Obesity is no longer a problem exclusively affecting the western world. Although developing countries across the Caribbean, Middle East, and Pacific Islands have all seen a rapid increase of obesity rates. Worldwide, 11.5% of adults were obese in 2010 with nearly a tripling to 30% (2.1 billion) in 2020. Since women are an integral part of this overflowing wave, the impact of obesity on health and wellbeing of mothers and their offspring is profound. Consequently, maternal obesity (Fig. 1) challenges modern perinatology [1].

SCOPE OF THE PROBLEM

Obesity is no new challenge; however, the extent of the problem today is unprecedented, and its sequelae for women’s health are undeniable. Poor weight control contributes to more deaths than smoking, alcohol and sedentary lifestyle combined, leading to 12% of all deaths (UK). Consequently, obesity also challenges modern obstetrics. Beside the medical problems, the socioeconomic impact of maternal obesity is to be faced by society as a whole. In the UK, an additional financial burden afforded by obesity on healthcare resources was £16 billion per year in 2007 with a predicted rise to £50 billion by the year 2050.

OVERCOMING OBSTETRICAL OBSTACLES

Etiology and consequences of obesity in the context of maternity are multifactorial. Since obesity is associated with adverse maternal and fetal outcome, obese mothers require a risk-adapted pregnancy management. As most of the issues are not trivial to study, quantifying is one key to tackling pending questions. Reliable scientific evidence to guide obstetricians is sustainably needed. To achieve the goals set, concerted social and medical efforts need broad collaboration to ameliorate the effects of maternal obesity on future generations.

OBESITY A DISEASE?

In 2013, the American Medical Association supported by several US national medical specialty organizations published Resolution 420 (A-13) recognizing obesity as a disease state with multiple pathophysiological aspects requiring a range of interventions to improve its prevention and treatment [2]. The aim of this decision was to encourage a broader spectrum of healthcare benefits insurance coverage for the prevention and treatment of obesity in North America. In the meantime, this claim has become a worldwide task.
of adipose tissue [7]. Øhman et al. extend this observation by finding that diet and exercise therapies improve metabolic fitness (body composition) in obese mothers, even during lactation [8]. Meta-analytic results on the effectiveness of lifestyle intervention and bariatric surgery to reduce the risks of gestational hypertension in obese women emphasize the need to modulate weight in obese women already preconceptionally [9].

MEN

Talking about human reproduction the focus of prophylactic preconception intervention strategies needs to be revised with a shift from women to couples. Observational evidence suggests that metabolic changes due to overweight/obesity affect epigenetic markers in oocytes and sperms alike (gamete quality) and may influence epigenetic programming and reprogramming processes during embryogenesis. Therefore Hieronimus et al. delineate that fathers contribute to the health trajectory of their progeny and this needs to be a part of considerations before all-female body weight interventions are implemented. Protection of future generation’s undesirable metabolic programming therefore warrants scientific awareness on interactions between maternal and paternal lifestyle and health status [10].

PERSPECTIVE DEBATE

With this themed issue, we aim to highlight diversified research that spans fertility problems, antenatal/intrapartum care and postnatal health issues as well as lifestyle factors and transgenerational consequences in relation to obesity in pregnancy. Education, support of healthy choices, and targeted promotion of lifestyle interventions are urgently warranted for the benefit of this and future generations.

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ADDITIONAL INFORMATION

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