

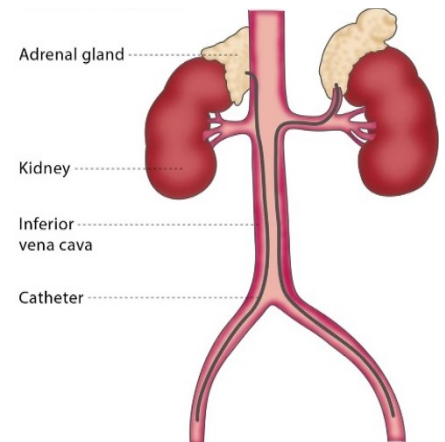
Adrenal Vein Sampling (AVS) Patient Information

WHAT IS ADRENAL VEIN SAMPLING (AVS)?

You have been diagnosed with primary aldosteronism (PA) where the hormone aldosterone is being overproduced in the body. Aldosterone is made by the adrenal glands. PA may involve one or both adrenal glands. If PA involves one gland, surgery to remove the gland can be performed. AVS is done for those who are suitable and willing to undergo surgery.

AVS is a procedure where blood is collected from the adrenal veins, to work out whether the right, left or both glands are overactive. Blood samples are taken directly from the adrenal glands by inserting thin tubes into a vein in the groin and passing them up to the adrenal veins.

AVS is useful even if you have an adrenal tumour on CT, because a tumour on CT may not necessarily be overactive.



WHAT DO I NEED TO DO TO PREPARE FOR THE PROCEDURE?

4-8 weeks before AVS: Medication changes may be needed.

- Medications which interfere with AVS results will need to be stopped, including some blood pressure and hormonal therapies. Alternative medications can be used to manage blood pressure during this time.

2-4 weeks before AVS:

- Have a blood test: Your endocrinologist/kidney specialist should organise this with you to check your electrolytes (especially your potassium level), kidney function and hormone levels.
- Arrange help: You will need a responsible friend or family member to accompany you home, and if possible, accompany you overnight.
- Inform the Radiology team if you have allergies, diabetes or are pregnant, or if you are taking spironolactone, diuretics, or blood thinning medications.

24 hours before AVS: Avoid alcohol or recreational drugs.

6 hours before AVS: Fast from food and drink for 6 hours before AVS

You must follow the instructions about taking your blood pressure medication(s) and potassium tablets.

WHAT CAN I EXPECT ON THE DAY?

- AVS takes 2-3 hours in most cases, and up to 5 hours in some cases.
- A small needle (cannula) will be inserted in your arm before AVS.
- Most people do not require sedation for AVS but some radiologists will use it, and they will talk to you about whether it will be given.
- You will lie on a table, the area around your groin will be cleaned with an antiseptic wash, and a sterile cover will be placed over your body.
- Local anaesthetic will be injected in the groin area, which may sting.
- The radiologist will insert 1 or 2 thin plastic tubes into the femoral vein in the groin.
- Contrast will be injected into your veins to help the radiologist see your blood vessels on X-ray and guide the tube to the adrenal veins. You should not be able to feel the catheters inside your body.
- During the procedure you will lie still and flat on your back.
- Sometimes a medication may need to be given to increase the amount of hormone production in the adrenal glands.
- Once the catheters are in place, blood samples will be collected, which will be sent for hormone analysis.
- There will be at least one radiologist, radiographer and nurse in the room. A radiology trainee, chemical pathologist, Endocrine nurse or Endocrine registrar may also be present.
- Once all samples are collected, the catheter will be removed from the puncture site and firm pressure applied for 10-15 minutes.

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WHAT ARE THE RISKS OF THIS PROCEDURE?

Common risks and complications include:

- Minor pain/bruising at the puncture site or groin.
- Bleeding at the puncture site may occur (usually stopped by applying pressure and limiting movement)

Less common risks include:

- Infection, requiring antibiotics and further treatment.
- Damage to surrounding structures such as blood vessels including the groin (femoral) artery.
- A blood clot or excessive bleeding from the puncture site.
- Adverse effects and hypersensitivity reactions may be experienced with the medications which may be used during AVS, including iodinated contrast, synacthen, pain-relief, or sedative medications.
- The Radiologist may not be able to locate the adrenal veins and therefore will not be successful.

Rare risks and complications include:

- Damage to the groin artery or blood vessels in the abdomen may cause severe internal bleeding which may require surgery. These complications are very uncommon and rarely life threatening.
- Deep vein thrombosis (blood clots in the veins) in the leg(s).
- Damage to the adrenal glands may very rarely occur. If both glands are damaged, you may need adrenal hormone replacement.
- Temporary nerve irritation may occur in the groin due to the local anaesthetic. Permanent nerve damage is very rare.
- Life-threatening allergic reaction to contrast or sedation.
- Small increased risk of lifetime cancer due to X-ray exposure.

The Radiologist will discuss the above with you and obtain your written consent. In general, the risks are outweighed by the potential benefits.

WHAT CAN I EXPECT AFTER THE PROCEDURE?

Immediately:

- You will be transferred onto a bed to lay flat for 2-4 hours to recover.
- There will be nurses looking after you and monitoring your progress.
- You can eat and drink one hour after AVS, or as determined by the radiologist.
- Please advise the nursing staff if you require a medical certificate.

On going home:

- You cannot drive yourself home
- You must be accompanied by an adult and go home by car or taxi
- You must ensure that you avoid any strenuous exercise for the 48 hours after your procedure
- You can shower but keep the dressing site dry, and keep the groin area clean and dry
- You may experience discomfort at the puncture site for 1-2 days.

If given sedation, DO NOT:

- Drive any type of car, bike or other vehicle.
- Operate machinery including cooking implements.
- Make important decisions or sign a legal document.
- Drink alcohol, take other mind-altering substances, or smoke. They may react with the anaesthetic drugs.

If you experience any of the following, present to your nearest Emergency Department or GP

- Swelling, lumps or continuous bleeding at the puncture site or in the limb.
- Fever or other signs of an infection.
- Severe abdominal pain.

TO FIND OUT THE RESULTS OF YOUR AVS

The hormone levels tested in AVS can take several days to weeks to be processed and then analysed. A clinic appointment will be made by your requesting doctor to discuss these results with you.