

## The final frontier - Repair and functional restoration

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### Abstract

Almost 20 to 30% of the body's consumption of oxygen occurs within 3 to 5% of the body mass; the brain and spinal cord structures. These structures are extremely sensitive to oxygen deficiency. The final frontier in the treatment of degenerative neurovascular disorders including brain and spinal cord injury is focused on repair and functional restoration. This involves the use of neural growth factors to promote axonal sprouting, activation of idling and non-functional neurons whilst promoting neovascularization (new capillary formation) of the damaged (Penumbra) areas. The extent of neurovascular deterioration can be significantly diminished with Hyperbaric Oxygenation (HBOT), which expands the therapeutic window. HBOT primes the body and provides a fertile neurovascular platform for mobilizing the patient's own immune and circulating stem cell capacity. HBOT activates dormant and inactive nerve cells and promotes plasticity to hasten recovery. A single two hour exposure to HBOT at 2 ATA doubles circulating CD34+ progenitor stem cells (primordial cells targeted to salvage and restore damaged structures) and at approximately 40 hours HBOT, stem cell activity increases eight fold (800%)..

### Biography:

Malcolm R Hooper is an International Executive Director serving both the International Hyperbaric Medical Foundation (IHMF) and the International Hyperbaric Medical Association (IHMA). He is a regular speaker at international symposiums on the topic of hyperbaric oxygen therapy applications in the modern era.