

Conceptual basis for prescriptive growth standards from conception to early childhood: present and future

Uauy, R., Casanello, P., Krause, B., Kuzanovic, J. P., Corvalán, C., & International Fetal and Newborn Growth Consortium for the 21st Century (INTERGROWTH^{21st}). (2013). Conceptual basis for prescriptive growth standards from conception to early childhood: present and future. *BJOG: An International Journal of Obstetrics & Gynaecology*, 120, 3-8. <10.1111/1471-0528.12057> Accessed 09 Feb 2021.

Abstract

Background: Healthy growth in utero and after birth is fundamental for lifelong health and wellbeing. The World Health Organization (WHO) recently published standards for healthy growth from birth to 6 years of age; analogous standards for healthy fetal growth are not currently available. Current fetal growth charts in use are not true standards, since they are based on cross-sectional measurements of attained size under conditions that do not accurately reflect normal growth. In most cases, the pregnant populations and environments studied are far from ideal; thus the data are unlikely to reflect optimal fetal growth. A true standard should reflect how fetuses and newborns 'should' grow under ideal environmental conditions. **Objective:** The development of prescriptive intrauterine and newborn growth standards derived from the INTERGROWTH^{21st} Project provides the data that will allow us for the first time to establish what is 'normal' fetal growth. **Methods:** The INTERGROWTH^{21st} study centres provide the data set obtained under pre-established standardised criteria, and details of the methods used are also published. **Design:** Multicentre study with sites in all major geographical regions of the world using a standard evaluation protocol. **Results:** These standards will assess risk of abnormal size at birth and serve to evaluate potentially effective interventions to promote optimal growth beyond securing survival. **Discussion:** The new normative standards have the potential to impact perinatal and neonatal survival and beyond, particularly in developing countries where fetal growth restriction is most prevalent. They will help us identify intrauterine growth restriction at earlier stages of development, when preventive or corrective strategies might be more effective than at present. **Conclusion:** These growth standards will take us one step closer to effective action in preventing and potentially reversing abnormal intrauterine growth. Achieving 'optimal' fetal growth requires that we act not only during pregnancy but that we optimize the maternal uterine environment from the time before conception, through embryonic development until fetal growth is complete. The remaining challenge is how 'early' will we be able to act, now that we can better monitor fetal growth..