

Non-Medical Use of Fetal Ultrasound

This policy statement has been reviewed by the Clinical Practice Obstetrics Committee and approved by the Executive of the Society of Obstetricians and Gynaecologists of Canada

PRINCIPAL AUTHORS

Michiel C. Van den Hof, MD, FRCSC, Halifax NS

Stephen Bly, PhD, Health Canada Radiation Protection Bureau, Ottawa ON

MEMBERS OF THE DIAGNOSTIC IMAGING COMMITTEE

Stephen Bly, PhD, Ottawa ON

Robert Gagnon, MD, FRCSC, London ON

Barbara Lewthwaite, MN, Winnipeg MB

Ken Lim, MD, FRCSC, Vancouver BC

Lucie Morin, MD, FRCSC, Montreal QC

Shia Salem, MD, FRCPC, Toronto ON

Michiel C. Van den Hof, MD, FRCSC, Halifax NS

J Obstet Gynaecol Can 2007;29(4):364–365

Fetal ultrasound is a valuable resource for dating a pregnancy, for ensuring fetal health and appropriate growth, and for assessing fetal development. Ultrasound in a carefully monitored and supervised environment is also important in education and research; however, the fetus should not be exposed to ultrasound for commercial and entertainment purposes. This recommendation has been made by Health Canada¹ and the United States Food and Drug Administration (FDA)² and by reputable professional medical and sonographic bodies.^{3–9} SOGC also strongly opposes the non-medical use of ultrasound to view or photograph the fetus or for the sole purpose of determining fetal sex when there is no medical indication to scan. Although there have been no fetal abnormalities linked to diagnostic ultrasound, it involves targeted energy exposure to the fetus, and there remains a theoretical risk for subtle

Key Words: Ultrasound, non-medical, commercial, fetal development

effects on fetal development. This is suggested by some biological effects of ultrasound observed at or near diagnostic intensities in both human studies and animal models.^{10–12}

With the non-medical commercial use of fetal ultrasound, the maintenance of technical safeguards, operator expertise, and governing competency is no longer ensured. As a result, fetal energy exposure may not be appropriately monitored. Examinations may be of extended duration, and 4D ultrasound, Doppler, and colour-flow studies may be used, all of which further increase fetal energy exposure. With non-medical ultrasound, there is no obligation to report fetal concerns, and if fetal abnormalities are present but are not detected, parents are left with a false sense of security. In addition, there is a concern operators may attempt unsafe levels of abdominal pressure and fetal manoeuvring to obtain a suitable commercial product.

SOGC recommends that ultrasound be used prudently and that energy exposure be limited to the minimum that is medically necessary. The SOGC further recommends a complete ban on the non-medical use of fetal ultrasound and encourages government to join with the Society to find appropriate means to deal with this potential public health issue.

REFERENCES

1. Health Canada (HC), Public Health Agency of Canada (PHAC). It's your health. Fetal ultrasound for keepsake videos. November 2003. Available at: http://www.hc-sc.gc.ca/iyh-vsv/med/ultrasound-echographie_e.html. Accessed February 20, 2006.
2. U.S. Food and Drug Administration (FDA). Fetal keepsake videos. August 2005. Available at: <http://www.fda.gov/cdrh/consumer/fetalvideos.html>. Accessed February 20, 2007.
3. NCRP Report No. 140. Exposure criteria for medical diagnostic ultrasound. Criteria based on all known mechanisms. Recommendations of the National Council on Radiation Protection and Measurements. Issued December 31, 2002.
4. Canadian Society of Diagnostic Medical Sonographers (CSDMS). Statement on ultrasound for entertainment. CSDMS Standards, March 1994. Available at: <http://www.csdms.com/docs/01.pdf>. Accessed February 20, 2007.
5. Bly S, Van den Hof MC; Diagnostic Imaging Committee, Society of Obstetricians and Gynaecologists of Canada. Obstetric ultrasound biological effects and safety. J Obstet Gynaecol Can 2005; 27(6):572–575.

This policy statement reflects emerging clinical and scientific advances as of the date issued and is subject to change. The information should not be construed as dictating an exclusive course of treatment or procedure to be followed. Local institutions can dictate amendments to these opinions. They should be well documented if modified at the local level. None of these contents may be reproduced in any form without prior written permission of the SOGC.

6. American Institute of Ultrasound in Medicine (AIUM). Keepsake Fetal Imaging. AIUM official Statement, June 2005. Available at: http://www.aium.org/publications/statements/_statementSelected.asp?statement=31. Accessed February 20, 2007.
7. Canadian Association of Radiologists. Position on the use of diagnostic ultrasound for non-medical purposes. February 11, 1996.
8. The College of Physicians and Surgeons of Ontario. Ultrasound for non-medical reasons. July 2004. Available at: <http://www.cpso.on.ca/Policies/ultrasound.htm>. Accessed February 20, 2007.
9. American College of Radiology (ACR). ACR Statement on fetal keepsake videos for entertainment only. Available at: http://www.acr.org/s_acr/doc.asp?CID=2192&DID=16912. Accessed February 20, 2007.
10. Kieler H, Axelsson O, Haglind B, Nilsson S, Salvesen KA. Routine ultrasound screening in pregnancy and the children's subsequent handedness. *Early Hum Dev* 1998; 50(2):233–45.
11. Salvesen KA, Eik-Nes SH. Ultrasound during pregnancy and birth weight, childhood malignancies and neurological development. *Ultrasound Med Biol* 1999 Sept;25(7):1025–31.
12. Kieler H, Chattingius S, Haglind B, Palmgren J, Axelsson O. Sinistrality – a side effect of prenatal sonography: a comparative study of young men. *Epidemiology* 2001 Nov;12(6):618–23.