

## Staphylococcal infection in deep water saturation dive to 200 metres

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A member has reported the following infection during a deepwater saturation dive.

### What happened?

Nine divers were stored at 170 meters (557 feet) in the chambers, and were working at a bottom depth of approximately 200 meters (656 feet).

Staphylococcus infected six members of saturation dive team onboard the vessel and one more during decompression. One of the diver's infection was quite severe and, at one point, affected his gallbladder and/or other organs (the liver or kidneys), due to the antibiotics prescribed.

It is likely that there was an index case from whom others contracted the infection. The index case could have entered the chamber complex with an active staphylococcus infection or developed an infection in the complex. The location of the rash suggests that minor skin damage from the dive helmet or more likely oral-nasal mask and chin-pad provided a suitable location for the development of the infection. The infection spread readily from the index case through the chamber atmosphere, from person to person or via commonly-used equipment or bedding. Why all the divers were not infected is a matter of chance and it is very possible that they would all have been infected, given time.

### The member involved has identified the following reasons as to why the infection spread from one diver to another?

- Nine divers were living in one chamber.
- There was an insufficient number of chambers to allow isolation and decompression of infected divers.
- Using Tego 2000 as a hat wash may have caused the skin around their divers' chin and upper lip to become irritated, causing the skin to 'break' and lose its defensive ability to shield against bacteria.
- The helmets were not rotated out of saturation on a regular basis.
- Surface support did not fully know the extent of the diver's infection as it was spreading.
- Humidity levels were high in the nine-man living chamber.
- There had not been enough KM17C chin pads

available for each diver to have his own.

- At 200 msw divers are easily tired and immunity levels can quickly decrease.
- Chamber hygiene was difficult to maintain due to nine divers living in the same chamber.
- Divers' personal hygiene had not been monitored closely enough.
- Pre-saturation medicals had not been stringent enough.
- There was high TVC in the potable water system.

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