7 Days of dabigatran

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7 days of [#dabigatran](https://twitter.com/search?q=%23dabigatran).

As the 1st new/non-vitamin K oral anti-coagulant (NOAC) in class & the first warfarin alternative for 50 years, [#dabigatran](https://twitter.com/search?q=%23dabigatran) was licensed in the USA/UK in 2010-11 for the treatment & prevention of DVT/PE, prevention CVA/embolism in atrial fibrillation if there is 1 or more risk factor.

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Day 2: [#dabigatran](https://twitter.com/search?q=%23dabigatran) is a direct thrombin inhibitor for adults, usually taken as 150mg capsule twice daily, unless dose reduction is needed e.g elderly >75 years, or in moderate renal impairment when dose 110-150mg twice daily (not exhaustive)

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Day 3: Kinetics: [#dabigatran](https://twitter.com/search?q=%23dabigatran) is a prodrug; post oral absorption, plasma + liver hydrolases convert it to the active form. Food delays time to peak plasma concentration. There is some conjugation converting to active metabolites, but most of the drug is excreted unchanged, t ½ 12-14 hrs. t½ is increased in renal impairment

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Day 4: [#dabigatran](https://twitter.com/search?q=%23dabigatran) attaches to thrombin, as it looks like a peptide normally hydrolysed by thrombin as part of the coagulation cascade. Once bound, thrombin cannot perform its roles, such as converting fibrinogen to fibrin & catalysis of many other coagulation cascade reactions

Day 5: Adverse drug events; Common, abnormal hepatic function, bleeding e.g nose bleeds, Uncommon, anaemia, nausea/vomiting, abdominal pain (not exhaustive). Check renal function check before starting #dabigatran & minimum x1/year check for elderly. If overdose/haemorrhage, can reverse using Praxbind

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Day 6: Drug-drug interactions; many ‘severe’ as increased bleeding e.g. anti-platelets, SSRIs, other anti-coagulants, NSAIDs. [#dabigatran](https://twitter.com/search?q=%23dabigatran) is a P-gp transporter substrate; P-gp inhibitors e.g itraconazole lead to increased drug concentration. There is reduced drug exposure re P-gp inducers e.g rifampicin, St John’s Wort, phenytoin, carbamazepine (not exhaustive)

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Day 7: When taking [#dabigatran](https://twitter.com/search?q=%23dabigatran), a patient alert card should be carried. The NICE patient decision aid for atrial fibrillation can be used to support the clinician for this indication, as well as assist the patient-led selection of the best oral anti-coagulant for the individual

CPD: in addition to the tweets, read the BNF section on ‘Thromboembolism’ and the monograph on Dabigatran etexilate. Another useful source is the Summary of Product Characteristics for dabigatran etexilate – see links below

<https://bnf.nice.org.uk/drug/dabigatran-etexilate.html>

<https://www.medicines.org.uk/EMC/medicine/24839/SPC/Pradaxa+150+mg+hard+capsules#gref>

CPD questions (most but not all answers will be in the tweets). There is only one correct answer per question

1. Dabigatran is licensed for both treatment and prevention of DVT and PE

TRUE or FALSE

1. Which is TRUE?
2. Dabigatran is excreted whole therefore renal impairment increases plasma levels of active drug
3. Dabigatran is converted in the kidneys to its active form
4. Formulations of dabigatran are all parenteral
5. Metabolism via the CYP450 system
6. The ‘N’ in the term NOAC is reported in the literature as meaning all of the following: new, novel or non-vitamin K antagonist ‘oral anti-coagulant’

TRUE or FALSE

1. Dose reduction is recommended in
2. Children
3. Moderate liver failure
4. Creatinine clearance 30–50 mL/minute
5. Diabetes
6. Dabigatran is an indirect prothrombin inhibitor

TRUE or FALSE

1. Thrombin is a proteolytic enzyme and when dabigatran attaches to it,
2. It causes thrombin to auto-digest
3. It prevents thrombin from catalysing other substances
4. It sets off a chain reaction leading to the production of more clotting factors
5. It directly breaks up fibrin strands
6. If dabigatran causes haemorrhage, the action of the drug cannot be reversed

TRUE or FALSE

1. Which of the following does NOT have an increased risk of bleeding when taken with dabigatran?
2. Citalopram
3. Clarithromycin
4. Ibuprofen
5. St John’s Wort
6. Renal impairment is an issue with dabigatran use because most of the drug is excreted unchanged

TRUE or FALSE

1. Nausea and vomiting are common side-effects of dabigatran

TRUE or FALSE