

1: Med Hypotheses. 2000 Sep;55(3):232-8.

## **HIV: Reactive Oxygen Species, Enveloped Viruses and Hyperbaric Oxygen.**

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This paper demonstrates that there are many examples in the literature of contradictory data concerning reactive oxygen intermediates (ROIs), responsible for producing cellular oxidative stress (OS), and their enhancement or diminution of viral replication. Nevertheless, ROIs repeatedly have been shown to be virucidal against enveloped-viruses, like the human immunodeficiency virus (HIV). Hyperbaric oxygen therapy (HBOT) increases the production of ROIs throughout the body, leaving no safe harbor for the virus to hide outside the genome. This technique already has been tried on acquired immune deficiency syndrome (AIDS) patients, with exciting results. Historically, the biggest setback to demonstrating HBO's antiviral effects has been the investigator's folly of studying non-enveloped viruses or failing to initiate ROI production. ROIs specifically attack areas of unsaturation occurring in the polyunsaturated fatty acids of cell membranes and viral envelopes. Moreover, it consistently has been shown that a peroxidized viral envelope breaches, and a breached viral envelope causes viral disintegration.

PMID: 10985915 [PubMed - indexed for MEDLINE]

### Related Links

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Neutrophils from human immunodeficiency virus (HIV)-seronegative donors induce HIV replication from HIV-infected patients' mononuclear cells and cell lines: an in vitro model of HIV transmission facilitated by Chlamydia trachomatis. [J Exp Med. 1995] PMID:7699332

Reactive oxygen intermediates and human immunodeficiency virus (HIV) infection. [Free Radic Biol Med. 1992] PMID:1459484