

# 'Dinosaur bends' caused by prolonged diving

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(Phys.org) -- A recent study identified bone deformities on the fossilized remains of Ichthyosarians, which were giant dolphin-like reptiles that first appeared about 245 million years ago.

The lesions were similar to those human divers develop as a result of changes in body pressure, and suggest the reptiles suffered from a version of 'the bends'.

A new analysis by University of Melbourne pathologist Associate Professor John Hayman — published in the latest edition of the *Naturwissenschaften: Science of Nature* journal — sought to explain what may have caused the bone lesions.

That research argues the scarring may be the result of deep diving and spending too long at depth, causing excess nitrogen to be dissolved in the body, and not from quick ascents as previously thought.

“Ichthyosarians probably evolved the ability to dive deeper and to remain at depth for longer periods,” Professor Hayman said.

“An alternative explanation is that the reptiles developed decompression sickness from being trapped in shallow water by predators.

“It wasn't from sudden and rapid ascents,” he said.

Associate Professor Hayman said the dangerous practice of deep sea diving wouldn't have affected the reptiles' long-term survival because

any ill effects would have developed later in life.

“The [lesions](#) wouldn’t have been enough to kill the animal, and wouldn’t have affected it’s ability to hunt or breed.”

Professor Hayman said the new analysis was possible because structure of modern humans’ necks are very similar to the prehistoric [reptiles](#).

“The arterial blood supply to the humerus and other bones such as the neck of the femur is highly conserved. It has remained much the same for 250 million years.”

**More information:** PDF: [visions-download.unimelb.edu.au/Deep-diving%20dinosaurs.pdf](https://visions-download.unimelb.edu.au/Deep-diving%20dinosaurs.pdf)

Provided by University of Melbourne

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