Christchurch Medicines Information Service
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CLINICAL PHARMACOLOGY
Te Whatu Ora
Health New Zealand
Waitaha Canterbury

Oral Anticoagulants in Breastfeeding

Venous thromboembolism (VTE), atrial fibrillation, mechanical heart valves, thrombophilia and other conditions may require ongoing anticoagulation during breastfeeding. Historically, warfarin and low molecular weight heparins (LMWH) have been preferred due to minimal transfer into human milk and extensive experience during breastfeeding.

For some patients, blood test monitoring (INR) with warfarin and the burden of injecting LWMH may be difficult to manage alongside infant care, recovery after birth, and other postpartum demands. Emerging evidence suggests that some direct oral anticoagulants (DOACs), particularly rivaroxaban and dabigatran, may be compatible with breastfeeding when clinically indicated. Anticoagulant selection during breastfeeding should balance patient benefit against potential infant risk.

Oral anticoagulants available in New Zealand

Medicine	Relative infant dose	Infant data	Prescribing comment	Breastfeeding advice
Warfarin	Undetectable in human milk studies	Below level of detection in plasma of seven breastfed infants No reported adverse effects in 16 breastfed infants, including one case of accidental maternal overdose	Use when suitable for indication Monitor patient INR as usual postpartum Postpartum dose titration may be required	**Preferred**
Rivaroxaban	1.3%–5% Modelling data supportive of low RID Infant dose via milk far below therapeutic infant anticoagulant dose (0.5%)	Below level of detection in plasma of three breastfed infants	Most reassuring DOAC Consider particularly for VTE indications	**Consider**
Dabigatran	0.01%–0.07%	Below level of detection in plasma of one breastfed infant	Very low oral bioavailability limits infant absorption (formulated as a prodrug to improve absorption) Evidence-base small	**Consider**
Apixaban	12.8%–21% Worst-case modelling much higher	No reassuring infant plasma/outcome dataset	Do not use routinely during breastfeeding, especially newborn/preterm infants Note: Not funded in New Zealand	**Avoid**

Relative Infant Dose (RID) = estimated infant dose via milk as a percentage of the parent weight-adjusted dose. The usual "<10%" is an accepted threshold of low infant exposure for full-term, healthy infants and when standard drug doses are used - not a guarantee of safety.

Infant advice

- Routine coagulation testing is not required due to anticoagulant exposure via human milk for healthy, full-term term infants.
- Seek specialist advice for newborn, preterm, or medically unstable infants.
- Advise caregivers to check with their midwife or doctor straight away if the infant develops unexplained bruising or bleeding.

References

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Dabigatran in Milk Study – RECRUITING NOW

The Christchurch Drugs in Breast Milk (DiB) Study measures medicine concentrations in participant blood and milk to estimate infant exposure during breastfeeding.

We are seeking breastfeeding patients who are already taking dabigatran under routine clinical care and can attend a study day at Christchurch Hospital. This will increase the evidence on its use during breastfeeding.

Contact Medicines Information, Christchurch Hospital **03 364 0900** or medicines.information@cdhb.health.nz for more information.