

## Age Dynamics of Bone Mineral Density in Women, Taking into Account Regional Specificities

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### Abstract

In the present study evaluated the age dynamics of bone mineral density (BMD) in women from a regional perspective. The study included 1504 women living in the Kemerovo region, who underwent lumbar vertebrae osteodensitometry by dual-energy X-ray absorptiometry. Evaluation of bone mineral density was carried out using a densitometer Lunar-DPX-NT (GE Healthcare, UK). Area of interest were the first to fourth lumbar vertebrae.

Peak values of bone mineral density in women Kemerovo region correspond 20–29 years of age, with an average of 1,177 g/cm<sup>2</sup>. Over the next 10 years there has been stability indicators, and the age of 40–49 years – a moderate decrease in BMD. A significant decrease in bone mass is observed after 50-years of age, which is associated with the onset of menopause. By the age of 50–59 years overall reduction in lumbar spine BMD in women is about 8 %, and by the age of 70 for 16 % of the peak 20–29 years of age, while the average are respectively 1,083 and 0,989 g/cm<sup>2</sup>.

The results of the present study will contribute to a more accurate assessment of bone mineral density of women, taking into account regional differences.

**Key words:** Bone Mineral Density, Dual-Energy X-ray Absorptiometry, Osteoporosis.

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