

**Embracing new technologies**

Any new development in diving is frequently met with a degree of doom and gloom that it is unsafe, ill advised or just downright dangerous! Over the years such comments have been applied to Drysuits, Lifejackets, BC's, Computers, Nitrox and most recently Rebreathers. Incidents including the involvement of such technology are usually cited as evidence for the increased risk.

Despite all the hype the majority are however now considered the norm, so is developing technology a problem or does that problem lie elsewhere. To my mind, as leader of the Technical Group on the NDC, the factors surrounding developing technology include the need for appropriate training, developing experience and following appropriate guidance. The evolution of training programs and guidance takes time and there will always be some element of learning from mistakes such as those recorded in the Incident Reports. As a consequence BSAC may seem to take a cautious approach to development and integration of new technologies but I believe the results are all the better for that caution.

**Nick Jewson**

**NDC Technical Group Leader**

**REBREATHER SAFETY**

Why do rebreather incidents occur? One explanation is the balance of experience and conditioned response. Many divers moving to rebreathers are experienced open circuit divers who have practiced and used O/C skills over a significant period of time and are in the process of relearning skills in the way demanded of rebreathers. An analogy is the situation where having driven a manual car for some years you start to drive an automatic. At the end of the road you end up putting both feet on the brake with predictable results but over time you gain a level of comfort and competence with the controls until 6 months down the line when someone does something 'really' stupid in front of you and you again put both feet on the brake because years of experience takes over from the 6 months. With rebreathers the O/C response can often be the opposite of the rebreather required response!

**Training**

Most divers recognise that rebreathers are sufficiently different to warrant seeking appropriate training in their use. Apart from making sure that the training meets your needs for using the equipment it should also be chosen to suit your mode of diving and basic training should never be adequate to use the unit for mixed gas (trimix) diving.

**Experience**

Many often describe becoming a rebreather diver as "becoming a novice again" and whilst in some ways this is true it might be more appropriate to remember that it is a balance of 'different' experience between O/C and Rebreather that you need to rebalance. As such careful preparation through a series of 'Build up Dives' and steady building of experience would be appropriate to help redress the balance?

**Practice**

The encouragement to 'practice, practice, practice' is very appropriate in helping redress the balance. The constant monitoring and active 'driving' of the rebreather in controlled conditions can help to redress the 'experience balance' faster than just sheer time in the water.

**Guidance**

A new experience requires new and additional guidance. In integrating rebreather diving in BSAC the NDC Technical Group have developed a range of guidance over the years to assist all divers to safely include rebreathers into all aspects of BSAC diving and training. A measure of this integration is the incorporation of much of this advice into 'Safe Diving'. Added to this there is specific 'Advice to DO's and Dive Managers', 'Build up dives' and 'Use of Rebreathers in Diver Training'

Think SAFE – Dive SAFE

Jim Watson

BSAC Safety and Development manager