

PATIENT INFORMATION SHEET for the MAGNETIC RESONANCE TOMOGRAPHY (MRT) (nuclear magnetic resonance imaging)



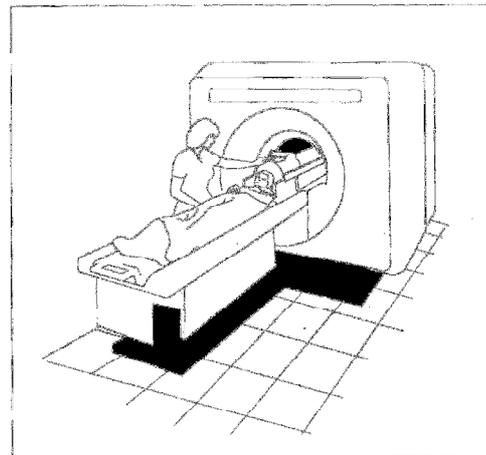
Dear patient!

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Your physician has referred you for undergoing a magnetic resonance tomography examination. For your information, kindly read the text below and answer the questions that follow. This document has been designed to provide basic information. If you have any other questions, please do not hesitate to ask the medical technical staff or the examining physician.

What is a magnetic resonance tomography scan?

Magnetic resonance tomography is used to examine the body without any X-rays. The examination uses powerful magnetic fields which create brief radio frequencies. The signals received from the body in the process are evaluated with a computer. Magnetic resonance tomography is a very reliable and accurate method; nevertheless, conclusive diagnoses may not be possible in every case. If performed properly, the examination is completely pain-free and no harmful effects are currently known.



What is the procedure like?

- Prior to the examination, you will be asked to take off any jewellery, piercings, eye glasses, braces and dentures, hearing aids and hair clips in a change room. You will be asked to take off all your clothes except for your underpants. You will be given a hospital gown to wear.
- Please let your doctor know before the examination if you suffer from claustrophobia.
- Depending on the examined organ, the examination will last for several minutes up to one hour. During the examination, you will be resting in a tube (see illustration).¹
- When you are pushed into the tube-like device, you will be asked to close your eyes briefly.
- Visual contact with you will be maintained throughout the examination. If necessary, you can call medical staff immediately using an emergency ball (bell).
- Loud tapping noises will be heard during the examination.
- The medical staff may give you instructions to hold your breath during certain phases of the examination.
- In some cases, the table top used for the examination may be moving during the procedure.
- Please remain calm, because even the slightest of movements can cause an impairment of the images.
- Important: please do not cross your arms or legs!
- It is imperative to follow the instructions given by the medical staff.

¹ Illustration: E. Weißenborn

Are complications expected?

- In general, the magnetic resonance tomography is a very safe procedure. However, superficial burns may occur in rare cases associated with improper positioning (crossed arms or legs, skin-to-skin contact). Therefore, if you experience a strong sense of heat, please notify the medical staff immediately.

What is contrast medium being used for?

Depending on the examination, it may be necessary to administer a contrast medium injection or infusion into a vein in your arm. This may be necessary to illustrate certain organs and anatomical structures of the body and to help better recognise pathological alterations. The relevancy of a number of examinations can be enhanced with contrast medium.

Scientific studies indicate that no adverse reactions occur in approximately 99 % of patients after the administration of contrast medium.² Similar to almost any medically indicated diagnostic procedure, a life-threatening complication is possible, albeit highly unlikely. Serious complications are very rare (1:10.000),² and therefore the risk associated with the examination is very low compared to the achieved benefit.

However, before being treated with contrast medium, it is important to know your renal function to be able to assess the potentially increased risk in advance. If any adverse reactions arise, medical care will be available immediately.

Adverse reactions and complications associated with contrast medium:

- A haematoma and in very rare cases an infection may develop at the injection site.
- A normal reaction to contrast medium may include a sensation of warmth during the injection. Intolerability-related reactions such as minor blood pressure fluctuations, nausea or tenderness and/or allergic reactions such as itchiness or hives may occur.
- Serious adverse reactions such as dyspnoea, sudden drop in blood pressure, arrhythmia or seizures were observed in rare cases.
- In case of pre-existing kidney damage, the administration of a contrast medium can cause serious inflammation of the skin and connective tissue associated with stiff joints and scarring.³

² Murphy K.J., *Adverse Reactions to Gadolinium Contrast Media* AJR: 1996; 167: 847-849.

³ Sadowski EA, Bennett LK, Chan MR, et al. *Nephrogenic systemic fibrosis: risk factors and incidence estimation.* Radiology 2007;224:148-157