

Rebecca J. Park  
Rob Senior  
Alan Stein

## The offspring of mothers with eating disorders

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Rebecca J. Park  
Developmental Psychiatry Section  
Department of Psychiatry  
University of Cambridge and Bedfordshire  
and Luton Community NHS Trust  
18b Trumpington Road  
Cambridge CB2 2AH

Rob Senior  
Leopold Muller Department of Child  
and Family Mental Health  
Royal Free and University College Medical  
School  
Royal Free Campus  
Rowland Hill Street  
London NW3 2PF

Prof. Dr. Alan Stein (✉)  
Department of Psychiatry  
University of Oxford  
Warneford Hospital  
Oxford, OX3 7JX, UK  
Tel.: +44-1865/223911  
Fax: +44-1865/226384  
E-Mail: alan.stein@psych.ox.ac.uk

■ **Abstract** There is good evidence that children of parents with psychiatric disorders are at increased risk of disturbances in their development. There is considerable research on disorders such as depression and alcohol abuse, but research on the children of parents with eating disorders has only recently emerged. This paper reviews evidence in a number of domains, including genetic factors; pregnancy; the perinatal and postpartum period; followed by infancy, and the early years, focusing on feeding and mealtimes, general parenting functions and growth. Psychopathology in the children, parental attitudes to children's weight and shape, and adolescence are then considered.

While numerous case reports and series have been published, there are very few systematic con-

trolled studies, and virtually no reports of the influence of fathers with eating disorders or the male partners of mothers with eating disorders. The available evidence suggests that children of mothers with eating disorders are themselves at increased risk of disturbance in a variety of domains. This risk depends on a range of factors, and it should be noted that difficulties in the offspring of mothers with an eating disorder are far from invariable. Finally, based on current evidence, five types of mechanisms by which eating disturbance in parents can influence child development are summarised.

■ **Key words** eating disorder – intergenerational transmission – feeding – body shape – growth

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### Introduction

The offspring of parents with psychological disturbance are at risk of disturbance themselves [27, 67, 71, 72], and there is evidence that disturbance in children may persist well after remission of parental disorder [5, 64, 71]. There has been considerable research on a variety of disorders such as depression and alcohol abuse, but studies of the offspring of parents of children with eating disorders have only recently emerged [65]. This paper aims to review current research findings in this area and from

this to suggest putative mechanisms by which eating disorders influence parenting and child development.

The influence of maternal eating disorders on the child development will be considered chronologically, beginning with genetic influences, through pregnancy and the post-partum period to infancy and early childhood (with a focus on feeding, growth and general parenting). Finally we review later childhood, parental concerns about their children's weight and shape and the possible development of psychopathology in childhood and adolescence.

## Genetic factors

Eating disorders aggregate in families [86], with large and systematic family studies reporting a 7- to 12-fold increase in the prevalence of anorexia and bulimia in first-degree relatives of individuals with eating disorder than in relatives of controls [58, 85]. Such studies provide strong support for familial transmission of both types of eating disorder which extends to milder eating disorder phenotypes [85].

Early twin studies [39, 40] found that rates of AN were much higher in MZ than DZ twins (56% versus 5%), suggesting that up to 80% of the variance in liability may be accounted for by genetic factors. In contrast, analyses on a subset of twins with BN found negligible genetic involvement [90]. However, twin studies suffer from several possible sources of error [21] and these early reports must be interpreted with particular caution, because the analyses were conducted on small, overlapping samples, recruited clinically or by advertisement [11].

A larger, population-based twin study of AN and major depression, using a sample of 2163 female twins, found that 58% of the variance in AN was due to additive genetic factors, and that AN and major depression share some genetic factors that influence the risk for both disorders [98]. In a twin study of 672 female 17 year-old twins, of whom 26 with a broadly defined AN syndrome were identified, genetic and non-shared environmental factors accounted for 74% and 26% of the variance in AN respectively [53]. However all these studies are limited by small numbers of affected twins, and confirmation of the nature and extent of genetic influences will require alternative strategies such as pooling samples, or larger sample sizes [11]. Studies of BN in two different epidemiological twin populations with greater power [10, 50, 97] report that 83% (Virginian) and 59% (Australian) of the variability was due to genetic effects. While these latter studies provide evidence that a reasonable proportion of the familiarity in BN is due to additive genetic effects [11], the exact nature of genetic and environmental factors remains to be determined.

Other studies have found that 32–72% of the variance in body dissatisfaction, eating and weight concerns and behaviours such as binge eating and vomiting can be accounted for by genetic factors [52, 53, 70, 95, 96]. There is a suggestion of developmental differences in genetic effects on eating and weight concerns [51], which one study found to be greater in postpubertal than prepubertal twins [51], even of the same age [52]. While again sample sizes have been small, these results suggest potential pubertal activation of heritability of eating abnormalities, which may be mediated by ovarian hormones.

Eating disorders may share genetic transmission

with other psychiatric disorders, in particular major depression [98, 100] and obsessive-compulsive personality disorder [58]. Personality traits associated with eating disorders may also show some heritability [12, 88]. Body weight is highly heritable [87] and obesity is a risk factor for BN [24]. However, existing research suggests genetic effects operating in eating disorders that are independent of those influencing these comorbid psychiatric disorders, personality traits or body mass [52].

Candidate gene studies have investigated genes encoding proteins implicated in the regulation of feeding, weight and energy expenditure. One candidate for investigation is the serotonergic (5HT) neurotransmitter system [28], which contributes to the modulation of appetite, feelings, mood and impulse control. Several lines of evidence suggest that 5HT systems may play a role in eating disorders: Serotonin dynamics may be disturbed in women with eating disorders, even on recovery [46]. Serotonin-reuptake inhibiting antidepressants, in particular Fluoxetine, are effective in the treatment for BN, independent of effects on depression [44] and Fluoxetine reduces relapse in weight-restored AN [48]. Dieting lowers the plasma concentrations of the 5HT precursor L-tryptophan, so impairing brain 5-HT neurotransmission [17]. In women recovered from BN, L-tryptophan depletion caused a temporary return of depressive symptoms, concerns about weight and shape and fear of loss of control of eating [45, 74].

An association between a polymorphism in the promoter region of the 5HT-2A gene and AN [16] has been replicated in some samples [19, 76] but not others [30, 34–36]. Although a meta-analysis [106] was unable to clarify whether or not there is a significant association with AN, it is possible that this 5HT2A polymorphism is associated specifically with the restricting subtype of anorexia nervosa [15]. No associations have been found with other genes related to 5HT regulation and either AN or BN [52].

Unreplicated reports suggest associations between AN and polymorphisms in other genes involved in appetite regulation [13, 68, 94]. A preliminary report of an association between the oestrogen beta-receptor gene and AN is particularly interesting in light of possible developmental differences in the genetic contribution to disturbed eating attitudes and behaviours pre- and post-puberty [51, 52].

Finally, linkage studies, which scan the genome in affected pairs of relatives [47] have found preliminary evidence of a genetic susceptibility locus for AN [52] but no linkage using a broader phenotype of eating disorder. These genetic studies also indicate that a large proportion of the variance is not accounted for by genetic factors, implying that environmental contributions are very important. Furthermore, gene-environment interactions are as yet largely unexplored.

## Pregnancy

Women with eating disorders have an increased rate of fertility problems. Those with AN have amenorrhoea and are often sexually inactive leading to reduced fertility [8]. Those with BN are often of normal weight and are more likely to be in sexual relationships [1] but high rates of oligomenorrhoea and unplanned pregnancies have been reported [63], possibly because menstrual irregularities were (incorrectly) believed to imply infertility.

For many women, pregnancy is the first time they experience major body changes since early adolescence. Davies and Wardle [18] found that in women attending antenatal clinics the pregnancy role conferred respectability to weight gain that would otherwise be unacceptable. Women were more accepting of their larger body size and made fewer attempts to control it. Studies on non-clinical [22] and clinical overeating samples [54, 56] report reduced restraint and concern about weight gain during pregnancy, and fewer episodes of overeating. However in clinical samples of women with eating disorders, many expressed negative feelings about the weight gain and changes in body shape during pregnancy [23]; fear of losing control over weight gain was the single most prevalent anxiety during pregnancy [55] and most mothers feared that their unborn child might be damaged physically owing to poor nutrition.

In AN, low pre-pregnancy weight and low weight gain during pregnancy have been associated with low infant birth weight [2, 101]. Case reports document prematurity, perinatal mortality [8], obstetric complications, lower Apgar Scores in newborns [83] and congenital abnormalities [92]. For women suffering from BN there are reports of excessive weight gain and further risk of complications such as pre-eclampsia and hypertension [23], miscarriages [61], intra-uterine growth impairment [91, 101], obstetric complications and congenital malformation [54]. Some researchers have not confirmed these increased risks [56, 82], so reports of increased perinatal complications in mothers with eating disorders and their infants need to be viewed with caution until adequate epidemiological studies are undertaken.

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## Breastfeeding and the postpartum period

Foster and colleagues [25] found that women's attitudes towards their bodies predicted breastfeeding intention. Those with high body shape and weight concerns were less likely to breastfeed their infants and this was further associated with low foetal attachment status during pregnancy. Barnes and colleagues [6], using data from a large community sample study of pregnancy and childbirth in the UK, also found that pregnant women with

higher concerns about body shape and weight were less likely to express an intention to breast feed.

Several studies indicate that the postpartum period represents a vulnerable time for the onset and exacerbation of eating disorder pathology [102] in both community [78] and clinical samples [54, 55, 63].

These findings raise the question of why the birth of a baby is associated with increased concerns about weight and shape for many mothers. Women in a prospective community survey were found to have unrealistic expectations about the time it would take to lose the excess weight of pregnancy and failure to achieve this worsened their mood and self-esteem [42]. Over 40% of all new mothers in a longitudinal follow-up study [99] were dissatisfied with their weight 6 months postpartum. In a clinical sample, 80% of women attributed the postpartum relapse in symptoms to feeling fat and wanting to lose weight [55]. Hence, it seems that the residual change in body weight and shape is partly responsible for the postpartum increase in body shape and weight concern [77].

Women also experience major changes in role and relationships as they make the transition to motherhood. Disruptions to routine, sleep and mealtimes may make it difficult to establish regular eating patterns, while constantly attending to their infant's feeds may in itself trigger loss of control and binges in some mothers [20]. Conversely, having a baby can relieve eating disorder symptomatology [54] with improvement maintained through lactation and weaning. Some women reported a change in the meaning of life since having a baby, i. e. a reason for remaining healthy [55], and one study found up to a third of mothers with bulimia nervosa experienced pregnancy as 'curative' [63].

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## Infancy and early childhood

### ■ Feeding and mealtimes

Feeding a baby is one of the critical early tasks of parenting, takes up a considerable part of the day, and is one of the most important means of communication between parent and child. It is a time when the infant explores developing capacities to experiment with self-gratification, autonomy and new foods. As an infant develops, the feeding process evolves with the child attempting to assert more independence. Mealtimes can be a testing time for many parents, and the food-focused setting can make it a particularly difficult experience for women with eating disorders.

In a prospective case-control study of the feeding behaviours in women with a past or present eating disorder and their children [3], daughters of mothers with eating disorders had a significantly higher rate of suckling at two and four weeks of age, and weaned from bot-

tle-feeding later and with more difficulty than controls. Mothers with eating disorders reportedly fed their children on a less regular schedule for non-nutritive purposes, e.g. to reward or calm offspring. This has been confirmed in clinical studies, with some mothers reporting giving food for comfort or as a means of expressing love [54].

In an observational case-control study of one-year-old children of primigravid mothers with eating disorders [81], index mothers were significantly more likely than controls to express negative comments towards the infant during mealtimes, but not during play, suggesting some specific influence of the eating disorder on parenting during mealtimes. Mothers with eating disorders were more intrusive than controls during both mealtimes and play. This involved cutting across and/or disrupting what the infant was doing as well as missing the infant's cues. There was more conflict at mealtimes between mothers with eating disorders and their children than for the control group. Children of mothers with eating disorder weighed less than controls, and this was related to the amount of mealtime conflict, and will be explored further in the 'growth' section.

Smaller clinical case studies [54] and case-control studies [101] also report difficulties in feeding and an atmosphere of tension at mealtimes. Therapists working with patients with eating disorders have observed a tense, cool atmosphere at mealtimes between mother and child, and feeding problems [26]. Other research has found that many parents with eating disorders tend not to eat in front of their children [93, 104].

Case studies report that some mothers with BN have difficulty feeding their children, and often do not keep food in the house, while those with AN are more likely to underfeed their children [20] in a variety of ways ranging from the dilution of bottle feeds in early childhood, to reducing the amount of food available in the home, confining food to mealtimes, forbidding sweets, and discouraging children's requests for second helpings in later childhood [69]. Reassuringly, a small case series of mothers with clinical current or past AN or BN [101] found no gross deficiencies in the diets of their infants (aged 1–4 years).

Studies exploring the implications of parental controlling behaviour and conflict at mealtimes have found that children of mothers who are more controlling of their child's food intake show less ability to self-regulate energy intake [43]. In an observational case-control study of mother-child interaction in infants with food refusal or extreme food selectivity [14], infants' behaviours resulted in inadequate food intake and growth failure, and was associated with intense parental involvement, anxiety and frustration. The authors judged the food refusal to be caused by an underlying conflict between autonomy and dependency, which they termed "infantile anorexia". Mothers of the infants with feeding

disorders showed less dyadic reciprocity, less maternal contingency, more dyadic conflict and more struggle for control. They were more inconsistent and expressed more negative affect, as did their children. Although the authors describe the feeding difficulties associated with maternal over-control they did not specifically assess mothers' eating psychopathology. Furthermore, the study was cross sectional, thereby limiting the extent to which causal inferences can be drawn.

The strength and specificity of the association between maternal eating disorder psychopathology and child outcome identified in Stein and colleagues' [81] observational study was confirmed using a different strategy, which used the *child's* disturbance as the starting point. The mothers of a consecutive series of young children referred to child psychiatric clinics with ICD-10 feeding disorders were compared to a group of children with behaviour disorders and a large unselected control group [80]. Compared to the other two groups, only the children with feeding disorders had mothers with significantly disturbed eating habits and attitudes, a finding confirmed in a separate community sample [103]. Although a causal relationship cannot be inferred from these cross-sectional studies, the specific link between feeding disturbances in children and disturbed maternal eating habits and attitudes suggests that maternal eating psychopathology may play a significant role in the development of children's feeding disorders.

Evidence suggests that these different experiences of feeding and mealtime may influence the subsequent development of feeding and early eating difficulties. A large prospective community study [84] found that eating disturbance in children up to the age of five could be predicted from the first month of the infant's life, and was related to both child and maternal factors. Several maternal eating disorder symptoms predicted child eating behaviours in the first five years: Maternal disinhibition, hunger, body dissatisfaction, bulimic symptoms and maternal body mass index predicted the emergence of secretive eating in children, while maternal restraint and drive for thinness and infant body mass index predicted the emergence of overeating.

Several studies suggest that early childhood feeding problems may be associated with the development of eating disorders in later childhood, adolescence and early adulthood. In a large prospective study [59], picky eating and digestive problems in early childhood were found to be risk factors for the later development of anorexic symptoms in later childhood and adolescence, while early childhood pica and mealtime conflict were risk factors for the development of bulimic symptoms, yet picky eating appeared to be protective. Jacobs and Isaacs [41] found that mothers of children with pre-pubertal anorexia nervosa reported more pre-morbid feeding problems than did mothers of post-pubertal

children with anorexia nervosa or mothers of pre-pubertal neurotic children. The findings of these studies await replication.

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## Growth

Stein and colleagues [81] found that at 12 months of age, the infants of mothers with eating disorders weighed less than controls. The most significant predictor of weight for age at 12 months was conflict between mothers and infants observed at mealtimes; when mother-infant interaction was relatively smooth and harmonious the infants were more likely to be heavier, but when it was more conflictual the infants were more likely to be lighter. Compared to infants of mothers with postnatal depression, the infants of mothers with eating disorders were smaller both in terms of weight for length and weight for age than the infants of mothers with postnatal depression, who did not differ from healthy controls on these measures of growth [79]. This finding suggests that the influence on growth in the postnatal year is specific to the infants of mothers with eating disorders.

In a 'bottom up' study, McCann and colleagues [60] found that mothers of children with non-organic failure to thrive scored significantly higher than control mothers on dietary restraint subscales (indicating a wish to restrict food intake to reduce their shape and weight) but did not differ from controls in terms of attitude to body shape and weight. Interestingly, despite their child's low weight, 50% of the mothers of the index children were restricting their child's intake of 'sweet' food and a further 30% were restricting food they thought was 'fattening' or 'unhealthy'.

A large scale follow-up study [8] of patients with AN found that 50/140 women had children, of whom 28% reported that their children had had broadly defined 'eating and weight problems' in the first year of life and 17% recalled their children had 'failure to thrive' in the first year. However, no comparison rates were provided. Case studies of mothers with AN attending eating disorder units report that a third or more of their children had abnormally low weight/growth, yet mothers show low levels of concern about their children's weight and rarely expressed concerns about giving their children too little food despite their children being underweight [37, 69, 89, 93]. These findings suggest that these mothers were underfeeding their children, leading to shortness of stature. Some of the mothers adopted extreme methods to ration their children's food intake behaviour, which seemed to stem from maternal fears that their children might become fat. One case series [37] proposed there was a gender influence, with girls of mothers with eating disorders tending to be at greater risk of being underweight. However sample sizes were small, and mothers had been referred to tertiary centres

and hence may represent only extreme samples of mothers with anorexia nervosa.

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## Parental concerns regarding children's weight and shape

Stein et al. [79] examined whether parents with eating disorders misjudge their children's size or want them to be thin and thus limit their food intake. Compared with controls and mothers with postnatal depression, mothers with eating disorders did not prefer thinner babies nor did they misperceive their one-year old children's size. In fact, these women were highly sensitive to their children's shape and were more accurate at judging their children's size. Thus, for the infants of women with eating disorder, poor growth does not seem to be a consequence of the mother's psychopathology affecting her perceptions regarding her infant's body shape. One prospective study found that mothers with eating disorders showed higher concern about their daughter's weight than mothers with no eating disorder, from as early as two years of age [3], but no evidence that the daughters of women with eating disorders were heavier than the daughters of mothers without. Case series report that mothers with eating disorders described their children as "podgy" or too greedy with an unnatural interest in cooking and watching food adverts on television [89]. Some mothers with anorexia nervosa reported fears that their children might become fat [69], and in some cases mothers with bulimia nervosa have acknowledged that they tried to slim their babies down, despite clinical records showing the babies to have been growing normally [54].

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## General parenting function

Exploring whether eating disorder psychopathology influences more general parenting functioning and child behaviour in domains outside of growth and feeding, Stein and colleagues [81] found that mothers with eating disorders were more verbally controlling and intrusive and less facilitating with their one year old infants during play as well as during mealtimes. Index children showed evidence of lowered emotional tone, being less happy during both mealtimes and play. Similarly, Agras et al. [3] found that despite there being no difference in parenting, the children of mothers with eating disorders showed more negative affect such as sadness, crying and irritability.

In smaller clinical case studies, Fahy and Treasure [20] report that women who were single managed their child during binges by confining the child to their room, while Lacey and Smith [54] report that 35% of mothers with BN said they had ignored their child because they

were so preoccupied with vomiting. Woodside and Shekter-Wolfson [104] found that patients with eating disorders experienced serious parenting difficulties involving abandonment of their children. Subsequently, even small children felt themselves responsible for their mother's symptoms, and older children often took over the care-taking role within the relationship [105]. In a large case series, Franzen and Gerlinghoff [26] established three patterns of mother-child relationship in their patients with eating disorders: 1) mother-child relationships that were too close or overprotective and enmeshed; 2) reversal of roles where the child was forced into a 'caretaker' role towards the mother and the needs of child were therefore neglected; and 3) mothers showing a frankly distant and emotionally controlled relationship to the child.

### **Later childhood and adolescence and the development of psychopathology**

In the early years of life, formal psychopathology is rare and not usually the focus of the study. Brinch et al. [8] assessed the mental state of 75 children of mothers with eating disorder and found that 2% of children were classified as "mentally ill", receiving out-patient care or periodic in-patient care, and that mothers reported that 7% of the children had "marked psychic problems". Mothers with clinical eating disorders often report concerns about their offspring developing problems similar to their own [20,26]. Indeed, case studies report that even at an early age children imitate their mother's eating disorder behaviours, e. g. retch when eating, refuse or 'wolf down' food, or purge in similar ways to their mothers [26, 89]. At a later age, children have been found to model their mothers' attitudes around eating, particularly the daughters of mothers with AN, who wished to be as thin as their mothers. Case series report psychological disturbance in domains other than eating and growth, including: enuresis, speech and language disorders and emotional problems [26]; aggressive behaviour and elective mutism [89]; obsessive-compulsive disorder, emotional and neurotic disorders [37]. Much of this evidence has been based on maternal reports, usually using small clinical samples and no controls, so should be viewed with particular caution. Not all studies made formal assessments of the children's psychopathology, and there were often high levels of parental separation, family discord and other social problems, making it difficult to ascertain whether the children's problems were due to the maternal eating disorder psychopathology or other factors.

Until recently, younger children have been thought to be free of weight and shape concerns. However, Hill and colleagues [31] study of nine-year old school children found that the desire for thinness and motivation to diet was evident in some children of all weights and this pat-

tern was more apparent for girls than boys. High levels of dietary restraint were found in a significant proportion of 9–10 year old girls [32] and there was a significant relationship between dieting concerns of these girls and their mothers [33].

Some authors have attempted to address the processes by which these influences might be mediated in the clinical context. In a series of eight clinical cases of adolescents and mothers with AN, Griffiths and colleagues [29] describe their relationship as 'anorexie a deux'; a pathological process similar to the pathogenesis of folie a deux where a submissive person shares a belief held by a dominant person in a closely-knit, mutually beneficial relationship. Such strict and rigid beliefs in the mothers provide some support for Bruch's [9] theories that the child is invited to submit and fit into the eating disorder pattern of the parent. While such theories are thought provoking, making generalisations from a small clinical sample again requires caution.

Smolak and colleagues [75] found that direct comments about children's weight appeared to be the most consistent parental correlate of child weight and shape concerns. Maternal comments were a significant predictor of children's dieting, whilst body self esteem and fat concerns were a more powerful influence for daughters than sons. Interestingly, paternal belief in dieting was associated with higher body self esteem and less dieting in children. Keel and colleagues [49] found similar results in families of adolescents in a community sample, but found no association between parental dieting and daughter's dieting. They suggest that at this developmental stage adolescent girls may be exposed to so many other social pressures to diet, for example from magazines, television and peers, that the contribution of parental modelling may be less important.

In a study using self-reports, mothers whose daughters' eating was disordered had more eating problems themselves [66]. These mothers thought that their daughters should lose more weight than did the mothers of girls who were not eating disordered, saw their daughters as less attractive than the girls judged themselves, and encouraged dieting and exercise more than controls [62]. However these findings have not been confirmed in similar prospective studies of teenagers [4, 73], which attribute the emergence of eating problems in adolescent girls more to the influence of fat gain in puberty and socio-cultural influences than their mother's attitudes and behaviours.

In a large prospective study of girls in early adolescence [4], girls who felt most negatively about their bodies were more likely to develop eating problems two years later. Those with eating problems reported less cohesion, organisation and expressiveness in their families, but in contrast to the findings of Pike and Rodin [66] there was little evidence of increased levels of parental weight and shape concerns [4].

Levine and colleagues [57] propose a 'cumulative stressor model' that emphasises the contribution of normative developmental factors to the individual differences in severity of problems. In a cross-sectional study of 382 middle school girls, they propose that the normative events of pubertal weight/fat gain, the onset of dating and the intensification of academic demands, interact with the socio-cultural pressures to attain a slender body ideal in the triggering of either non-pathological dieting or eating disturbances in adolescence. Peer and mother's investment in slenderness were significant correlates of non-pathological dieting, suggesting these influences affected a girl's efforts to lose weight. However, this study could not identify how these social influences were being transmitted. The threshold for eating disturbance decreased if there was synchronous occurrence of puberty, dating and academic threat.

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## Mechanisms

Eating disorders may disturb parenting and influence child development in a number of ways. Some of the influences are specific to eating disorders, involving parental symptoms impinging directly on the child and some are more indirect. In order to mitigate intergenerational transmission of eating disorder, it is important to identify the mechanisms which mediate any influence parental eating disorders have on child development. Five broad categories of mechanisms underlying transmission of eating disturbance from parent to child have emerged from the evidence so far reviewed:

First, genetic influences have been shown to play a role in this area, but the research remains inconclusive regarding the extent and nature of genetic influences and the precise elements that are being inherited. Moreover, gene-environment interactions are likely to be of importance, but these remain to be determined.

Second, parental eating psychopathology may impinge directly on the child, for example, some parents may wish their children to be thinner and attempt to influence this by withholding food for their children as they do for themselves. This seems most evident in mothers with anorexia nervosa as illustrated by Russell et al. [69].

Third, eating disorder psychopathology may disrupt general parenting functioning. For example, preoccupa-

tion with food, body shape and weight may impair attention and thereby interfere with sensitive responsiveness to the child. Mothers may get into conflict with their infants over mealtimes, which may influence the child's food intake and their perception of the enjoyability of food and mealtimes and ultimately their development.

The fourth mechanism involves learnt behaviour. Parents may act as poor role models for children in relation to eating behaviours and attitudes either through dieting or their own eating behaviours.

Fifth, parental eating disorders may be associated with discordant marital and family relationships, which have been clearly shown to adversely influence child development.

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## Conclusions

This review is limited by the relative lack of substantial controlled studies. There are many interesting case reports, which by definition require cautious interpretation. Nonetheless, a body of evidence suggests that maternal eating disorder increases the risk of parenting difficulties and adverse developmental outcomes for children. Given that Berg and Hodes [7] found that health care professionals working with mothers with eating disorders had little knowledge of these risks to child development, this may be of substantial clinical importance. The influence of maternal eating disorders seems to be related specifically to growth, feeding and body shape and weight concerns although there does appear to be some influence on general parenting. Importantly, a significant proportion of children in community samples are unaffected by their mothers' eating disorder, so it should not be assumed that all children are invariably adversely affected. Potential mechanisms by which such outcomes are mediated have been summarised. It is likely that early intervention may be important in order to interrupt the intergenerational transmission of difficulties.

■ **Acknowledgments** We are grateful to the Wellcome Trust (Grant number 050892) for their support and to Colette McNeil and Bernice Slagel for their help in the preparation of this manuscript. We are also grateful to our colleagues Helen Woolley, Sandra Cooper, Priti Patel, Becky Wheatcroft, Fiona Challacombe, Rosie Nicol-Harper and Joanna Lee, Pia Feldman, Leezah Hertzmann and Mary Lovel for their input.

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