

## Computerized Tomography (CT) Scan

A computerized tomography (CT) scan is a diagnostic test. It uses an x-ray machine and a computer to create pictures of the body. 3-D images can also be seen. It is used to detect certain diseases, injuries or to help diagnose problems with the organs of the body.

### Preparation/Diet



The clear liquid diet instructions are **only for patients scheduled to have a CT scan in an outpatient setting**. There are no diet restrictions if your CT scan is done in an inpatient setting.

**2 hours** before you check in for your CT scan appointment:

- Maintain a clear liquid diet.
- Drink 4 cups (1,000 mL) of water or clear fluids.
- Unless otherwise instructed, you may have fluids from the list below.

Food Group	Allowed
Soups	Fat-free, clear chicken, beef or vegetable broths; consommé; bouillon.
Fruits	All strained (no pulp) fruit juices except prune juice. Apple and grape juice may cause gas in some patients.
Desserts	Gelatin (without milk or fruit); Italian ices; ice pops (Popsicles®).
Beverages	Water and ice chips; plain tea (without milk or creamer); black coffee (without milk or creamer); clear fruit-flavored beverages (Gatorade® or G2®); carbonated beverages.
Miscellaneous	Salt; sugar; honey; syrup; clear hard candy.
Supplements	Clear liquid oral nutrition supplements (Boost Breeze®), Ensure Clear® or Premier Protein Clear®)

- If you have a PEG or nasogastric feeding tube, you must stop your feedings 2 hours before your CT scan. However, you can supplement with clear fluids from the list above.
- Take your medicines as usual unless otherwise instructed.
- Bring all your prescription and non-prescription medicines in their original, labeled bottles.
- This includes vitamins, nutritional supplements, herbal products and over-the-counter medicines.
- IV contrast dye (media) is often used with CT scans.
- Blood tests (BUN, creatinine) should be completed at least 2 hours before your CT exam.
- If your blood tests were done within the last month by an outside facility, bring the results with you to your appointment.
- If you are currently receiving chemotherapy, immunotherapy or undergoing radiation therapy, your blood tests and results must be completed within 48 hours before receiving your CT scan.

## External Medical Devices

If you have an external medical device, you may be asked to remove the device at your procedure visit. Please bring additional supplies and necessary medicines as needed to your appointment.

Examples of external medical devices are:

- On body injectors (OnPro<sup>®</sup>, Omnipod<sup>®</sup>, V-Go<sup>®</sup>)
- Continuous glucose monitors (FreeStyle Libre<sup>®</sup>, Dexcom G4-6<sup>®</sup>, Medtronic MiniMed<sup>®</sup>, etc.)
- On body transmitters and monitors
- Medication pumps (CADD, insulin pumps)
- Wound care pumps (PICO 7)

## Precautions

Tell the CT staff if you:

- Are allergic to contrast media, iodine or any other allergies
- Have been pre-medicated or need to be pre-medicated for a known contrast media allergy
- Are diabetic and take:
  - Insulin
  - Metformin (Glucophage<sup>®</sup>, Glucovance<sup>®</sup>, Metaglip<sup>®</sup>, Avandamet<sup>®</sup> or Fontamet<sup>®</sup>)
- Are fasting for any other tests
- Are pregnant or breastfeeding
- Have fluid restrictions due to kidney or heart conditions
- Have received or will be receiving a radioactive iodine isotope (I-131)
- Have a PEG or nasogastric feeding tube in place
- Weigh more than 400 pounds (181.4 kilograms)
- Have a metal tracheostomy tube (your metal tube will be replaced with a plastic one in the Head and Neck Center before your CT scan)
- Have problems with constipation

**For patients having a CT scan of the abdomen or pelvis with oral contrast:** On the day of your CT scan, if you are scheduled for any of the following tests, you will need to have them **before** your CT scan:

- Hip x-ray
- Bone mineral density test
- Bone survey
- GI (abdominal) series
- Colonoscopy
- Any procedure that requires sedation or anesthesia

If you are scheduled for an upper GI series (barium swallow), you will need to have it **after** your CT scan.



You will be asked to drink oral contrast media over a duration of 45 minute. Oral contrast media allows your intestines and digestive system to be more visible on the CT scan.

Tell a staff member if you have had any of the following tests within the past 5 to 10 days:

- Barium enema
- Upper GI series
- Radiation simulation test
- CT scan
- If barium was used during your previous tests, you will need to take a laxative. It will help to clear your body of the barium.
- On the day of your CT scan, you will have an x-ray to make sure there is no barium in your intestines.

## Procedure

- The total amount of time for your CT scan, including preparation, is about 2 hours.
- If oral contrast media will be used, you will drink it over a duration of 45 minutes.
- IV contrast media may be used alone or in addition to the oral contrast media.
- If an IV contrast media is required, an IV needle will be placed into a vein in your arm.
- An IV will need to be placed if one has not been started.
- If you are having a CT scan of your pelvis, you may receive a rectal contrast enema in addition to oral and IV contrast media.



- On the day of your CT scan, report to the location listed in your MyChart account.
- Sign in with the receptionist at the front desk.
- Arrive on time at your **scheduled check-in time** to avoid delays.
- **Do not** bring jewelry or other valuables.
- Bring only the amount of money you will need for the day.
- MD Anderson is not responsible for any lost valuables.
- You will receive a locker, lock and a key to store your personal items.
- You will be taken to a dressing room and change into a hospital gown or scrubs.
- A staff member will escort you to the CT imaging area.

## Instructions

During the CT scan:

- You will lie on a padded table.
- You will be positioned for the CT scan.
- Once you are in position, **do not move**. Movement can cause the images to blur.
- A staff member will be outside the CT scan room. You may speak with the staff through an intercom.
- You will be asked to hold your breath at different times during the procedure.
- CT scans take between 5 to 30 minutes.

## Follow-up Care



Within 6 hours after the procedure, drink 4 cups (1 liter or about 2 bottles) of water or clear fluids. The liquids help remove the contrast media from your body. If you are unable to get rid of

the contrast media and/or barium within 24 hours, call your primary clinic. Barium may cause bowel problems. If you feel constipated, you may take an over-the-counter laxative.

## Resources

Click on the hyperlink or scan the QR code below for more information about CT scan.

### How to Use QR Codes with a Smartphone or Tablet

- Make sure your mobile device has an internet signal or Wi-Fi connection.
- Open the camera app on your smartphone or tablet.
- Scan the QR code below with the camera on your device.
- Tap the pop-up notification.

### What to Expect During Your CT Scan Visit

<https://www.mdanderson.org/content/dam/mdanderson/documents/patients-and-family/diagnosis-and-treatment/diagnostic-tests/ct-infographic.pdf>



### Computerized Tomography (CT) Scan video:

<https://youtu.be/j8EFdD3Uc8o>

