

Understanding Dual Action Antiplatelet Therapy (DAPT)



Hearing that you're at risk for blood clots can sound pretty scary. This is especially true if you're at high risk for certain heart conditions. But know that there are treatments available, like dual action antiplatelet therapy (DAPT), to help prevent blood clots.

About blood clots

Blood clotting is actually an important function of your body. It's how injuries like cuts and scrapes heal. It prevents excessive bleeding, too.

Blood clotting involves platelets, which are tiny cell fragments in your blood. When an injury happens, platelets stick to the damaged area. They release a chemical that attracts additional platelets to them, plugging the blood flow and allowing the injury to continue with the healing process. Without blood clotting, a small cut could cause you to bleed nonstop.

But blood clotting can be dangerous, too. Sometimes, it can happen too often. Or a clot blocks blood from flowing properly through the body. This is especially dangerous if you're at high risk for or are already recovering from a heart attack or stroke.

What is DAPT?

Dual action antiplatelet therapy (DAPT) is a treatment that uses two medicines to prevent dangerous blood clots. These medicines target different stages of the blood clotting process.

One of the medicines is aspirin. Aspirin stops a specific molecule in the clotting process from forming. Without this molecule, the platelets are less sticky. That means they don't form as strong of a bond.

The second medicine is a P2Y₁₂ receptor inhibitor. Platelets have this receptor on their surface. When it's activated, other platelets are signaled to that part of the body. This helps form a blood clot. But if those receptors don't send the signal, no clot is formed. This medicine blocks the signal.

When is DAPT needed?

DAPT can be used in a variety of treatments:

- **After a heart attack:** A heart attack happens when a part of the heart doesn't receive enough blood. The longer the heart goes without proper blood flow, the more it can be damaged. After a heart attack, DAPT can prevent blood clots to lower the risk of a second heart attack.
- **After an angioplasty:** An angioplasty opens a blocked artery in the heart. A surgeon inserts a small metal stent to keep the artery open and allow proper blood flow. DAPT helps keep blood clots from forming and blocking the blood flow again.
- **After a coronary artery bypass graft (CABG):** CABG creates a new route for blood flow to get around a blocked passageway. A surgeon takes a healthy blood vessel from the chest or leg. Then they graft the blood vessel onto the heart. This creates a connection around the blocked artery. DAPT can prevent a blood clot from forming in this new pathway.

DAPT can also be used for:

- Helping prevent heart attacks and stopping chest pain
- Unstable angina
- Heart rhythm disorders like an irregular heartbeat or atrial fibrillation to prevent a stroke

Length of treatment

Treatment time will depend on why it is being prescribed and your future risk of blood clots and bleeding. You can have short-term DAPT for up to 6 months. Long-term DAPT can last for a year or longer.

There are potential risks with DAPT. While on it, your body may not be able to form blood clots when they're actually needed. A small cut could lead to excess bleeding, and a larger injury could become even more serious. Your healthcare provider can discuss the specific benefits and risks with you. Be sure to ask any questions you have. Remember, your provider is there to help determine the best treatment for you.

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