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# KRAKOWSKIE CENTRUM MEDYCZNE NZOZ

[www.kcm.pl](http://www.kcm.pl)

## DIAGNOSIS OF OSTEOPOROSIS

### Patient information

#### INTRODUCTION

Osteoporosis is one of the most prevalent civilisation diseases. Every third woman and every eighth man over 50 suffer from osteoporosis. This disease leads to bone porosity and fragility. Osteoporosis is also called “The silent bone thief”, because those who suffer from it are not always aware that this disease “steals” their minerals. Increased bone porosity makes bones weaker and leads to spine and limb fractures. Vertebral fractures can cause changes in our posture called a “widow's hump” and a loss of height. Spine fractures do not risk our lives, however they can cause pain. The fractures can also lead to chest deformation disabling proper circulation and breathing, thus having influence on the length of our lives. Apart from the spine fractures, the most common to occur are the fractures of: forearm, ribs, proximal femur. The most dangerous is the femoral neck fracture (hip). Every fifth woman dies from the femoral neck fracture if there are any complications, and half of the women who survive become disabled for the rest of their lives.

#### DENSITOMETRY

The main step to diagnose Osteoporosis is the bone mineral density examination – BMD (densitometry). The parts of a body that should be examined are the femoral neck and the lumbar spine. Densitometry of other parts of a body, such as: forearm or heel does not entitle us to diagnose the disease; this can, however, be used for screening. To measure the mineral density of the femoral neck and lumbar spine the whole body densitometer is used. This densitometer consists of a tiny x-ray lamp on one side, and a suitable detector on the other side. Based on the measurement the densitometer describes the density with the precision up to 1%.

Densitometry is completely safe because the dose of radiation equals one-fourth of everyday cosmic radiation to which each man on our planet is exposed.

The absolute result of the measurement (BMD) is compared to a control group examination results. A computer program calculates, so called T-score comparing the obtained result with the bone density result among healthy people at the age of 40, and T-score comparing with a control group of the same age as the person examined. Based on these scores the World Health Organisation (WHO) adopted the following diagnostic criteria:

Diagnosis	T or Z score
Norm	+1.0 - -1.0
Osteopenia	-1.0 - -2.4
Osteoporosis	-2.5
severe OP	-2.5 and one or more fractures

Krakowskie Centrum Medyczne uses the most modern fan-beam equipment, type Hologic Delphi W, for densitometry. Such densitometers allow faster and more precise measurement. Moreover, our centre possesses the peripheral densitometer DTX 200 for BMD assessment in a forearm and the ultrasound equipment Sunlight Omnisense. The tests are performed by qualified RTG technicians. The workshop itself consists of international certificates. The tests descriptions are also carried out by certified doctors. The workshop is under the leadership of dr hab.med. Edward Czerwiński – the lecturer and director of Densitometry courses - IOF and ISCD certificates.

**Rejestracja - tel. 012 430 00 00**

pon-pt: godz. 7-19, sobota: 8-14

Who should be tested for osteoporosis?

The Bone Mineral Density tests are recommended for women over 55 and for people, who have the following risk factors for osteoporosis:

- previous fragility fractures – low-trauma
- mother suffering from osteoporosis
- early menopauza
- fragile body
- smoking habits and alcohol consumption

and also for people who:

- use glucocorticosteroids (e.g Encorton)
- use anti-epileptic drugs
- suffer from chronic kidney disease
- suffer from alimentary canal pains.

Registration

In order to make an appointment we kindly ask for a telephone contact on the following number 012 430 0000. Patients should arrive at the workshop for the appointed hour. Waiting time is no longer than 15 minutes. Test results are printed out immediately. Doctors interpretation and recommendations are added to the test results the next day and posted, if required, to the patient. So far, we have performed in our Centre 80,000 densitometry tests, which is the highest number of tests to be carried out by a single centre in the world.

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