

Anticoagulants and Breastfeeding

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The Breastfeeding Network factsheets will be reviewed on an ongoing basis, usually within three years or sooner where major clinical updates or evidence are published. No responsibility can be taken by the Breastfeeding Network or contributing authors for the way in which the information is used.

If you have any questions about this information, you can contact the Drugs in Breastmilk team through their [Facebook page](#) or on druginformation@breastfeedingnetwork.org.uk.

Breastfeeding mothers can feed as normal following use of heparin, warfarin and low molecular weight heparinoids.

Blood clots may develop in the calves (deep vein thrombosis/DVT) or the lungs (pulmonary embolism/PE). Risks increase in patients who smoke or who are overweight. They increase if the person is immobile for prolonged periods e.g. during travel or after surgery. Anti-coagulants are used frequently to prevent the development of DVT in those at risk.

For further information see patient.info/allergies-blood-immune/deep-vein-thrombosis-leaflet

Pregnancy increases your chances of getting DVT, with approximately 1 in 1,000 pregnant women developing the condition. The risk is considerably increased if your Body Mass Index (BMI) is over 30 ([NICE guideline NG89, 2018](#))

The symptoms of a DVT in the leg include:

- swelling,
- pain,
- warm skin,
- tenderness, and
- redness, particularly at the back of your leg, below the knee.

A DVT usually (although not always) affects one leg (nhs.uk/conditions/deep-vein-thrombosis-dvt/)

If you have a BMI of more than 30, have a previous history of DVT or develop symptoms of a DVT or PE you may be given daily injections of heparin or a low molecular weight heparinoid (enoxaparin, dalteparin or tinzaparin) (BNF). These drugs do not pass into breastmilk in any significant amount as the molecules are very large and the drugs have very poor oral bioavailability (Hale, Jones, LactMed).

To talk to a mum who knows about breastfeeding call the National Breastfeeding Helpline 0300 100 0212

Calls to 0300 numbers cost no more than calls to UK numbers starting 01 and 02 and will be part of any inclusive minutes that apply to your provider and call package.

Enoxaparin (Clexane®) was studied by Guillonneau (1996) in 12 women receiving 10-20 milligrammes: after 5-7 days of exclusive breastfeeding their infants showed no change in anticoagulant activity or evidence of bleeding.

Tinzaparin (Innohep®): Although there are no studies on transfer of tinzaparin into breastmilk, there is no reason to suggest that it will pass through to the baby due to its lack of oral bioavailability (Hale, Jones, LactMed).

Dalteparin (Fragmin®): In another study (Richter 2001) of 15 patients who had undergone caesarean section, breastmilk levels of dalteparin measured were less than 0.037 international units (IU) per millilitre and no adverse events were reported.

Fondaparinux (Arixtra®): although there are no studies in the levels passing through milk this drug has zero oral bio-availability so cannot be absorbed by the baby. (Hale, Jones, LactMed, Brown and Jones)

Warfarin: Alternatively women may be prescribed warfarin tablets to take. Warfarin is an anticoagulant that is taken as tablets once daily (NICE 2010). The dose of warfarin has to be precise to ensure that the blood does not clot too easily, or that it does not cause excessive bleeding. This may involve regular monitoring of INR (a measure of clotting levels) by blood tests.

Mothers can continue to breastfeed normally whilst taking warfarin up to 12milligrammes daily, as levels passing through breastmilk are too low to affect your baby's blood clotting (Orme 1977). No adverse reactions in breastfed infants have been reported from maternal warfarin use during lactation.

Direct Oral Anticoagulant Medications (DOAC)

This group of medicines is being increasingly used in general medicine as they have advantages over warfarin (Mekaj et al). However, use in pregnancy and breastfeeding presents some issues with lack of studies.

UKDILAS have produced an excellent summary (sps.nhs.uk/articles/using-oral-anticoagulants-in-breastfeeding-women/)

Dabigatran (Pradaxa®) whilst there are no studies on the transfer of dabigatran into breastmilk, the large molecular weight and the low oral bioavailability (6.5%) suggest that clinically relevant levels are not expected to occur in a breastfed infant (Hale, accessed November 2021)

Rivaroxaban (Xarelto®) is more frequently prescribed because it is a tablet and requires less frequent monitoring of INR). There is a case study of a mother taking 15mg twice daily where the relative infant dose was 1.3% over a 10 hour collection period but the baby was not breastfed (Wiesen 2016). Muysson studied 2 mothers and showed that rivaroxaban does transfer into milk but that at a dose of 30mg a day the baby would be exposed to 30 mcg/kg/day – a relative infant dose of 5. No data on the babies seems to have been published so caution in using this drug is recommended (Brown and Jones).

Apixaban (Eliquis®) and **Edoxaban (Lixiana®)** are not recommended based on lack of data.

Breastfed babies should be monitored for rare-bruising on the skin, blood in urine, vomit or stool.

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