

## Adding weight to preconception care

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*Excessive maternal weight adversely affects all aspects of pregnancy and childbirth*

Weight and weight gain in pregnancy used to be an obstetric obsession, if not an oppression. Belief that weight restriction could prevent pre-eclampsia made scales the most feared instruments in antenatal clinics,<sup>1</sup> causing some women to resort to fasting before their next appointment. Nearly 20 years ago, the routine use of scales started to diminish, in the same way as it had begun — without good evidence.<sup>1</sup> Attention shifted to the weight of the offspring, and achieving birthweights within the 3000–4000 g bracket, which are associated with better perinatal outcomes.<sup>2</sup> Evaluations of the resulting guidelines for weight gain in pregnancy<sup>2</sup> (recently revised)<sup>3</sup> also centred on birthweight, with less attention to more substantive perinatal and infant outcomes.<sup>4</sup> The evaluations also showed that only a minority of women achieve an ideal weight gain;<sup>4</sup> many gain more than is recommended, and excessive gain is most frequent in those who are overweight already.<sup>4</sup>

In the meantime, the childbearing population has changed considerably: growing in age, growing in weight, and growing in the expectation that none of this matters too much. In this issue of the Journal, two articles address different aspects of weight and pregnancy. Callaway and colleagues (page 425) surveyed women about the preconception weight management advice they received, their self-perception of weight before pregnancy and their success with weight reduction.<sup>5</sup> Jeffries and colleagues (page 429) conducted a randomised controlled trial of an intervention to limit maternal weight gain during pregnancy.<sup>6</sup> Callaway et al found that many women enter pregnancy blissfully unaware of their excessive adipose tissue,<sup>5</sup> and presumably also of its effects on pregnancy. The study by Jeffries et al revealed that regular self-measurement of weight was effective in reducing pregnancy weight gain only in

women who were overweight, but not obese, at the start of pregnancy.<sup>6</sup>

While it is disappointing that Callaway et al found that pre-pregnancy medical advice to lose weight was rare,<sup>5</sup> one wonders how often doctors are rebuked for not acknowledging that “big is beautiful”. Alternatively, they may be constrained in their advice by their own body mass, or by simply not knowing how to translate weight reduction advice into meaningful action for their patients. Despite being innovative, the medical profession is often not an avant-garde movement known for tackling issues that do not fit within the routine framework of history, examination, diagnosis and treatment. It was only after obstetricians turned away from maternal weight control that fertility specialists turned to it,<sup>7</sup> although their concern was more with achieving conception than with pregnancy and infant outcomes.

Undoubtedly, the obesity pandemic has hit women of reproductive age particularly hard.<sup>8</sup> The critical mass needed to initiate the menarche now comes earlier, but anything thereafter — from conception to pregnancy, childbirth, and perinatal outcome — up to the health of the next generation, is a different matter.<sup>9</sup> An extensive body of literature, already overweight itself, testifies to the deleterious effects of excessive weight on conception rates (natural and assisted), pregnancy complications (mostly, gestational diabetes, pre-eclampsia and operative delivery, but also others), and fetal wellbeing (with increased rates of miscarriage, congenital malformations, stillbirth and perinatal death).

Yet, the issue is not only the increased frequency of so wide a range of problems. It is also the weight-dependent increase in the challenges of diagnosis and management, not to mention the inherent complications of treatments, all of which add further fuel

to the fire. Increased risks of fetal malformations are accompanied by greater difficulties of visualisation on ultrasound. Increased rates of late fetal death are compounded by reduced perception of fetal movements and the inadequacy of clinical examinations, including ultrasound and cardiotocography, in oversized individuals. Increased caesarean section rates are accompanied by greater challenges in gaining access to airways and the epidural space; increased operating times; greater blood loss; and a range of postoperative complications, including excessive bleeding, thromboembolism, impaired wound healing, wound dehiscence, urinary tract infection, and longer time to recovery. None of these ameliorate what is already common in obese mothers postpartum: failure to initiate and sustain breastfeeding, and postpartum depression, which have their own effects on giving infants who have survived earlier assaults a healthy start in life.

Motivation on the part of pregnant women to protect their baby from unhealthy lifestyles and not to transmit these across generations is rarely lacking, but this is often an underutilised window of opportunity. It suffers from two main problems. First, and contrary to the wealth of evidence on the effects of obesity on pregnancy from its inception to its aftermath, there is remarkably little evidence on what can be done about it, as Jeffries et al noted.<sup>6</sup> Second, the 9 months of pregnancy is too short a time for much to be achieved, especially for those at greatest need.

Weight loss during pregnancy is not recommended. Recycling adipose tissue provides energy but few building blocks for fetal development, while the resulting ketoacidosis may harm the fetus. Re-introducing the terror of the scales (although worth considering for women who are unaware of their weight<sup>5</sup>) is probably not a solution. First, its effectiveness is limited, as Jeffries et al found.<sup>6</sup> Second, although it reduces rates of fetal macrosomia and postpartum weight retention,<sup>4</sup> it is too little too late for almost anything else. Third, it has the potential of adding insult to injury, victimising those who need ongoing support and assistance rather than repetitive lectures.

Attention certainly needs to shift to preconception care, but further than preconception and fertility clinics.<sup>5,7</sup> Too few attend them,<sup>5</sup> half of all pregnancies are unplanned;<sup>5</sup> and, when planned, there is usually too little time to produce substantial change. Contraception care may be better if it includes the question "what about afterwards?" and anticipatory guidance on the importance of

weight, folic acid supplementation and planned pregnancy before instead of after stopping contraception.

Like other pandemics that have hit maternity care in the past few decades, such as advanced maternal age and caesarean section rates, the obesity pandemic has roots that are deeper and longer than the 9 months of pregnancy.<sup>7,10</sup> Digging them up will require more innovative strategies than we have witnessed thus far.

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