

**D**evelopmental Disabilities are a group of chronic impairments that impede the development of one or more abilities, traits, skills or processes. As a generalized term it can include the diagnosis of Epilepsy, Cerebral Palsy (CP), Attention-Deficit / Hyperactivity Disorder (ADD / ADHD) and Autism Spectrum Disorders.

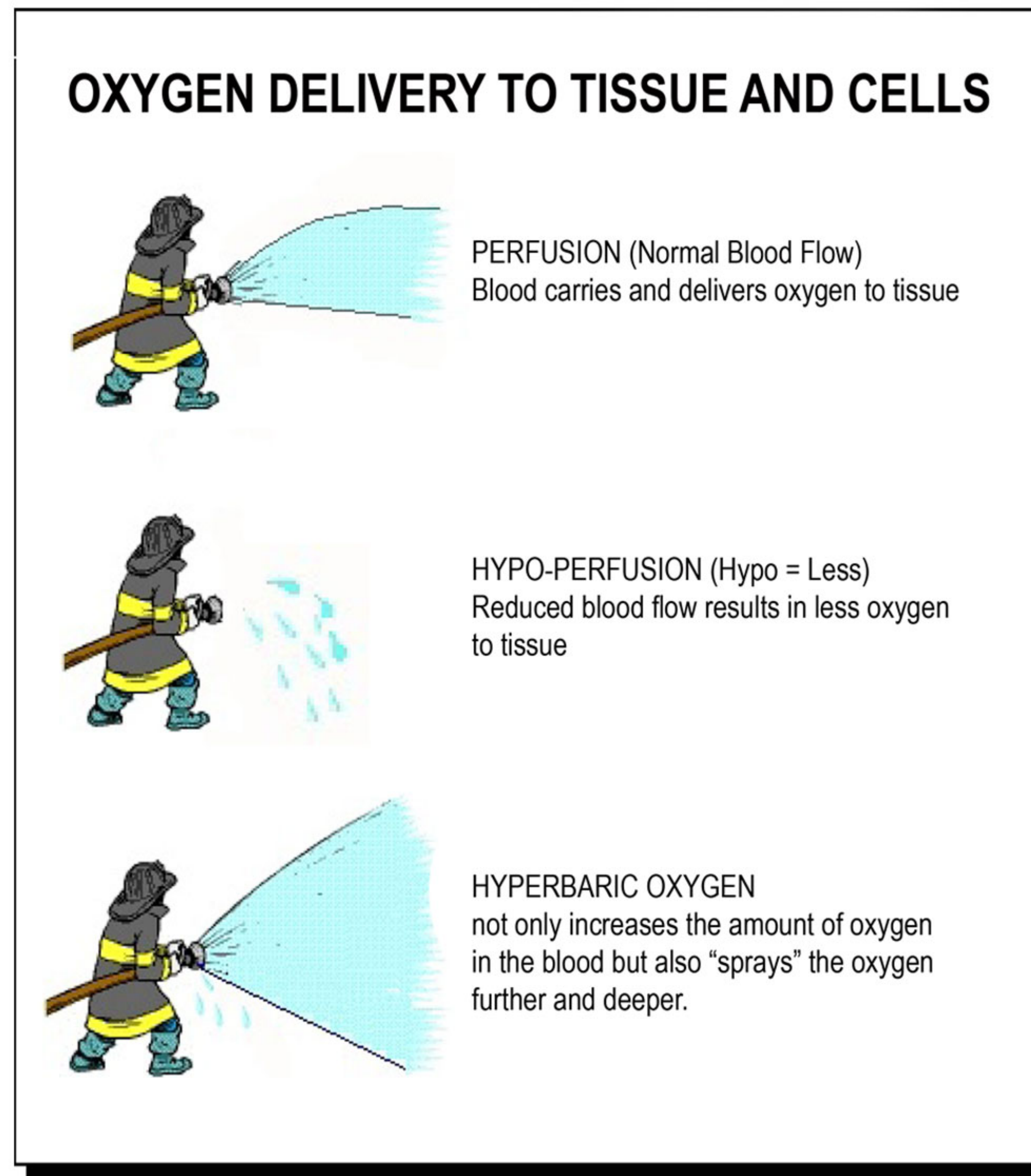
Autism Spectrum Disorders (ASD) are a group of Developmental Disabilities that are caused by unusual brain development. Autism is a pervasive developmental disorder that appears as impaired or limited social skills, speech, language, communication and abnormal or obsessive behaviours and routines.

While the key underlying neuro-biological anomalies remain unknown, functional imaging studies of the brain provide further insight. Findings from these studies demonstrate that there is a delayed maturation of the frontal lobes in the brain.

Neuroimaging studies [MRI, PET, SPECT] of autism have shown certain abnormalities in the brain. Analysis of blood flow in the brain has revealed a pattern of abnormal perfusion [blood flow] related to the behaviours observed in autism.

Ultimately, the body or brain does not care about blood flow or perfusion. The issue is more about what is in the blood. A Lack of blood flow means lack of oxygen delivery or hypoxia. It is what's in the blood that counts...

### ... Oxygen



*Oxygen can be delivered to tissues and cells that have a limited supply and do not function normally.*

Medical research and published literature has established that there are regions of ischemic tissue [deficiency of blood] in the autistic brain. This tissue is hypoxic... lacking oxygen.

*... revealing focal areas of decreased perfusion.*  
European Journal of Nuclear Medicine. 1999.

*... bilateral hypoperfusion [inadequate blood flow] of the temporal lobes in autistic children.*  
Journal of Pediatric Radiology. 2000.

*We found significant hypoperfusion in the prefrontal areas of autistic children.*  
Journal of Neuropsychobiology. 2002.

*Autistic patients had significantly lower perfusion.*  
J. Neuropsychiatry/Clinical Neuroscience. 2002.

Hyperbaric Oxygen (HBO) is a proven therapy for adding large concentrations of oxygen to tissue.

Since one of the significant factors known to be part of Autism are portions of the brain that lack adequate oxygen delivery, putting the treatment to the illness should not be rocket science. HBO is known as an effective treatment for brain disorders:

*"Inadequate tissue oxygenation could be reversed by using hyperbaric oxygen."*

American Journal of Surgery. 1998.

*"HBO can increase the oxygen supply to ischemic brain and may improve oxidative metabolism."*

Eighth ICHM.\* 1984.

*"Improved ischemic brain metabolism will improve reversible brain dysfunction."*

Eighth ICHM.\* 1984.

*"Hyperbaric Oxygenation treatment is generally beneficial to these patients..., thus improving the hypoxic or anoxic state of the cells of the various organs including the brain tissue, and facilitates repair of damaged brain tissue."*

Ninth ICHM.\* 1987.

*"HBO guarantees the sufficient oxygen delivery to potentially hypoxic brain areas."*

Ninth ICHM.\* 1987.

\* [ICHM] International Congress on Hyperbaric Medicine.