

Should I dive on Air or Nitrox?

If you're a recreational diver you've probably heard the term "Nitrox." Here's a clear, practical guide to what Nitrox is, why many divers use it, and what you need to know before you breathe it.

What is Nitrox?

- Nitrox (often called Enriched Air Nitrox, EANx) is a breathing gas with a higher percentage of oxygen and therefore a lower percentage of nitrogen than normal air.
- Standard air is about 21% oxygen / 79% nitrogen. Recreational Nitrox mixes are most commonly 32% oxygen (EAN32) — a popular choice for recreational diving.

Why divers use Nitrox

- Lower nitrogen content means you absorb less nitrogen on the dive. That leads to real operational benefits (see below) for no extra physical effort.
- Nitrox is especially popular for multi-dive days, repetitive diving, and for older divers who want an extra safety margin.

Oxygen toxicity — what it is and why it matters?

- Oxygen is vital, but at increased partial pressures underwater it can become toxic to the central nervous system (CNS) and lungs. CNS oxygen toxicity can cause convulsions — a life-threatening event underwater.
- Risk increases with depth and with higher oxygen percentages. That's why Nitrox dives require attention to limits.
- Nitrox training teaches you to manage oxygen exposure using the concept of partial pressure of oxygen (PO₂) and to stay within safe limits.

MOD — Maximum Operating Depth

- MOD is the deepest depth you should go with a specific Nitrox mix without exceeding your chosen PO₂ limit. The commonly used recreational PO₂ limit is 1.4 atm for working dives.
- Example: For EAN32 (32% O₂) the MOD at PO₂ = 1.4 atm is 33m. If the dive would take you deeper than the MOD, that mix is unsafe for that depth.
- Always plan dives using your selected PO₂ limit, check your dive computer settings (set the oxygen percentage), and verify MOD before the dive.

Key benefits of Nitrox

- Reduces risk of decompression sickness (DCS): Lower nitrogen uptake reduces your theoretical DCS risk for a given depth and bottom time.
- Stay down longer: Using Nitrox can give you longer no-decompression bottom times compared to air at the same depth.
- Shorter surface intervals: Less residual nitrogen means shorter required surface intervals between repetitive dives.
- Feel better after diving: Many divers report feeling fresher, especially on multi-day trips — while not definitively proven scientifically, it's a commonly cited benefit.
- Added safety margin as we age: With increasing age or reduced fitness, a Nitrox profile can give an extra conservative margin by reducing nitrogen load.

Important safety reminders

- Nitrox is not a substitute for training. You must be certified in Enriched Air Nitrox to plan and dive Nitrox safely.
- Always analyse the mix or confirm the tank's label. Never assume the oxygen percentage.
- Set your dive computer to the correct oxygen percentage before you dive.
- Respect MOD and PO2 limits. Do NOT exceed them.
- Mixing and filling with oxygen requires trained technicians and appropriate equipment; don't attempt DIY fills.

Is Nitrox right for you?

- If you do repetitive diving, multiday trips, or want extra safety margin, Nitrox is worth considering.
- For shallower single dives air might be fine, but Nitrox often provides tangible benefits with minimal downside when used correctly.

Ready to extend your bottom time and add safety to your dives?
Check out our course schedule or contact us to book your course.