

HEADACHES AND DIVING

DAN gets many enquiries regarding headaches and diving and there are probably very few divers who dive regularly and have not left the water at least once with some cranial discomfort. This section reviews the common causes of headaches in diving and offers some simple advice that should solve the problem in most cases.

Finding the cause of a headache is probably unnecessary if it only happens once or twice, occurs in the absence of any other symptoms, and clears spontaneously or with only mild analgesics. However, a few divers complain of frequent and more troublesome headaches and it is for these poor individuals that the following considerations and suggestions are intended.

One way to find the cause of a headache is to run through a checklist of possible causes and eliminate them one by one. While not an exhaustive list these may include:

- Anxiety/ Tension
- Sinus or Ear Barotrauma
- Sinus & Ear infections
- Cold
- Salt water aspiration
- Mask tension
- Mouthpiece discomfort or dental problems
- Gas toxicity (especially high CO₂)
- DCS
- Migraine
- Hyperextension of the neck
- Cervical spondylosis
- Caffeine and other drugs

By simply looking at the list one can already see that the origin of headaches is truly diverse, but important clues can usually be found in the history taken from someone who develops headaches regularly. Here are five key questions to ask that may provide an answer to the cause of headaches:

1. Have you had previous head or neck problems, injuries or regular headaches even when not diving?

Divers who develop headaches regularly above water are very likely to get them under water as well. Such headaches, especially if they are associated with symptoms of nausea, vomiting, abnormal sensations, vision, abnormal smell or even paralysis may be serious and require assessment by a specialist neurologist. Migraine is a relative contraindication to scuba diving and requires expert assessment. Headaches may also be the result of tension, large caffeine intake, menstrual changes, etc. A bad fitting mouthpiece can also cause headache: Some regulators are quite heavy in the water and require a constant “bite” to stay in place. Swapping regulators or trying different mouthpieces may spell the end of a continuous string of headaches. In the end, it is always better to own your own equipment once you have found what works for you. Divers with previous neck or

upper back problems or injuries are very prone to developing headaches underwater or with bumpy boat trips. The underlying bony problems lead to muscle spasms, which in turn cause the headache. A medical specialist, e.g. an orthopaedic surgeon, should assess these problems. Physiotherapy and muscle strengthening exercises are often of value. Some report improvement after visiting a chiropractor. Back surgery is usually a last resort.

2. What is the position of your tank on your back?

Is the diver constantly avoiding the pillar valve by bending the part of your neck closest to the shoulders down and having to hyperextend the part closest to your skull to curl around the valve? As odd as this may sound, it is a very common cause of headache in divers. The solution is to ensure that the neck, when extended normally, does not bring the head against the pillar valve by simply adjusting the position of the cylinder as needed.

3. Where is the pain and what does the pain feel like?

Pain related to neck problems is usually a persisting non-throbbing pain that gradually spreads from the back of the head to the temples. Sinus pain is usually over the forehead or cheekbones or sometimes behind the eyes or the top of the head. Ear pain is mostly quite obvious, but it is always worth asking whether ear equalizing was easy and effective during a dive.

4. What is your surface air consumption?

Many divers boast about low air consumption or try to artificially reduce their air consumption by skip breathing. The truth of the matter is that removing carbon dioxide from the lungs is very analogous to rinsing dye out of a carpet. The bigger the spill (in our comparison this would be the amount of exercise which produces more carbon dioxide) and the bigger the carpet (in our example the size of the person's lungs) the more water you would need to rinse it clean — i.e., the more air you will require to wash the carbon dioxide out. Larger lungs require larger breaths and consequently an increase the air consumption. That is why female divers typically have better air consumption than males. The only way to effectively reduce breathing requirements without building up carbon dioxide is to reduce underwater exercise, ensure adequate thermal protection and to relax; taking deep breaths (better gas exchange — good rinsing) rather than shallow ones. A healthy breathing pattern is the key to solving many headaches.

5. What was the dive profile?

Long or deep dives, rapid ascents, breathholding and panic ascents followed by headache, all raise the suspicion of decompression illness (DCI) as a possible cause. Although fortunately uncommon, DCI is a cause that would require immediate treatment. Abnormal symptoms following any exposure to compressed air should always prompt a suspicion of DCI. Don't deny symptoms; when in doubt call DAN.

Some quickfix solutions that may be useful (and are good diving practice anyway) include:

Loosen your mask strap to avoid pressure on the nose, forehead or cheekbones. If necessary, change your mask to a more comfortable one. Relax during your dives. You are on holiday after all. Take slow deep breaths. These are relaxing and a more efficient way of removing carbon dioxide. Relax your neck during dives. Even though it spoils your trim momentarily, rotating the body rather than the head to look at objects underwater may avoid the strain and the discomfort of hyperextending the neck. Stay in shape. Exercise reduces the incidence of headaches. Avoid caffeine and tobacco with diving. Always follow safe diving practices. Spend 3-5 minutes at a safety stop at 3-5 meters below the surface. It is relaxing (weather and conditions permitting) and allows time to reduce the carbon dioxide build up from finning to the surface. Wear adequate thermal protection. Go for regular dive medical examinations: biennial below 40, and annually thereafter.

Headaches can spoil a diving trip or vacation and detract from the wonderful underwater experience of our unique sport. Many headaches are simple to cure once the cause has been determined. The abovementioned suggestions should allow most divers to steer away from headaches, but remember that unless a headache is easily explained, it is always better to go for a check-up. If they are recurrent seek medical advice or call **DAN on (011) 254-1112 or 0800 020111**.

Safe Diving!

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