

Friday, April 24, 2009

Is Hyperbaric Oxygen Therapy Always Useful When Treating Vision Problems?

Hyperbaric oxygen therapy (exposure to oxygen at high pressure) is sometimes used to treat certain vision problems. But will this treatment work for everyone? CBR member **Frank Giblin**, Director of the **Eye Research Institute**, and his colleagues think not. In a paper published in the April 2009 issue of the **Archives of Ophthalmology** (**Loss of Protein Kinase C gamma in Knockout Mice and Increased Retinal Sensitivity to Hyperbaric Oxygen**, Volume 127, Pages 500-506), Giblin performs experiments on mice and concludes that in certain individuals with a particular genetic defect, hyperbaric oxygen therapy may do more harm than good.

"Protein kinase C gamma-knockout mice had increased retinal sensitivity to [hyperbaric oxygen]. Results demonstrate that [Protein kinase C] gamma protects **retinas** from [hyperbaric oxygen] damage...Care should be taken in treating patients with [hyperbaric oxygen], particularly if they have a genetic disease, such as **spinocerebellar ataxia** type 14, a condition in which the [Protein kinase C] gamma is **mutated** and nonfunctional."

SUMMARY

Hyperbaric oxygen therapy (exposure to oxygen at high pressure) is sometimes used to treat certain vision problems. But will this treatment work for everyone? CBR member Frank Giblin, Director of the Eye Research Institute, and his colleagues think not.

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Modified by Brad Roth (roth@oakland.edu) on Friday, April 24, 2009
Article Start Date: Friday, April 24, 2009