Apixaban (a-pi-ka-ban)

**Classification**
- Therapeutic: anticoagulants
- Pharmacologic: factor Xa inhibitors

**Pregnancy Category** B

**Indications**
Decreases risk of stroke/systemic embolism associated with nonvalvular atrial fibrillation.

**Action**
Acts as a selective, reversible site inhibitor of factor Xa, inhibiting both free and bound factor. Does not affect platelet aggregation directly, but does inhibit thrombin-induced platelet aggregation. Decreases thrombin generation and thrombus development. Therapeutic Effects: Decreased thrombotic events associated with atrial fibrillation including stroke and systemic embolization.

**Pharmacokinetics**
- **Absorption:** 50% absorbed following oral administration.
- **Distribution:** Unknown.
- **Metabolism and Excretion:** 25% metabolized (mostly by CYP3A4) and excreted in urine and feces. Biliary and direct intestinal excretion account for fecal elimination.
- **Half-life:** 6 hr (12 hr after repeated dosing due to prolonged absorption).

**Time/Action Profile (effect on hemostasis)**

<table>
<thead>
<tr>
<th>ROUTE</th>
<th>ONSET</th>
<th>PEAK</th>
<th>DURATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>PO</td>
<td>unknown</td>
<td>3–4 hr†</td>
<td>24 hr</td>
</tr>
</tbody>
</table>

†Blood levels.

**Contraindications/Precautions**
- **Contraindicated in:** Previous severe hypersensitivity reactions; Active peptic ulcer disease; Severe hepatic impairment; Not recommended for use in patients with prosthetic heart valves; Concurrent use of strong dual inhibitors of CYP3A4 and P-gp; Omit when need.
- **Use Cautionally in:** Discontinuation increases the risk of thromboses; Surgery; Peptic ulcer disease (dose reduction required for serum creatinine >1.5 mg/dL); Moderate hepatic impairment (dose reduction required); Concurrent use of strong dual inhibitors of CYP3A4 and P-gp systems (dose reduction required); GI: Use during pregnancy only if potential benefit outweighs possible risks to mother and fetus; Pregnancy: Safe and effective use in children has not been established.

**Adverse Reactions/Side Effects**
- **Hemat:** BLEEDING.
- **Misc:** Hypersensitivity reactions including ANAPHYLAXIS.

**Interactions**
- **Drug-Drug:** Risk of bleeding with other anticoagulants, antiplatelets, heparins, NSAIDs, SNRIs, SSRIs, or thrombolytics. Concurrent use of strong inhibitors of both the CYP3A4 and P-gp enzyme systems (including clarithromycin, itraconazole, ketoconazole, and ritonavir) 5 levels and bleeding risk, dosage of apixaban should be in 2.5 mg twice daily. Other reasons for dose reduction, apixaban should be avoided. Inducers of the CYP3A4 enzyme system and the P-gp system including carbamazepine, phenobarbital, rifampin, may levels and may risk of thromboses.
- **Drug-Natural Products:** Concurrent use St. John’s wort, a strong dual inducer of the CYP3A4 and P-gp systems can levels and risk of thromboses.

**Route/Dosage**
- **PO (Adults):** 5 mg twice daily; 5 mg twice daily or concurrent use of strong inhibitors of both the CYP3A4 and P-gp enzyme systems—2.5 mg twice daily.

**NURSING IMPLICATIONS**

**Assessment:**
- Assess for symptoms of stroke or peripheral vascular disease periodically during therapy.

**Potential Nursing Diagnoses**

**Activity intolerance**
Implementation

- When converting from warfarin, discontinue warfarin and start apixaban when INR is < 2.0.
- When converting from apixaban to warfarin, apixaban affects INR; so INR measurements may not be useful for determining appropriate dose of warfarin. If continuous anticoagulation is necessary, discontinue apixaban and begin both a parenteral anticoagulant and warfarin at time of next dose of apixaban. Discontinue parenteral anticoagulant when INR reaches acceptable range.
- When switching between apixaban and anticoagulants other than warfarin, discontinue one being taken and begin the other at the next scheduled dose.
- For surgery, discontinue apixaban at least 48 hrs before invasive or surgical procedures with a moderate to high risk of unacceptable or clinically significant bleeding or at least 24 hrs prior to procedures with a low risk of bleeding or where the bleeding would be non-critical in location and easily controlled.
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- PO: Administer twice daily without regard to food.

Patient/Family Teaching

- Instruct patient to take apixaban as directed. Take missed doses as soon as remembered on the same day and resume twice daily administration; do not double doses. Do not discontinue without consulting health care professional; may increase risk of having a stroke. If temporarily discontinued, restart as soon as possible. Store apixaban at room temperature. Advise patient to read Medication Guide before beginning therapy and with each Rx refill in case of changes.
- Instruct patient that they may bruise and bleed more easily or longer than usual. Advise patient to notify health care professional immediately if signs of bleeding (unusual bruising, pink or brown urine, red or black, mucky stools, coughing up blood, vomiting blood, pain or swelling in a joint, headache, dizziness, weakness, recurrent nose bleeds, unusual bleeding from gums, hematochezia) occur or if injury occurs, especially head injury.
- Caution patient to notify health care professional if skin rash or signs of severe allergic reaction (chest pain or tightness, swelling of face or tongue, trouble breathing, swelling of lips or tongue, itching or hives, nausea, vomiting, diarrhea, fever, chills, sore throat, muscle aches, backache, joint pain or swelling, rash, hives, itching, wheezing, shortness of breath, skin rash or signs of severe allergic reaction) occur.
- Advise patient to notify health care professional if pregnancy is planned or suspected or if breast feeding.

Evaluation/Desired Outcomes

- Reduction in the risk of stroke and systemic embolism.
- Instruct patient to notify health care professional of all Rx or OTC medications, vitamins, or herbal products being taken and consult health care professional before taking any new medications. Risk of bleeding is increased with aspirin, NSAIDs, warfarin, heparin, SSRIs or SNRIs.
- Advise female patient to notify health care professional if pregnancy is planned or suspected or if breast feeding.