

¹³C Xylose Breath Test

RELEVANCE:

[¹³C]xylose breath test can be used for the diagnosis of small bowel bacterial overgrowth also in paediatrics, including the evaluation of corresponding antibiotic therapy.

SUBSTRATE/TEST DRINK:

Children receive 50 mg of uniformly labelled [U-¹³C]xylose, dissolved in 30 ml of water, either capsuled or not, if the child is unable to swallow the capsule. Adults ingest a 250 mg oral dose of [U-¹³C]xylose, dissolved in 50 ml of water.

STATUS OF PATIENT:

After an overnight fast of at least eight hours. During the test the subjects are instructed to fast except for water. Children should be engaged in quiet play without strenuous activity.

TIMING OF SAMPLE COLLECTION:

Immediately before tracer intake and then every 30 min for three hours

EVALUATION:

FAN proposes a cut-off-value of DOB = 33 ‰ for distinguishing between adult patients with small bowel bacterial overgrowth and healthy individuals. For adults the 180 minute breath samples show the largest differences in ¹³C between normal volunteers and patients with bacterial overgrowth.

REFERENCES:

- Dellert SF, Nowicki MJ, Farrell MK et al. (1997): The ¹³C-Xylose Breath Test for the Diagnosis of Small Bowel Bacterial Overgrowth in Children. *J Paediatr Gastroenterol Nutr* 25, 153 - 158
- Lim AG, Wagner DA and Tosces PP (1993): ¹³C-Xylose Breath Test for Bacterial Overgrowth. *Gastroenterol* 104, A 259