

DeepStop

Deep Stops During Decompression in a Swine Model of Decompression Sickness

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Abstract: In a porcine model of neurological and cutaneous **decompression** sickness (DCS), the effect of a deep, initial stop during **decompression** from a heliox dive was examined. In the first phase of the study, control (regular stops) pigs were dived in a dry chamber environment on a profile of 250 feet of seawater (fsw) for 30 min with 3 **decompression** stops: 10 min at 120 fsw; 20 min at 60 fsw; and 50 min at 20 fsw. The experimental (deep stops) group underwent a profile of the same depth and bottom time, but the **decompression** consisted of 6 stops: 1 min at 220 fsw; 2 min at 190 fsw; 7 min at 160 fsw; 10 min at 120 fsw; 20 min at 60 fsw; and 30 min at 20 fsw. Each group comprised 31 pigs. Animals were observed post**decompression** for the onset of neurological and cutaneous DCS. In the regular stops group, 13 animals developed neurological DCS and 6 manifested cutaneous DCS. In the deep stops group, 13 pigs developed neurological DCS and 7 cutaneous DCS. Therefore, no statistically significant difference was detected in the incidence of either neurological or cutaneous DCS for the deep stop profile, even though it had 8 min less total **decompression** time (TDT). In the second phase of the experiment, the control profile from the first phase was changed so that its last **decompression** stop was 42 min at 20 fsw, giving both the regular stop and deep stop profiles the same TDT. The deep stop profile was unchanged. Each group in the second phase comprised 29 animals. In the regular stops group, 16 pigs developed neurological DCS

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