INAHTA Briefs

Issue 2007/159

*Title* **The Role of Hyperbaric Oxygen Therapy in the Management of Autism**

*Agency* **AETMIS, Agence d'évaluation des technologies et des modes d'intervention en santé**
2021, avenue Union, bureau 10.083, Montréal, Québec H3A 2S9, Canada;
Tel: +1 514 873 2563, Fax: +1 514 873 1369; aetmis@aetmis.gouv.qc.ca, www.aetmis.gouv.qc.ca

*Reference* 2007-11. ISBN 978-2-550-51397-1.
www.aetmis.gouv.qc.ca/site/en_publications_2007.phtml

## Aim

To present the published scientific data and current studies on the presumed efficacy of hyperbaric oxygen (HBO) therapy in addressing the symptoms of autism.

## Conclusions and results

The question about the efficacy of HBO in managing autism is part of the broader mandate given to AETMIS by the Minister of Health and Social Services to update a previous report. That report outlines the indications for which the efficacy of HBO is supported by scientific data. The Minister specifically asked AETMIS to pay special attention to cerebral palsy and autism. The first of these topics was already the subject of an assessment report submitted to the Minister in January 2007.

Despite a thorough literature search of scientific databases, textbooks, and websites dealing with autism or HBO, it must be concluded that there is a lack of evidence. Apart from 2 descriptions of anecdotal cases, the only results available are from a randomized controlled trial and 3 case series studies, 2 of which are described only briefly. These studies seem to indicate a reduction in autism symptoms, but their validity cannot be demonstrated due to the small patient samples and methodological weaknesses.

Five current studies on this subject were also identified. In examining their designs, the oxygen and pressure parameters were found to vary from study to study. Furthermore, the number of subjects enrolled is small, ranging from 10 to 60. Both factors will influence the analysis and interpretation of results when these studies are published.

In light of its assessment, AETMIS concludes that the evidence is insufficient to build a strong case for the efficacy of hyperbaric oxygen therapy in managing autistic disorders. For now, hyperbaric oxygen therapy should be considered an experimental treatment modality in the management of autism. As such, this treatment should be limited to formal research projects.

## Methods

Systematic review of scientific publications; search in scientific databases (Biosis, CINAHL, Dissertation Abstracts, Current Contents, the Cochrane Library, Psychological Abstracts, PubMed, EMBASE, and Web of Science); Manual search in recognized journals (Austism, Journal of Autism and Developmental Disorders, and Child Neuropsychology); examination of grey literature in the Web (National Institute of Mental Health, Canadian Autism Intervention Research Network, Autism Society Canada, and Autism Society of America).

## Further research/reviews required

A literature watch should be conducted to evaluate the results of the current and future studies.

Written by Khalil Moqadem and Gilles Pineau, AETMIS, Canada

ISSN 1654-501X