

# Gaps in knowledge of pharmacokinetic changes in pregnancy and their clinical consequences

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There is a substantial gap in knowledge of pharmacokinetic changes in pregnancy and their clinical consequences, according to a study published by Shinya Ito and colleagues from the Hospital for Sick Children, Toronto, Canada, in *PLOS Medicine*.

Pregnant women take a variety of medications, including prescription and over-the-counter medications, with more than 90% of women in some areas reporting use of at least one medication during pregnancy. However, information may not be available on whether or how to adjust dosing to compensate for the physiologic changes that occur during pregnancy.

The researchers conducted a systematic review of the biomedical literature, and identified 198 studies, involving 121 different medications, that measured changes in pharmacokinetics (absorption, distribution, metabolism, and excretion of drugs) during pregnancy and/or the resultant clinical impact of these changes. Across the different drug classes, they frequently observed a decrease in drug exposure mainly due to increased elimination. However, only a few studies described changes in clinical outcomes associated with altered pharmacokinetics during pregnancy.

The authors say: "It is essential for clinicians to be aware of these unique pregnancy -related changes in pharmacokinetics, and to critically

examine their potential clinical implications."

**More information:** Gali Pariente et al, Pregnancy-Associated Changes in Pharmacokinetics: A Systematic Review, *PLOS Medicine* (2016).

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