

Breastfeeding and Medication



Anti-platelet agents and Breastfeeding

Anti-platelet drugs decrease platelet aggregation (stickiness) and may stop thrombus (clot) formation. Clopidogrel is also used, sometimes alone or in combination with low-dose aspirin. There are unfortunately some mothers who, whilst breastfeeding, have a heart attack, transient ischaemic attack, stroke or other event that requires anti-platelet agents if only temporarily. Anti-platelets may also be given during investigation if such a condition is strongly suspected.

Aspirin dispersible 75 mg

Aspirin 75 mg acts by decreasing platelet stickiness irreversibly inhibiting aggregation. It is not used during **treatment** of thrombosis but may be used to after a myocardial infarction (MI), transient ischaemic attack and stroke or to decrease cardiovascular risk. It is also used to prevent recurrent miscarriage, with a past history of pre-eclampsia and other reasons in pregnancy (<https://breastfeeding-and-medication.co.uk/fact-sheet/low-dose-aspirin-and-breastfeeding>)

Aspirin is not recommended during breastfeeding at analgesic doses of 600 mg four times a day, due to its association with Reye's syndrome. However, use of low dose aspirin is considered acceptable. In the absence of the theoretical risk of association with Reye's syndrome, aspirin would be a drug compatible with lactation due to its pharmacokinetic properties. Milk Plasma ratio is 0.03-0.08, oral bio availability 50-75%, plasma protein binding 88-93%, relative infant dose 2.5% - 10.8%. There is no documented risk of association with Reye syndrome. Virtually all aspirin is metabolised 2-3 hours after dose.

Clopidogrel (Brand name: Plavix®)

Little is known about the levels of clopidogrel secreted into breastmilk but it's likely to be a small amount (<https://www.nhs.uk/medicines/clopidogrel/>). Clopidogrel irreversibly modifies the platelet adenosine diphosphate (ADP) receptor. There are no human studies, but rat studies have shown passage into milk. This significance in human treatment is unknown. It's unlikely that clopidogrel will

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cause any side effects in the baby. It is used with good tolerance in paediatrics, even in new-borns and infants (<https://www.e-lactancia.org/breastfeeding/clopidogrel/product/>)

The pharmacokinetics of clopidogrel show a low oral bio availability 50%, plasma protein binding 98%. Babies exposed to clopidogrel through their mother's breastmilk should be monitored for rare bruising on the skin, blood in urine, vomit or stool.

Gastric irritation of aspirin and clopidogrel

Both aspirin and clopidogrel (Plavix™) are gastro irritant so may need to be used with a proton pump inhibitor (PPI) for protection of the stomach. There has in the past been some concern over a potential interaction between clopidogrel and omeprazole and esomeprazole, with the anti-platelet effect of clopidogrel being diminished (<https://www.gov.uk/drug-safety-update/clopidogrel-and-proton-pump-inhibitors-interaction-updated-advice#:~:text=Concomitant%20use%20of%20clopidogrel%20and,therapies%20would%20be%20more%20suitable.>) . The Specialist Pharmacy Service suggest that this is a clinical decision but that pantoprazole, lansoprazole and rabeprazole are suitable alternatives (<https://www.sps.nhs.uk/articles/do-proton-pump-inhibitors-reduce-the-clinical-efficacy-of-clopidogrel-2/>). PPI medication is largely destroyed in the maternal gut and can be used during lactation.

Other anti-platelet drugs

- Prasugrel (Effient) No studies on the transfer of prasugrel into breastmilk are available
- Ticagrelor (Brilinta) No studies on the transfer of prasugrel into breastmilk are available
- Dipyridamole No studies on the transfer of prasugrel into breastmilk are available

References

- CKS Anti platelet treatment <https://cks.nice.org.uk/topics/antiplatelet-treatment/management/secondary-prevention-of-cvd/>
- Elactancia <https://www.e-lactancia.org/>
- Finkelstein Y, Nurmohamed L, Avner M, Benson LN, Koren G. Clopidogrel use in children. J Pediatr. 2005 <https://pubmed.ncbi.nlm.nih.gov/16291359/>
- Hale Medications and Mothers Milk Online Access
- Kwok CS, Loke YK, Effects of proton pump inhibitors on platelet function in patients receiving clopidogrel: a systematic review, Drug Saf, 2012;35(2):127–39.
- Kwok CS, Loke YK, Inconsistencies surrounding the risk of adverse outcomes with concomitant use of clopidogrel and proton pump inhibitors, Expert Opin Drug Saf, 2012;11(2):275–84.
- LactMed <https://www.ncbi.nlm.nih.gov/books/NBK501922/>
- [LactMed Lansoprazole https://www.ncbi.nlm.nih.gov/books/NBK501283/](https://www.ncbi.nlm.nih.gov/books/NBK501283/)
- [LactMed Pantoprazole https://www.ncbi.nlm.nih.gov/books/NBK501280/](https://www.ncbi.nlm.nih.gov/books/NBK501280/)
- [LactMed Rabeprazole https://www.ncbi.nlm.nih.gov/books/NBK501282/](https://www.ncbi.nlm.nih.gov/books/NBK501282/)
- Li JS, Yow E, Berezny KY, Bokesch PM, Takahashi M, Graham TP Jr, Sanders SP, Sidi D, Bonnet D, Ewert P, Jennings LK, Michelson AD; PICOLO Investigators. Dosing of clopidogrel for platelet inhibition in infants and young children: primary results of the Platelet Inhibition in

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Children On clopidogrel (PICOLO) trial. Circulation. 2008

<https://pubmed.ncbi.nlm.nih.gov/18195173/>

- NHS Clopidogrel. <https://www.nhs.uk/medicines/clopidogrel/>
- Patient Info Antiplatelet Drugs <https://patient.info/doctor/antiplatelet-drugs>

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