military patrol dogs with your keen sense of smell, step aside. The U.S. Navy has enlisted the biological sonar and other abilities of bottlenose dolphins and California sea lions to protect harbors from enemy swimmers, detect explosives on the seafloor and perform other tasks. An article in the current edition of *Chemical & Engineering News (C&EN)* focuses on the Navy's health program for marine mammals and how it may also help keep people healthy.

C&EN Associate Editor Lauren K. Wolf explains that the Navy invests a lot of time and money in training these animals and, naturally, wants to keep them in tip-top shape when they deploy to places like Iraq or Korea. Their missions can involve guiding sailors through mine-laden waters or attaching recovery lines to lost equipment on the seafloor. When one of the roughly 120 animals gets sick, a team of veterinarians carefully evaluates and treats its illness. Because of the Navy's medical care, the animals are living two and three times longer than is common in the wild, leading to illnesses also seen in older humans, like high cholesterol and chronic inflammation. Wolf reports that the Navy is looking to apply its growing understanding of ailments in marine mammals to develop advances in human medical care.

For instance, vets have noticed that dolphins show symptoms similar to diabetes, with spiking blood sugar after meals, but they are able to live with the condition. Wolf says the researchers are looking for a genetic "switch" the dolphins might use to control their diabetes that could lead to treatments for humans living with the disease. Similarly, dolphins



show extraordinary healing abilities that Navy researchers think may be linked to the animals' stem cells. The scientists are extracting stem cells from dolphins and testing to see whether their application can speed up wound healing and reduce scarring. If successful, the technique may one day be useful for humans, too.

More information: "Marine Mammal Health" - cen.acs.org/articles/90/i19/Ma ... e-Mammal-Health.html

Provided by American Chemical Society

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