PREGNANCY PLUS

Eating disorders in pregnancy

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Pregnancy can complicate an eating disorder as changes in body shape may increase anxiety about weight gain. Pregnant women with eating disorders need enhanced monitoring and postnatal support

Eating disorders are more common than is realised in women of reproductive age. Anorexia nervosa has a prevalence of up to seven per 1000 in the UK population and is especially common in adolescent girls and young women.¹ Bulimia nervosa is more common and affects a slightly older age group, with a prevalence of 0.5-1% in women of reproductive age.¹ Atypical eating disorders (eating disorder not otherwise specified) are probably even more common, but little is known about their prevalence. People in the atypical group have abnormal eating behaviour but do not meet the diagnostic criteria for anorexia nervosa or bulimia nervosa.¹ A retrospective questionnaire study of 454 women, three to seven months postpartum, reported an 11.5% prevalence of some type of eating disorder, with a predominance of younger women affected.²

Pregnancy can complicate an eating disorder as changes in body shape may increase anxiety about weight gain. Women with a history of eating disorder should be monitored frequently during pregnancy and postpartum; they also need enhanced support with breast feeding (see Scenario box).

How do eating disorders affect fertility?

Most women with bulimia nervosa (even those with a normal body mass index) have menstrual irregularities, and 5% of these women report secondary amenorrhoea. Women with eating disorders may therefore present to their general practitioner with infertility. However, an 11.5 year follow-up study of 173 women with bulimia nervosa found that 75% became pregnant, which indicates that fertility problems are not more common in these women.³ Women with active anorexia nervosa have more difficulty conceiving. Menstruation and return of normal fertility can be delayed in up to 30% of women with anorexia nervosa who regain normal weight.⁴

Women with irregular or absent periods often assume that they cannot conceive. This can lead to inadequate use of contraception and the risk of unplanned pregnancies.⁵

Does pregnancy affect eating disorders?

Pregnancy can be a stressful and anxious time for some women, especially those with an eating disorder. The accompanying weight gain and change in body shape can lead to recurrence or worsening of the eating disorder. Conversely, the eating disorder may improve because of the woman's worries about its adverse effects on her unborn baby.⁶

Evidence suggests a variable course for women with past or current eating disorders who become pregnant. The eating disorder may continue unchanged during the pregnancy.² Two prospective studies found that symptoms may improve in women with bulimia nervosa, whereas those with anorexia nervosa were more likely to relapse postpartum.^{6,7} Another prospective case-control study reported that pregnancy might lead to a relapse in women with a history of an eating disorder, most probably in the first six months postpartum.⁸

A recent community based prospective cohort study of 12 254 women with a history of an eating disorder, an active eating disorder, obesity, or no eating disorder reported that women with an eating disorder generally improved throughout pregnancy. However, these women reported continuing concern and anxiety about their weight, dieted more often, used more

Box 1 National Institute for Health and Clinical Excellence recommendations on eating disorders¹

Symptoms seen in high risk women who should be screened for eating disorders

- Low body mass index
- Concerned about weight but not overweight
- Menstrual disturbances or amenorrhoea
- Gastrointestinal symptoms
- Physical signs of starvation or repeated vomiting
- Psychological problems

Suggested screening questions

- Do you think you have an eating problem?
- Do you worry excessively about your weight?

This is one of a series of occasional articles about how to manage a pre-existing medical condition during pregnancy.

Box 2 Suggested questions at each antenatal visit

- What is your current eating pattern? Are you restricting your dietary intake? Do you binge? Do you vomit or take laxatives after eating?
- How do you feel about your shape and weight?
- What is your weight? Are you gaining weight appropriately?
- What is your mood like? Do you feel low or anxious?
- What exercise are you taking? Are you exercising too much?

laxatives, exercised more, and practised more self induced vomiting than the other groups of pregnant women.⁹

Do eating disorders affect pregnancy and fetal outcomes?

The evidence here is limited and sometimes conflicting. Many studies are retrospective or questionnaire based, which can lead to recruitment bias and recall bias. Other studies are based in hospital clinics, which are not representative of community populations.

Overall it seems that a current eating disorder, particularly active anorexia nervosa, carries an excess small risk to the mother and the fetus. A recent large cohort study of women with anorexia nervosa, women with bulimia nervosa, women with both disorders, and controls found that women with bulimia nervosa were significantly more likely to have a history of miscarriage and those with anorexia nervosa were significantly more likely to have smaller babies compared with the general population.¹⁰

Another retrospective study compared women with a history of anorexia nervosa, bulimia nervosa, atypical eating disorder, and controls. It found that women with a history of an eating disorder had a higher rate of miscarriage, small for gestational age babies, low birth weight babies, babies with microcephaly, intrauterine growth restriction, and premature labour (especially if the mother's body mass index was 20).⁸

However, a recent large cohort study in Sweden suggests that a past history of anorexia nervosa in itself may not be associated with negative birth outcomes.¹¹

Maternal problems reported include psychological upset, postnatal depression, anaemia, increased risk of

hyperemesis gravidarum, and more problems with episiotomy repair.⁸

Do eating disorders affect the postpartum period and breast feeding?

Women with eating disorders are at increased risk of postnatal depression. A retrospective case-control study of 94 women with eating disorders found that a third of them developed postnatal depression compared with 3-12% in the general population.⁵ A large retrospective questionnaire study of women with one or more pregnancies found that those with eating disorders were more likely to report depression during pregnancy and postpartum.¹²

Women with an eating disorder are more likely to have an underlying affective disorder (up to 40%), and this together with the added stresses of pregnancy (body image change, weight gain, loss of control) is thought to make these women more vulnerable to postnatal depression.

Several studies have found that women with eating disorders are at increased risk of relapse of the disorder postnatally, especially those with a history of anorexia nervosa or a high frequency of binge eating at conception.^{7,13}

Women with eating disorders seem to stop breast feeding earlier than the general population. A retrospective questionnaire study surveying 454 women at three to seven months postpartum found that 11.5% self reported an eating disorder and these women were significantly less likely to be breast feeding at three months postpartum.²

Do eating disorders affect the mother-infant relationship?

Research on mothers with eating disorders suggests that they may be particularly controlling of their infants, both during play and at meal times. A controlled cross sectional study of 1 year old children of mothers with eating disorders, found that the mothers were more critical of their children and more conflict occurred during meal times than in controls. The children tended to weigh less than controls, and the children's weight correlated inversely with the mother's concern about her own body shape.¹⁴

How are women with eating disorders managed before pregnancy?

Eating disorders often go undetected by general practitioners; research suggests that only 10% of women with bulimia nervosa are identified and only half of these are referred for treatment.¹⁵ Prepregnancy counselling sessions and the first antenatal visit are good opportunities to screen for eating disorders, as women are perhaps more open to advice and help at these times. National Institute for Health and Clinical Excellence guidelines¹ recommend opportunistic screening in vulnerable groups (box 1).

Women with active eating disorders should be advised to postpone pregnancy if possible, until they have largely recovered. Treatment should be offered, with early

Box 3 Summary of the management of pregnant women with eating disorders

- Treat the eating disorder before pregnancy
- Provide general nutritional advice before pregnancy
- Educate women about nutrition and growth of the fetus
- Refer the woman to an eating disorder service as early in pregnancy as possible if she has an active eating disorder
- Alert the midwife to the presence of an eating disorder
- Joint obstetric care is needed if the woman has active anorexia nervosa or there are concerns that she is vulnerable
- Watch for postnatal depression in the postnatal period and for recurrence or deterioration of the eating disorder
- Support breast feeding
- Liaise with the health visitor to monitor infant growth and weight gain closely

SCENARIO

A 32 year old woman presented to her general practitioner with an unplanned but wanted pregnancy of nine weeks' duration. She had previously had one termination of pregnancy and had a history of obesity, bulimia nervosa, depression, and self harm in her 20s.

At presentation she had a body mass index of 27. She was anxious about the pregnancy and admitted to occasional binge eating and purging. She was otherwise well. Antenatal care was managed in the community with regular visits to her midwife and general practitioner.

In the first trimester the pregnancy was complicated by recurrent vomiting. Initially we were unsure whether this was hyperemesis gravidarum or a relapse of her eating disorder. Vomiting resolved by 14 weeks' gestation and the pregnancy progressed normally, although she needed frequent support and reassurance regarding normal weight gain during pregnancy. At 39 weeks' gestation she spontaneously delivered a baby girl who weighed 3.6 kg.

She found breast feeding difficult and developed postnatal depression at four weeks postpartum. She attended a mother and baby group, was treated with fluoxetine, and made a good recovery over several months, although she remained unhappy and preoccupied by her body shape and weight and continued to binge and vomit.

referral to a specialist eating disorders service, especially for anorexia nervosa.

Women with eating disorders who are considering pregnancy should be asked about drugs, particularly laxatives, appetite suppressants, or diuretics, which may not be safe in pregnancy.

Early education about body changes, cravings, and hyperemesis gravidarum can help the woman prepare for pregnancy.

How are women with eating disorders managed in pregnancy?

Women with an active eating disorder should be referred early to an obstetrician with an interest in high risk pregnancies and ideally to a specialist eating disorders service.

The availability of specialist eating disorders services varies considerably across the United Kingdom, and it may be more appropriate to refer in the first instance to the local psychiatric service.

ADDITIONAL EDUCATIONAL RESOURCES

Resources for professionals

Newton MS, Chizawsky LL. Treating vulnerable populations: the case of eating disorders during pregnancy. *J Psychosom Obstet Gynaecol* 2006;27:5-7

Franko DL, Spurrell EB. Detection and management of eating disorders during pregnancy. *Obstet Gynecol* 2000;95(6 Pt 1):942-6

Wagh E, Bulik CM. Offspring of women with eating disorders. *Int J Eat Disord* 1999;25:123-33

Resources for patients

Cooper PJ. *Bulimia nervosa and binge eating: a guide to recovery*. London: Robinson, 1995

Fairburn CG. *Overcoming binge eating*. New York: Guilford Press, 1995

Schmidt U, Treasure J. *Getting better bit(e) by bit(e): survival kit for sufferers of bulimia nervosa and binge eating disorders*. Hove: Erlbaum, 1993.

McCabe R, McFarlane T, Olmsted M. *The overcoming bulimia workbook*. Oakland: New Harbinger Publications, 2003

Treasure J. *Anorexia nervosa: a survival guide for families, friends and sufferers*. Hove: Psychology Press, 1997

Freeman C. *Overcoming anorexia nervosa*. London: Constable and Robinson, 2001

Beating Eating Disorders (www.edauk.com)—Information and help on all aspects of eating disorders, including anorexia nervosa, bulimia nervosa, binge eating disorder, and related eating disorders

Something Fishy (www.something-fishy.org)—Website dedicated to raising awareness and providing support to people with eating disorders

Antenatal visits in the surgery

Antenatal monitoring in primary care is appropriate for women with milder eating problems and for those who decline referral. The severity of the eating disorder should be reviewed at each visit (box 2).

Patients may need more frequent and longer appointments than normal to provide psychological support and physical monitoring. Good communication with the midwife and obstetrician, along with sensitive documentation about the presence of an eating disorder in the notes, are important.

The woman will need guidance on nutrition. The importance of eating healthily to enable the baby to grow and develop should be stressed.

Although little emphasis is currently placed on monitoring weight in uncomplicated pregnancies, weight gain is likely to be a huge concern to women with eating disorders. Weight gain should be discussed with the woman early on in the pregnancy. She should be told that the average weight gain in a normal pregnancy is 8-14 kg. It may also be helpful to explain how her abdomen will increase in size (symphysis-fundal height) as the fetus grows, and that fundal height correlates with gestational age, and to continue giving positive reinforcement as she gains weight.

How are women with eating disorders managed postpartum?

Areas of concern postpartum include the woman's psychological wellbeing, breast feeding, and relapse of the eating disorder. Offering advice and encouraging partners to be supportive can be helpful.

These women should be offered extra support with breast feeding as many have difficulties and are more likely to give up earlier.

Relapse may be identified by monitoring weight and asking about eating behaviour and self induced vomiting. It is worthwhile to ask about drugs such as laxatives, diuretics, and appetite suppressants. Some women may use these drugs in an effort to lose weight quickly without realising the potential hazard they pose to a breastfed baby. If rapid weight loss occurs, leading to concern about recurrence of anorexia nervosa, referral is indicated.

Bulimia nervosa and binge eating can sometimes be managed in the community with self help guides. High dose fluoxetine (60 mg daily) has a specific anti-bulimic effect and may help patients regain control over their eating if combined with self help therapy.¹⁶ Referral is indicated if simple interventions do not help or if the eating disorder is severe or complicated by other psychological problems.

Eating disorders are a relatively uncommon but important problem in women of reproductive age, as they can be affected by pregnancy and can adversely affect mother and baby. Box 3 provides a summary of the management of pregnant women with eating disorders. The key elements are recognising the disorder at an early stage; developing a good relationship with the woman and her partner; clearly communicating with the general practitioner, midwife, and obstetrician; and having a low threshold for asking the advice of a specialist in eating

disorders. These women often need ongoing support so continuity of care is vital.

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LESSON OF THE WEEK

Severe weight loss caused by chewing gum

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Sorbitol intake should be considered in patients with bowel problems, chronic diarrhoea, and weight loss

About 10-20% of adults and adolescents are estimated to have symptoms related to functional bowel disorders, resulting in high healthcare costs.¹ We report two cases of chronic diarrhoea and substantial weight loss in which extensive investigations had been performed previously. However, final diagnosis was only established after precise evaluation of eating habits, which showed habitual ingestion of sorbitol, a widely used sweetener in food products which has laxative properties.

Case reports

Case 1

A 21 year old woman had experienced diarrhoea and diffuse abdominal pain for eight months. She had four to 12 bowel movements with watery stools daily. She was initially suspected to have infectious colitis. However, as clinical investigation suggested no clear diagnosis and diarrhoea persisted, she was transferred to our department for further evaluation. At that time she had lost 11 kg and weighed 40.8 kg (body mass index 16.6). Laboratory analysis showed hypoalbuminaemia (albumin 30.7, normal range 33-50 g/l; total protein 64.3, 66-87 g/l). Further laboratory investigations (including antipepsin antibodies, antiparietal antibodies, endomysial antibodies, stool pancreatic elastase, and stool

cultures) were normal. The colon had a normal macroscopic appearance on colonoscopy; histology showed no specific changes (single lymphocytes and plasma cells, no granulocytes, normal mucosal architecture) and no evidence of microscopic colitis. Findings of gastroscopy with deep duodenal biopsy, abdominal ultrasound, and computed tomography were normal. Stool collection showed that the patient produced large amounts stool—up to 1900 g daily (normal <250 g). Stool electrolytes were 71 mmol/l of sodium and 34 mmol/l of potassium. Using the formula, osmotic gap = $290 - 2([Na] + [K])$ ($\times 2$ to account for anions), we found the osmotic gap to be 80 mmol/l (normal <50 mmol/l), raising the suspicion of an osmotic purgative. When we questioned the patient further, we found that she chewed large amounts of sugar-free gum, accounting for a total daily dose of 18-20 g sorbitol (one stick contains about 1.25 g sorbitol). After she started a sorbitol-free diet her diarrhoea subsided—with one formed bowel movement daily on discharge from hospital. One year later she still had normal bowel movements (one or two formed stools daily) and had gained 7 kg (body mass index 19.5).

Case 2

A 46 year old man was admitted to our hospital because of diarrhoea and a weight loss of 22 kg within the past year. Extensive diagnostic procedures had been performed previously. Blood and stool investigations (including albumin, protein, antipepsin antibodies,