The 5HIAA Test

The NET Patient Foundation: supporting the neuroendocrine cancer community.

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The 5HIAA Test

Your doctor has asked you to have a urine test to measure some very specialised hormones, which may be produced if you have a neuroendocrine tumour. If there is a suspected or known diagnosis of a bowel or atypical lung NET you will be asked to do a special urine test called a 5-hydroxyindole acetic acid (5HIAA).

This is an important marker for patients with 'carcinoid syndrome' with certain bowel NETs and in some atypical lung NET patients.

'Carcinoid syndrome'

This occurs as a result of various hormones and peptides entering the systemic circulation. Symptoms and the frequency of these symptoms in patients are below and include:

- Flushing - 85%
- Teleangiectasia (dilated blood vessels on the skin) - 25%
- Cyanosis (blue or purple coloration of the skin) - 18%
- Pellagra (chronic lack of vitamin B3) - 7%
- Diarrhoea - 75%
- Cramps - 85%
- Right heart lesions (carcinoid heart disease) - 40%
- Left heart lesions (carcinoid heart disease) - 10%
- Bronchospasm - 19%

When serotonin breaks down in the body, it is converted first to 5-HT and then to 5HIAA, which is excreted into the urine.

A urine sample is collected, and the level of 5HIAA in the urine is measured. By measuring the level of 5HIAA in the urine, doctors are able to calculate the amount of serotonin in the body.

A tumour may secrete 5-HT into the bloodstream, where it is converted into 5HIAA. A urine sample is taken, and the level of 5HIAA in the bloodstream is determined.

5HIAA tests are performed every three to six months. It is possible to have a blood sample taken, but it is not a common procedure and may not be as sensitive as the urine sample (the results may not be as accurate). Your doctor will tell you how the test will be taken and will explain the reasons to you.

It maybe recommended that two urine collections be taken over 24 hours.

Various foods and drugs can interfere with the sample so you should avoid the following 24 hours before the sample is taken and during the 24 hour sample period:

- Pecan nuts
- Coffee
- Tea
- Avocados
- Pineapple
- Walnuts
- Aubergine
- Kiwi
- Chocolate
- Plums

All the above contain serotonin, however you only have to avoid them while taking the test.

You will be given a special bottle containing acid so this should be kept in a safe place and away from skin.

There are various medications that should be avoided too (for example, cough and antihistamine medicines) and this should be discussed with your doctor or nurse.