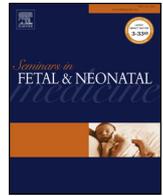


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# Seminars in Fetal and Neonatal Medicine

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## Introduction

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### 1. Introduction

Maternal substance use is not a new phenomenon. However, in recent years, the number of mothers using addictive drugs, especially opioids, has increased exponentially, particularly in Western countries. These drugs are easier to obtain and are more potent than ever before. Unfortunately, any substance taken by a mother will traverse the placental barrier to affect the developing fetus. The consequences of these drugs at critical stages of fetal development as well as the associated risks inherent in drug-use behaviors are concerning and uncertain.

In recent years, there has been an explosion of research and policies regarding perinatal substance exposure, particularly on Neonatal Abstinence Syndrome or NAS, a withdrawal syndrome first described in infants affected by maternal narcotics. NAS is dangerous and even fatal if unrecognized and untreated. However, there is now increasing evidence that the consequences of maternal substance has ramifications beyond NAS.

This special issue describes the far-reaching consequences of maternal substance use and includes appraisals of current assessment and screening procedures, models of care and impact of pharmacotherapies and alternative methods of treatment for the affected infant. The

chapters illustrates the need to approach this problem comprehensively and to consider outcomes beyond the neonatal period, the problems caused by non-opioid drugs including cannabis, stimulants and the rapidly escalating dilemma of synthetic, legal and increasingly potent substances that are particularly prevalent in the Internet age. It also addresses the ethical conundrum and pros and cons of drug testing, and the knowledge gaps involving NAS pharmacotherapy and long-term, including adult and intergenerational outcomes of maternal substance use.

This edition highlights the omnipresent nature of maternal substance use. The effects of substance use and dependency do not stop with birth or with resolution of neonatal withdrawal symptoms. Substance-use can lead to intergeneration consequences through epigenetic changes and adult survivors of prenatal substance exposure have unique problems that require long-term intervention and support to prevent future disadvantage.

Practice points are suggested but importantly, research and knowledge gaps are highlighted and hopefully, in the near future, the adverse consequences of maternal substance use and dependency can be minimised and hopefully, eradicated, for thousands, if not millions of children, around the world.

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