



Late-night salivary cortisol test

Information for patients from Pathology

Your doctor has advised you to have a late-night salivary cortisol test. This leaflet explains:

- what a late-night salivary cortisol test is
- why you have been asked to do this test
- what you need to do to prepare for the test; and
- what happens before and after the test.

We hope this leaflet answers some of the questions you may have. If you have any further questions or concerns, please speak to a member of your healthcare team.

What is a late-night salivary cortisol test?

Cortisol is a type of steroid hormone produced by your adrenal glands. It has many roles within the body, including:

- a key hormone during a stress response
- regulating glucose (sugar) concentration
- decreasing inflammation; and
- containing the immune response.

The amount of cortisol your body produces will change throughout the day; at night it should be at its lowest.

A late-night salivary cortisol test will look at the amount of cortisol in your saliva, to see if you are producing too much cortisol.

Why have I been asked to do this test?

Your doctor may have asked for this test if you had shown signs of having high cortisol levels. These signs include:

- weight gain around your stomach
- your face appearing rounder
- high blood pressure
- a fatty hump on your back
- purple stretch marks on your stomach
- muscle weakness.

How do I prepare for the test?

When deciding when you will collect your sample, keep the following rules in mind.

- Do the test between 11pm and midnight.
- Do not eat black liquorice for 2 weeks before your test.
- If you use steroid cream or a steroid-based inhaler, please speak with your doctor. Follow their advice on when to stop using / taking it before your test.
- Do not perform the test if you have felt unwell at all that day.
- Avoid activities that may make your gums bleed for 30 minutes before your test. This includes brushing or flossing your teeth. If needed, rinse your mouth with water 30 minutes before your test. Make sure that no pieces of food are in your mouth.
- Do not eat, drink, smoke, vape, or take any other medications for 30 minutes before your test.
- Wash and dry your hands thoroughly just before collecting the sample.

If for whatever reason you cannot follow these rules, reschedule your collection for a day when you can.

How do I collect my sample?

You will have been given several tubes with blue lids and sponges inside. You must transfer your saliva into the tube using the following instructions. You may have been given spare tubes in case anything goes wrong.

1. Remove the lid by gently pushing it towards one side of the tube. Make sure the sponge inside does not fall out. **Do not touch the sponge with your hands.**
2. Tip the cotton sponge into your mouth, aiming to get it either on top or underneath your tongue.
3. Roll the sponge around your mouth with your tongue, you may gently bite the sponge too. The goal is to try to completely soak the sponge with your saliva. This usually takes 1 or 2 minutes.
4. Put the sponge back into the tube without using your hands. It may help to use your front teeth to place it in.
5. Once the sponge is back in the tube, put the lid on firmly.

6. Look at the sponge to make sure there are no pieces of food or blood, as these interfere with the test. If there is any food or blood, repeat the test on a different day.



Step 1



Step 2



Step 4

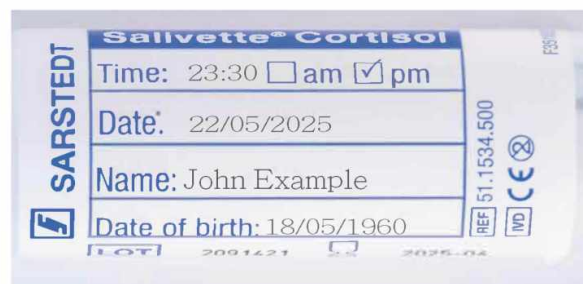


Step 5

What do I do once I have collected my sample?

Make sure your details are written clearly on both the form and the sample tubes. This includes:

- your first name
- your last name
- your date of birth; and
- the time you collected your sample. Write the time in the 24-hour format, for example 23:00 or 00:00.



Example of a completed sample tube label

If you are collecting more than one sample, you can keep them in the fridge. Bring the samples and the fully completed forms to the Pathology department at:

- Kent and Canterbury Hospital, Canterbury
- Queen Elizabeth the Queen Mother (QEQM) Hospital, Margate; or
- William Harvey Hospital (WHH), Ashford

Or give the samples to your GP, and they will send them to us.

It is important that the samples arrive in the laboratory within 72-hours of collecting them.

Are there any side effects?

There are no side effects to this test. Be careful not to swallow the sponge, as it may be a choking hazard.

What if I have any questions?

If you have any questions about the test, please contact your GP or healthcare professional.

For questions about the sample collection, contact the laboratory between 9am and 5pm (Monday to Friday). Call the Pathology switchboard on 01233 616060, press 3 for Biochemistry.

References

- Nieman, L.K., et al., The diagnosis of Cushing's syndrome: an Endocrine Society Clinical Practice Guideline. *J Clin Endocrinol Metab*, 2008. 93(5): p. 1526-40.
- Fleseriu, M., et al., Consensus on diagnosis and management of Cushing's disease: a guideline update. *Lancet Diabetes Endocrinol*, 2021. 9(12): p. 847-875.
- Imamovic, M., et al., Confounding effects of liquorice, hydrocortisone, and blood contamination on salivary cortisol but not cortisone. *Endocr Connect*, 2023. 12(1).
- Flowers, K.C. and K.E. Shipman, Pitfalls in the Diagnosis and Management of Hypercortisolism (Cushing Syndrome) in Humans; A Review of the Laboratory Medicine Perspective. *Diagnostics (Basel)*, 2023. 13(8).

This leaflet has been produced with and for patients.

Please let us know:

- If you have any accessibility needs; this includes needing a hearing loop or wanting someone to come with you to your appointment.
- If you need an interpreter.
- If you need this information in another format (such as Braille, audio, large print or Easy Read).

You can let us know this by:

- Visiting the Trust web site (<https://www.ekhuft.nhs.uk/ais>).
- Calling the number at the top of your appointment letter.
- Adding this information to the Patient Portal (<https://pp.ekhuft.nhs.uk/login>).
- Telling a member of staff at your next appointment.

Any complaints, comments, concerns or compliments, please speak to a member of your healthcare team. Or contact the Patient Advice and Liaison Service on 01227 783145 or email (ekh-tr.pals@nhs.net).

Patients should not bring large sums of money or valuables into hospital. Please note that East Kent Hospitals accepts no responsibility for the loss or damage to personal property, unless the property has been handed into Trust staff for safe-keeping.

Further patient information leaflets are available via the East Kent Hospitals' web site (<https://www.ekhuft.nhs.uk/patient-information>).

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