

Abstract

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Nutrition and reproduction in women.

ESHRE Capri Workshop Group.

BACKGROUND: Malnutrition is a major problem in developing countries, and obesity and eating disorders are increasingly common in developing as well as developed countries. The reproductive axis is closely linked to nutritional status, especially undernutrition in the female, and inhibitory pathways involving detectors in the hind brain suppress ovulation in subjects with weight loss.

DISCUSSION AND SUMMARY: Recovery may occur after minimal reacquisition of weight because energy balance is more important than body fat mass. Anorexia nervosa and bulimia nervosa affect up to 5% of women of reproductive age causing amenorrhoea, infertility and, in those who do conceive, an increased likelihood of miscarriage. Obesity can affect reproduction through fat cell metabolism, steroids and secretion of proteins such as leptin and adiponectin and through changes induced at the level of important homeostatic factors such as pancreatic secretion of insulin, androgen synthesis by the ovary and sex hormone-binding globulin (SHBG) production by the liver. WHO estimates that 9 to 25% of women in developed countries are severely obese, and obese mothers are much more likely to have obese children, especially if they have gestational diabetes. Obesity-associated anovulation may lead to infertility and to a higher risk of miscarriage. Management of anovulation with obesity involves diet and exercise as well as standard approaches to ovulation induction. Many obese women conceive without assistance, but pregnancies in obese women have increased rates of pregnancy-associated hypertension, gestational diabetes, large babies, Cesarean section and perinatal mortality and morbidity. Among contraceptors, the fear of weight gain affects uptake and continuation of hormonal contraceptives, although existing trials indicate that any such effects are small. For all methods of hormonal contraception, weight above 70 kg is associated with increased failure rates.

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