

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



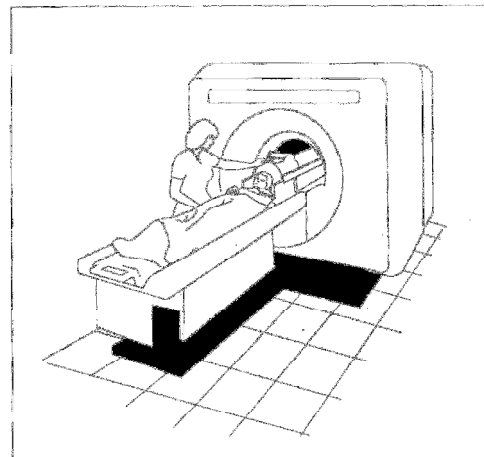
**Dear patient!**

englisch

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).<sup>1</sup>
- 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.

---

<sup>1</sup> 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.<sup>2</sup> 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),<sup>2</sup> 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.<sup>3</sup>

---

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

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

Patient's name

To be able to evaluate your potentially increased risk, we ask that you kindly **answer the following questions by checking the appropriate option:**

1. **Do you currently have or have you ever had a pace maker?**  yes  no  don't know
2. **Did you ever undergo surgery of the heart, head or a joint?**  yes  no  don't know  
*If yes: do you have any implants? e.g. defibrillator, heart valve, ear implant, aneurysm clip, insulin pump, pain control pump, prosthetic joint, shunt, port-a-cath, stent*  yes  no  don't know  
*please specify: .....*
3. **Do you have any metal pieces or fragments (medullary nail, etc.) in your body?**  yes  no  don't know  
*If yes, please specify: .....*
4. **Have you ever undergone an MRT scan?**  yes  no  
*If yes: did any problems arise?*  yes  no  
*please specify: .....*
5. **Do you suffer from claustrophobia?**  yes  no
6. **Do you suffer from kidney disease or have you ever had kidney surgery?**  yes  no  don't know
7. **Are you suffering from diabetes?**  yes  no
8. **Are you suffering from high blood pressure (hypertension)?**  yes  no
9. **Are you suffering from gout?**  yes  no
10. **Do you have allergies, asthma or drug intolerances?**  yes  no  don't know  
*If yes, please specify: .....*  
Allergic reactions to MRT contrast media are extremely rare.  
Allergies to iodine are irrelevant in connection with this examination.
11. **Do you have any tattoos, are you wearing body jewellery (piercings)?**  yes  no
12. **Weight** ..... **kg**      **Height** ..... **cm**

**For female patients:**

14. **Is there a possibility that you might be pregnant?**  yes  no  don't know
15. **Are you using the spiral for birth control?**  yes  no

**Caution:** if you are given a sedative due to claustrophobia, you should avoid driving a motor vehicle or working with dangerous machines during the following 24 hours.

I confirm that I have read and understand the text and that I have answered the questions concerning my person to the best of my knowledge. I consent to the conduct of the proposed MRT examination. My questions have been adequately answered during a personal conversation.

For female patients fitted with a copper spiral: I was informed about the required gynaecological control following an MRT scan using the 3.0T device.



.....  
**Patient's or legal guardian's signature**

.....  
Physician's name and signature

.....  
Date / time

.....  
Med. tech. employee's name and sign.



**Please hand this form to the imaging staff prior to the examination.**

**Physician's remarks about the briefing:**

.....  
.....

The patient does not consent to undergo the examination.

If the patient refuses to undergo the examination, s/he was informed about the potentially resulting negative impact. ....  
.....

**This information sheet was compiled by the following working group:**

Prof. Dr. W. Schima, MSc, Prof. Dr. S. Trattnig, Prof. Mag. iur. Dr. A. Resch-Holeczke,  
Prof. Dr. iur. H. Ofner, Prof. Dr. H. Czembirek, S. Möriz-Kaisergruber, B.S., M.I.M,  
med. director Prof. G. Mostbeck, lecturer Dr. L. Prayer, Dr. M. Rehnelt  
Version 2.1 (2009)

**Copyright:** Austrian Roentgen Society (ÖRG) 2009

The free use of these sheets is permitted with the citation of the working group and ÖRG.