

Breastfeeding and Medication



The Synacthen test and Breastfeeding

Breastfeeding may continue as normal particularly as the procedure is unlikely to be completed before 1 hour post injection.

The short Synacthen test is a test of adrenal insufficiency which can be used as a screening procedure. The test is based on the measurement of serum cortisol before and after an injection of synthetic ACTH (also known as tetracosactrin or Corticotropin).

The test is used to see if the adrenal glands are producing normal amounts of cortisol. When the adrenal does not produce enough cortisol and aldosterone the patient can feel tired, lethargic, sick and lose weight. Synacthen stimulates the adrenal glands to produce cortisol.

What are the symptoms of low cortisol levels?

Too little cortisol may be due to a problem in the pituitary gland or the adrenal gland (Addison's disease). The onset of symptoms is often very gradual. Symptoms may include fatigue, dizziness (especially upon standing), weight loss, muscle weakness, mood changes and the darkening of regions of the skin

What does cortisol do?

It has many functions which include:

- helping to regulate blood pressure
- helping to regulate the immune system
- helping to balance the effect of insulin in regulating the blood sugar level

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February 2022 The information on this sheet is based upon my professional experience as a pharmacist with a specialised interest in the safety of drugs in breastmilk, supported by evidence from expert sources. However, I cannot take responsibility for the prescription of medication which remains with the healthcare professionals involved. I am happy to discuss the evidence by email wendy@breastfeeding-and-medication.co.uk

- helping the body to respond to stress

'Hypoadrenalism' means deficiency of cortisol. When this happens due to diseases of the adrenal gland, the condition is known as Addison's disease. When it occurs due to diseases of the pituitary, it is called central hypoadrenalism or secondary hypoadrenalism.

What is the Synacthen test?

With the short Synacthen test, the adrenal gland is stimulated by an injection of a drug (Synacthen), which is chemically similar to ACTH. If the adrenal glands are working normally, blood samples taken shortly after Synacthen should show a rise in cortisol. If you have hypoadrenalism, you may not have a rise in blood cortisol following the injection.

What happens during the Synacthen test?

- A blood test is taken from a vein in your arm to measure cortisol.
- You will be given an injection of Synacthen, which stimulates the adrenal glands to produce Cortisol.
- You will wait in the waiting room for 30 minutes.
- A final blood test will be taken for cortisol, this completes the test.

Pharmacokinetics of cosyntropin

Corticotropin is a sterile synthetic preparation of ACTH with actions similar to that of ACTH made by the body. ACTH is easily destroyed in the infants' gastrointestinal tract so none would be absorbed by the infant. It contains the first twenty-four of the thirty-nine amino acids found in ACTH.

Corticotropin (Tetracosactrin) has a very short half-life (15 minutes) so will all have left the body after 75 minutes. However, it is not orally bioavailable so the nursing cannot absorb any present in milk.

Breastfeeding may continue as normal particularly as the procedure is unlikely to be completed before 1 hour post injection.

Further Information:

NHS Hull <https://www.hey.nhs.uk/patient-leaflet/short-synacthen-test/>

Short Synacthen Test - Pennine Acute Hospitals NHS Trust
<https://www.pat.nhs.uk/downloads/New%20NCA%20Leaflets/Endocrine/590%20-%20Short%20Synacthen%20Test.pdf>

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NHS Diagnosis Addison's disease <https://www.nhs.uk/conditions/addisons-disease/diagnosis/>

Addison's Self Help Group <https://www.addisonsdisease.org.uk/news/new-nhs-steroid-card-released>

LactMed corticotropin <https://www.ncbi.nlm.nih.gov/books/NBK500708/>

Hale TW Medications and Mother's Milk Springer publication

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