



Fluoroscopy Protocols

Timed Barium Swallow/Esophagram-Adult FLBAT

Fluoro Time Target Limit: 2.0 minutes

Scheduling and Prep: The patient should have nothing to eat or drink for 8 hours prior to the exam.

Purpose: Timed barium esophagram (**FLBAT**) is a simple and objective method for assessing the esophageal emptying. The technique is similar to the usual barium swallow with some modifications, which include taking multiple sequential films at pre-decided time interval after a single swallow of a fixed volume of a specific density barium solution. While many authors have used height and width of the barium column to assess the esophageal emptying, others have used the area of the barium column. This exam is being used in patients with suspected or confirmed **achalasia** and to follow-up those who have been treated with pneumatic dilation or myotomy.
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3644662/#:~:text=Timed%20barium%20esophag>

Supplies: *Single contrast barium, chilled water, 1-medicine cup, 1-drinking cup with mL measurements *Anatomical side marker placed on Image Intensifier surface. If your equipment does not have measuring capabilities built-in Use a marker with cm increments or tape a barium tablet on the image intensifier to allow for measuring.

Mixing the Barium: Add 15ml cold water to a bottle of pre-mixed thin barium. This will get as close as possible to 45% w/v. Shake well, Pour 150ml into a cup with mL measurements.

Procedure: **Open the magnification to the largest FOV. Collimate from side to side.**

- *All images are to be taken in the **upright LPO** position to eliminate superimposition of the esophagus and spine.
- *Fluoro on to line up your patient.

Spot Images: The distance between the fluoroscope carriage and the patient is kept constant during all three spot films.

*Have the patient drink all the 150 mL of barium within 15 to 20 seconds.
Spot images are taken 1, 2 and 5 minutes after barium ingestion

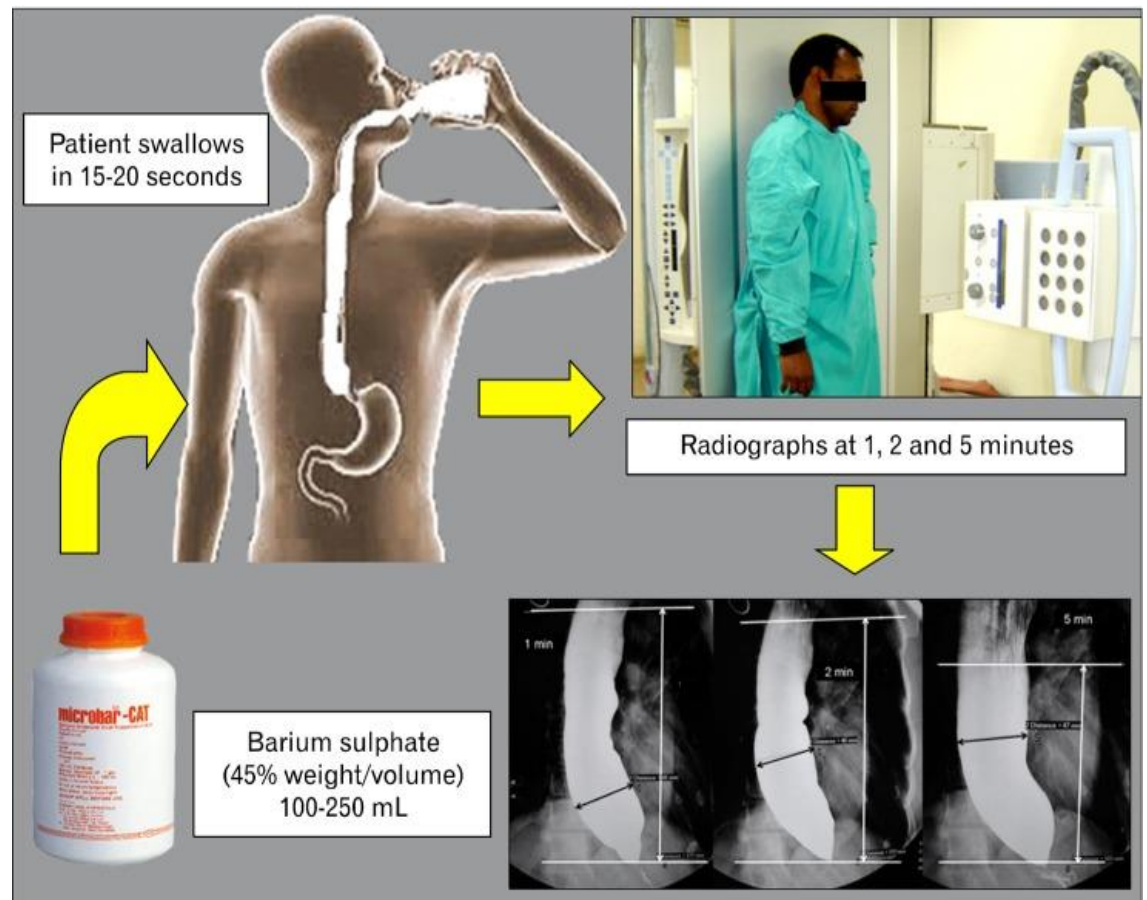
*As soon as the patient finishes drinking the barium, wait 1 minute: take an image of the entire length of the esophagus, to include the gastroesophageal junction. Label 1 minute.

*Wait 1 more minute and take the exact same spot image. Label 2 minutes.

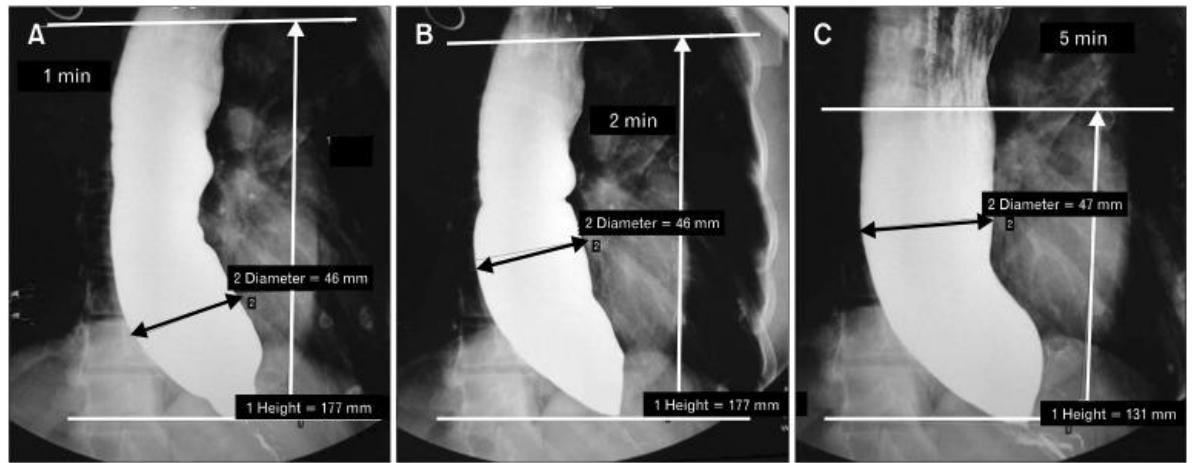
*After the 2-minute image, if barium completely clears from the esophagus on the 2-minute film, the 5-minute film may be omitted.

*After 5 minutes, take the same spot image. Label 5 minutes.

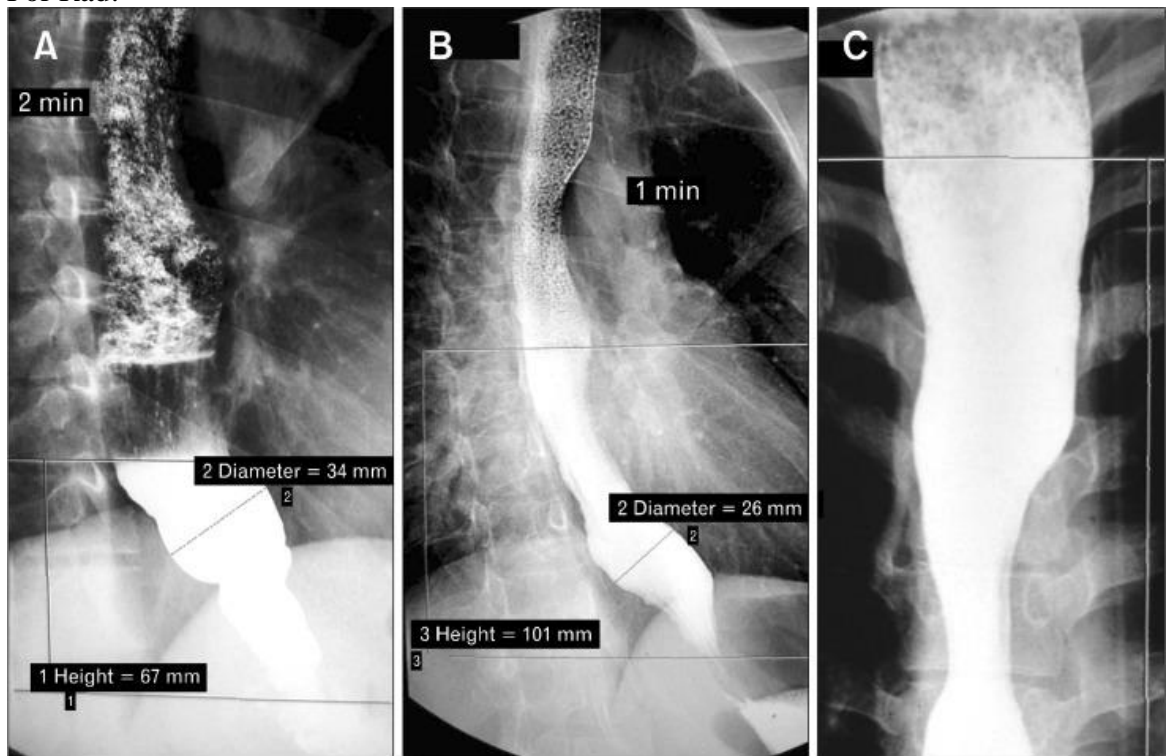
***Label each image with the appropriate time. 1 min, 2min, 5 min.**



For Rad:



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*Report to the Radiologist how much barium the patient ingested, appearance of the esophagus and if and how delayed the barium was emptying out of the esophagus. Show the images to the Radiologist before the patient leaves.

**If aspiration of the barium occurs, stop the patient from drinking; take note if the patient coughs or does not cough. Acquire your 3 images and then consult the radiologist if he or she feels that the exam should continue or be discontinued.

**The radiologist is relying on the Fluoro technologist to witness and inform them of pathology

and motility issues.

** These are the minimum images needed to demonstrate the proper anatomy for this exam.

When deemed necessary, more images may be taken to demonstrate pathology or for
Other reasons.

** Take care to minimize patient and technologist exposure.

**Instruct the patient to drink extra fluids to help prevent constipation from the barium.

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