PROCEDURE

Low-dose aspirin therapy

Low-dose aspirin therapy is daily aspirin used to reduce platelet clumping and prevent certain blood clots.

PURPOSE
Prevent clots that can cause heart attack or stroke

PROCEDURE TYPE
Therapeutic; oral medicine taken daily

WHERE IT IS DONE
At home, after prescription and medication review

ANAESTHESIA
None

HOW LONG IT TAKES
Seconds daily; treatment ranges from weeks to lifelong

PREPARATION
Medication review; no fasting or bowel preparation

RECOVERY
No recovery period; usual activities continue

MAIN RISKS
Bleeding, stomach ulcer, allergic reaction, bleeding stroke

RESULTS
No immediate result; protection develops while treatment continues

Overview

Low-dose aspirin therapy means taking a small dose of aspirin regularly, usually once a day. It is used to prevent certain blood clots rather than to treat everyday pain or fever.

Aspirin reduces the ability of platelets to stick together. Platelets are small blood cells that help form clots. This effect can lower the chance of a clot blocking an artery in the heart or brain.

The treatment is simple to take, but it is not right for everyone. Because aspirin affects clotting, it can also increase bleeding. The balance between preventing a clot and causing bleeding is different for each person.

Do not start low-dose aspirin because of age alone or because it is available without a

prescription. A healthcare professional should first review why you might need it, your bleeding risk, and the other medicines you take.

Why the procedure is performed

Low-dose aspirin may be prescribed when the expected protection from blood clots is greater than the risk of bleeding.

Common reasons include:

An ischaemic stroke happens when a clot blocks blood flow to part of the brain. A TIA causes similar symptoms that resolve, but it is still an important warning sign.

Using aspirin before any heart attack or stroke has occurred is called primary prevention. It is no longer routinely recommended for everyone at increased cardiovascular risk. The possible benefit may be small and must be weighed against the chance of serious bleeding.

During pregnancy, low-dose aspirin may be offered to people with particular risk factors for pre-eclampsia. It should be taken only on the schedule provided by the pregnancy care team.

- Preventing another heart attack after a previous heart attack
- Reducing risk after an ischaemic stroke or transient ischaemic attack, or TIA
- Protecting certain people with coronary artery disease or peripheral artery disease
- Preventing clots after some heart procedures, including coronary stent placement
- Reducing the risk of pre-eclampsia in selected pregnancies

Who should and should not have it

Low-dose aspirin is often appropriate after a heart attack, an ischaemic stroke, or certain artery procedures. It may also be appropriate for selected people with known artery disease or a high risk of pre-eclampsia.

Treatment may be avoided or delayed if you have:

Kidney disease, liver disease, uncontrolled high blood pressure, frequent falls, or a history of ulcers may also change the decision. These conditions do not always rule out aspirin, but they require individual assessment.

Aspirin is generally avoided in children and teenagers with a viral illness because of the risk of Reye syndrome, a rare but serious condition affecting the brain and liver. Specialists may still prescribe aspirin for specific childhood illnesses.

Tell your healthcare team if you are pregnant, trying to become pregnant, or breastfeeding. Low-dose aspirin is used safely in some pregnancies, but the reason, timing, and dose should be professionally directed.

- Active bleeding, including bleeding from the stomach or bowel
- A current or recently bleeding stomach ulcer
- A previous serious allergic reaction to aspirin
- Asthma or nasal symptoms triggered by aspirin or similar medicines
- A condition that substantially reduces normal blood clotting
- A previous bleeding stroke
- Planned surgery or another procedure with a significant bleeding risk

How to prepare

No fasting, bowel preparation, or anaesthetic is needed. The main preparation is a review of your health, bleeding history, allergies, and medicines.

Your treating facility's own instructions take priority. This is especially important if aspirin was prescribed after a heart procedure or if you are preparing for surgery, dental treatment, or an endoscopy.

Provide an up-to-date list of prescription medicines, non-prescription products, and supplements. Important examples include:

Do not stop prescribed aspirin before a procedure unless the team responsible for your aspirin and the procedure tells you to. Stopping it unexpectedly can increase clot risk, particularly after a coronary stent.

Your healthcare professional may arrange blood tests if there is concern about anaemia, kidney function, liver function, or abnormal clotting. Routine testing is not needed for everyone.

- Anticoagulants such as warfarin, apixaban, or rivaroxaban
- Other antiplatelet medicines such as clopidogrel
- Anti-inflammatory pain medicines such as ibuprofen or naproxen
- Steroids and some antidepressants like sertraline or fluoxetine
- Supplements that may affect bleeding

What happens during the procedure

You take the prescribed tablet by mouth, usually at the same time each day. Follow the product label and your prescription because aspirin products come in different strengths.

Enteric-coated tablets have a coating intended to dissolve farther along the digestive tract. These tablets should usually be swallowed whole rather than crushed or chewed. The coating may reduce stomach irritation, but it does not remove the risk of an ulcer or internal bleeding.

Taking aspirin with food may help minor stomach discomfort. It does not prevent serious bleeding.

If you miss a dose, follow the instructions supplied with your medicine. Do not take two doses together unless a healthcare professional specifically tells you to do so.

Aspirin used during a suspected heart attack is a separate emergency situation. Do not take extra aspirin for chest pain unless emergency services or a healthcare professional directs you.

Recovery and what to expect afterward

Low-dose aspirin should not cause pain. Mild indigestion can occur, but persistent or worsening stomach pain needs medical advice.

You can usually eat and drink normally. Limiting alcohol may reduce stomach irritation and bleeding risk; ask your healthcare team what is appropriate for you.

Aspirin itself does not restrict normal physical activity. You may notice that cuts take longer to stop bleeding or that bruises appear more easily.

You can drive after taking low-dose aspirin because it does not usually cause sedation. Do not drive if the illness or procedure that led to aspirin treatment makes driving unsafe.

Most people can continue working without interruption. Any time away from work is usually related to the underlying heart, brain, pregnancy, or artery condition rather than the aspirin.

Risks and possible complications

Bleeding is the main risk. Most bleeding is minor, such as easy bruising or a longer nosebleed. Less commonly, bleeding can occur in the stomach, bowel, brain, or another internal organ.

Aspirin can irritate the stomach lining and contribute to an ulcer. An ulcer is an open sore in the stomach or upper intestine. The risk may be higher if you have had an ulcer before or take other medicines that affect bleeding.

Other possible complications include:

Taking ibuprofen or naproxen with aspirin can increase bleeding risk. Ibuprofen may also interfere with aspirin's antiplatelet effect when taken at certain times. Ask a pharmacist or prescriber before combining them.

- Indigestion, nausea, or stomach discomfort
- An allergic reaction, including wheezing or swelling
- Worsening of aspirin-sensitive asthma
- Kidney problems, particularly with dehydration or other kidney-affecting medicines
- A haemorrhagic stroke caused by bleeding in the brain

Results and follow up

There is usually no immediate result that you can feel. Aspirin lowers risk while you continue taking it, but it cannot guarantee that a heart attack, stroke, or pregnancy complication will not occur.

Routine follow-up may include reviewing:

If aspirin was started for primary prevention, its benefits and risks may need periodic reassessment as your age and health change. If it was prescribed during pregnancy, your maternity team will tell you when to start and stop it.

Do not stop long-term aspirin suddenly without advice, especially after a heart attack, stroke, or coronary stent.

- Whether aspirin is still needed
- Bruising, indigestion, or other possible adverse effects
- New medicines or planned procedures
- Blood pressure and other cardiovascular risk factors
- Blood tests when bleeding, anaemia, or organ problems are suspected

Alternatives

The alternatives depend on why aspirin has been offered.

Clopidogrel is another antiplatelet medicine. It may be used when aspirin is unsuitable or, for a limited period, alongside aspirin after certain procedures. It has different side effects but still

carries a bleeding risk.

Anticoagulants like warfarin or apixaban reduce clotting through a different process. They may be more suitable for conditions such as atrial fibrillation or clots in the legs or lungs. They are not interchangeable with aspirin and may cause more bleeding.

Managing blood pressure, cholesterol, diabetes, smoking, activity, and diet lowers cardiovascular risk without aspirin-related bleeding. These steps remain important, but they may not replace antiplatelet treatment after a heart attack, ischaemic stroke, or coronary stent.

Choosing no antiplatelet medicine avoids aspirin's adverse effects but may leave a higher risk of artery-blocking clots. The trade-off is particularly important after a recent cardiovascular event or stent.

For pre-eclampsia prevention, closer monitoring can detect problems earlier but does not provide the same preventive effect as prescribed aspirin. Your maternity team can explain the options for your particular risk factors.

When to call your healthcare team

Contact your healthcare team routinely if you develop persistent indigestion, frequent nosebleeds, troublesome bruising, or bleeding gums. Also contact them before starting another pain medicine or supplement.

Seek urgent medical advice for:

Call emergency services for vomiting blood, coughing up a significant amount of blood, sudden severe headache, collapse, confusion, new weakness on one side, trouble speaking, or serious difficulty breathing.

Chest pressure, sudden stroke symptoms, or other signs of a possible heart attack or stroke are emergencies even while you are taking aspirin. Do not drive yourself for emergency care.

- Red or black, tar-like stools
- Blood in the urine
- A nosebleed that will not stop with firm pressure
- New weakness, unusual tiredness, or shortness of breath that could suggest anaemia
- Persistent or severe stomach pain

Common questions

Will I be asleep?

No. Low-dose aspirin is a tablet taken while you are awake. No sedation or anaesthetic is required.

Can I drive after taking it?

Usually, yes. Aspirin does not normally affect alertness. Driving restrictions may apply because of the heart problem, stroke, surgery, or other condition for which it was prescribed.

How painful is it?

Taking the tablet is not painful. Some people develop indigestion or stomach discomfort. Severe or persistent pain is not expected and needs medical advice.

When will I know whether it is working?

You usually cannot feel it working. There is no routine test that proves it is preventing a clot. Follow-up focuses on continued need, safe use, and possible bleeding.

Can I take ibuprofen with low-dose aspirin?

Do not combine them without checking with a pharmacist or prescriber. The combination can increase bleeding, and ibuprofen may interfere with aspirin's antiplatelet action.

Can I stop when I feel well?

Feeling well does not mean aspirin is no longer needed. Ask the prescribing team before stopping, especially if you have a coronary stent or a history of heart attack or stroke.

Sources

- US Preventive Services Task Force. "Aspirin Use to Prevent Cardiovascular Disease: Preventive Medication." JAMA . 2022;327(16):1577-1584.
- Arnett DK, Blumenthal RS, Albert MA, et al. "2019 ACC/AHA Guideline on the Primary Prevention of Cardiovascular Disease." Circulation . 2019;140:e596-e646.
- Virani SS, Newby LK, Arnold SV, et al. "2023 AHA/ACC Guideline for the Management of Patients With Chronic Coronary Disease." Circulation . 2023;148:e9-e119.
- Kleindorfer DO, Towfighi A, Chaturvedi S, et al. "2021 Guideline for the Prevention of Stroke in Patients With Stroke and Transient Ischemic Attack." Stroke . 2021;52:e364-e467.

- American College of Obstetricians and Gynecologists. "Low-Dose Aspirin Use During Pregnancy." Committee Opinion No. 743. Obstetrics & Gynecology . 2018;132:e44-e52.
- US Food and Drug Administration. "Aspirin: Questions and Answers." Consumer drug information.
- National Health Service. "About low-dose aspirin" and "Taking low-dose aspirin with other medicines and herbal supplements." Medicines guidance.