Do obese people have metabolic rates which are different from non-obese people?

Question submitted by:
Dr. Andrew. C. Piotrowski, BASc, CCFP
General practitioner,
Fernie, British Columbia

Most obese people gain weight at a rate of 5 kg per year over a few years. This rate is equivalent to eating an extra 100 kcal per day (one apple or one piece of bread) or burning off 100 kcal per day less than before. Obesity is always caused by a positive caloric balance (more calories ingested than expended). Caloric expenditure is the sum of the resting metabolic rate (the energy required to keep the body functioning at rest), energy burned in exercise, and the small number of calories used to absorb food.

The resting metabolic rate is reduced in hypothyroidism, in autonomic hypofunction, and in unusual genetic disorders. However, the obese, as a group, do not have a different resting metabolic rate from the non-obese. That is to say, a constitutionally low metabolic rate is not the cause of obesity. For treatment, food intake and exercise can vary and be varied significantly.

Answered by:
Dr. C. Laird Birmingham, MD, FACP, FRCPC
Professor and director, Eating Disorders Program, department of psychiatry, University of British Columbia, Vancouver, British Columbia

If a patient is given RhoGAM® for a bleed in early pregnancy, how long does it work? If she bleeds again later, does she need another shot?

Question submitted by:
Dr. Deborah Kestenbaum, MD, CCFP
Family physician, Toronto, Ontario

The product now used in Canada for prenatal and postpartum prevention of maternal rhesus factor (Rh) isoimmunization is WinRho® SDF. WinRho is highly purified anti-D immunoglobulin (Ig) G with high Rh D antigen antibody titre, obtained from human donor plasma.

Most women become Rh-alloimmunized because of exposure to < 0.1 mL of fetal blood. Fetoplacental blood volume at 12 weeks amenorrhea is 3 mL (1.5 mL fetal red blood cells); 50 µg of anti-D protects against 5 mL of transfused fetal blood.

Thus, given threatened, spontaneous or induced abortion under 12 weeks of amenorrhea, unsensitized Rh D-negative women should be given at least 120 µg of anti-D Ig (600 IU, the lowest dose available in Canada). After 12 weeks amenorrhea, this dose should be increased to 300 µg (1500 IU). The manufacturer recommends a standard 300 µg antepartum dose, given the possibility of abortion at any gestation because passive anti-D antibodies are undetectable by six weeks after treatment with the lower dose.

After an initial peak serum value (which occurs sooner after intravenous use), circulating passive antibody stabilizes for approximately 12 weeks (although stabilization only occurs as described with the larger doses). By this time, residual anti-D is

insufficient to protect against another 1 mL of fetomaternal hemorrhage. Thus, if threatened abortion recurs beyond six weeks after 120 mg prophylaxis or 12 weeks after 300 µg, another 300 µg WinRho dose should be given.

In all such circumstances, patients should be informed about WinRho's source and safety compared with the material risk of not receiving prophylaxis. Dx

Answered by:
Dr. Philip F. Hall, MD, BScMed, FRCSC
Professor, division of maternal and fetal medicine, University of Manitoba, Winnipeg, Manitoba

References available—contact *The Canadian Journal of Diagosis* at **diagnosis@sta.ca**.

Nation's Top Doctors Honoured

The College of Family Physicians of Canada (CFPC) recently honoured 10 family physicians—one from each province—with the title of "Canada's Family Physicians of the Year" for 2003/04.

The physicians honoured were:

- Dr. Art Macgregor, British Columbia
- Dr. Harvey Woytiuk, Alberta
- Dr. Vicki Holmes, Saskatchewan
- Dr. Denis Fortier, Manitoba
- Dr. Val Rachlis, Ontario
- Dr. Richard Boulé, Quebec
- Dr. Jean-Pierre Arseneau, New Brunswick
- Dr. Murdock Smith, Nova Scotia
- Dr. Philip Hansen, Prince Edward Island
- Dr. Frank Hicks, Newfoundland

"Whether it's providing community leadership in the face of SARS, or developing programs to help teen mothers get back to school, aiding the homeless, or fundraising on behalf of important public health issues, the breadth of their individual pursuits demonstrates how, on a daily basis, family doctors are contributing to the health and well-being of their patients and communities," said Dr. Calvin Gutkin, executive director and CEO of the CFPC.

From left to right (front): Dr. Jean-Pierre Arseneau; Dr. Vicki Holmes; Dr. Arthur Macgregor; (second row): Dr. Harvey Woytiuk; Dr. Richard Boulé; Dr. Murdock Smith; Dr. Denis Fortier; (back row): Dr. Philip Hansen; Dr. Frank Hicks; Missing: Dr. Val Rachlis.

Each recipient received a Reg L. Perkin award, named in honour of the CFPC executive director from 1985 to 1996. The awards are supported through a grant from Janssen-Ortho Inc. to the CFPC's Research and Education Foundation. Recipients are selected through a nomination process including their peers, other health-care colleagues, community leaders, and patients.

For more information, contact Leslie Stafford, communications officer, at (905) 629-0900, ext. 303.