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**EVOLIUCINĖ MEDICINA:
ŽMOGAUS RAIDOS PERSPEKTYVOS IR SVEIKATA
BESIKEIČIANČIOJE APLINKOJE**

**EVOLUTIONARY MEDICINE:
PERSPECTIVES ON HUMAN DEVELOPMENT AND HEALTH
CONSEQUENCES IN A CHANGING ENVIRONMENT**

Rengėjas:

Vilniaus universiteto Medicinos ir sveikatos mokslų
Doktorantūros mokykla, VU Medicinos fakultetas

Organized by

the Doctoral School of Medicine and Health sciences
at Vilnius University, VU Faculty of Medicine

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BODY MASS INDEX AND PUBERTAL TIMING IN LITHUANIAN GIRLS

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Background and Aim: Women make up about half of mankind. Girls aged 7-17 make about 50 % of children in this age group. During puberty, complex anatomical, hormonal, and psychosocial processes occur. Weight problems are one of the most important issues for girls in this period, both physically and psychologically. Overweight, obesity, or thinness are the two extreme sides of the problem. Both of them greatly influence puberty. For women's health, puberty is of primary importance, as it often determines the health of the fertile period.

Materials and Methods: A cohort of 952 healthy, asymptomatic volunteer girls aged 7–17 years was examined between September 2023 and May 2026. The study was approved by the Vilnius Regional Bioethics Committee, Vilnius, Lithuania. Breast development was staged using Tanner criteria. Anthropometric and ultrasound parameters were recorded, including body circumferences, skinfolds, uterine and ovarian dimensions, and breast tissue thickness. All the girls and their parents filled out the questionnaires about their birth data, menstrual cycle (if there is one), and other medical conditions. Body mass index (BMI) was calculated $BMI = \text{weight} / \text{height}^2$. We aim to determine how girls' BMI influences the onset of thelarche and menarche.

Results: Puberty in girls with increased BMI starts earlier than in girls with low BMI.

Conclusions: We think that both thinness and obesity greatly influence puberty: obesity accelerates puberty, and thinness slows it down.

Keywords: girls, obesity, puberty, thinness, ultrasound