

# Sharks prefer to sneak up from behind, study shows

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"Never turn your back on a shark" is the take home message from an article published in Springer's journal *Animal Cognition*. Erich Ritter of the Shark Research Institute and Raid Amin of the University of West Florida in the US contend that sharks can comprehend body orientation and therefore know whether humans are facing them or not. This ability helps sharks to approach and possibly attack their prey from the blind side – a technique they prefer.

To hunt successfully a predator needs to correctly perceive the body form, size and movement of its potential prey. Studies confirm this is also true when sharks hunt. Descriptions of a shark's approach to typical

prey, as well as humans, indicate that these predatory fish prefer to avoid the field of vision. In other words, a shark would tend to approach a person from behind. These observations underlie the yet-untested assumption that sharks are able to identify human body orientation and can use such information in a self-serving manner.

Ritter and Amin therefore set about to deepen the understanding of how sharks select an approach pattern when interacting with humans. A test was designed to evaluate if sharks show a measurable preference based on body orientation when approaching a person, and if they choose a certain swim pattern when close to a human being. In one experiment, a diver in full scuba gear was positioned on the sea floor in a kneeling position, looking forward. In another, two divers kneeled back-to-back to eliminate the blind area.

To ensure the safety of the test subjects, the preferences of the Caribbean reef shark (*Carcharhinus perezii*) were tested. The animal is a typical type of reef shark frequently encountered by divers in the Bahamas, and is not considered to be a dangerous species regarding incidents with humans.

They found that when approaching a single test-subject, significantly more sharks preferred to swim outside the person's field of vision. The results suggest that sharks can identify human body orientation, but the mechanisms used and factors affecting the nearest distance of approach remain unclear.

"Our discovery that a shark can differentiate between the field of vision and non-field of vision of a human being, or comprehend human body orientation, raises intriguing questions not only about shark behavior, but also about the mental capacity of sharks," writes Ritter.

"The more research is conducted on how [sharks](#) sense and interpret

humans, the better we will understand how to cope with them in their habitat," adds Amin.

**More information:** Ritter, E. & Amin R. (2013). Are Caribbean reef sharks, *Carcharhinus perezii*, able to perceive human body orientation? *Animal Cognition*. [DOI: 10.1007/s10071-013-0706-z](https://doi.org/10.1007/s10071-013-0706-z)

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