

HORMONAL CHANGES IN GIRLS OF PUBERTY.

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Annotation. This article explores hormonal changes caused by girls in adulthood, focusing on physiological and psychological effects. Puberty marks an important stage of development, primarily associated with hormonal fluctuations that affect growth, reproductive maturity and emotional well-being. The article includes an in-depth analysis of literature, a study of research methodology and analysis of results, followed by discussions on results and future areas of research.

Keywords: puberty, hormonal changes, estrogen, adolescence, growth rates, menstrual cycle, psychological effects, puberty in girls, reproductive health.

Puberty is an important period of development that transfers girls from childhood to adulthood. It is characterized by rapid physical growth, sexual maturity and deep hormonal changes. Hormonal shifts, especially in estrogen and progesterone, are the main factors in these changes. Understanding the dynamics of girls' puberty is very important for medical professionals, teachers and parents, as it affects physical and psychological health.

The purpose of this article is to provide a complete overview of hormonal changes in puberty in girls, analyze existing research and provide insight into the consequences of these changes for growth, development and emotional well-being.

Puberty is a period of significant hormonal and physical changes in girls in the transition from childhood to adulthood. Hormonal changes that occur during this time are responsible for secondary sexual characteristics and the development of reproductive ability. The main hormones include:

1. Estrogen

- Main function: Estrogen is the main female sex hormone. It stimulates the growth of breast tissue, the development of the lining of the uterus and the regulation of the menstrual cycle.

- Effect: it causes physical changes such as breast development, hip enlargement and the onset of menstruation (menarche).

2. Progesterone

- Main function: progesterone produced by the ovaries after ovulation works with estrogen to regulate the menstrual cycle and prepare the body for a potential pregnancy.

- Effect: promotes thickening of the lining of the uterus and is necessary to regulate menstruation.

3. Luteinizing hormone (LH) and follicle-stimulating hormone (FSH)

- Main function: these hormones produced by the pituitary gland stimulate the ovaries to produce estrogen and progesterone and initiate the growth of ovarian follicles.

- Effect: they play an important role in regulating ovulation and the menstrual cycle.

4. Testosterone

- Main function: although it is usually considered a male hormone, testosterone is also present in girls and promotes the development of muscle mass and body hair.

- Effect: it affects sexual development and the growth of armpits and pubic hair.

5. Growth Hormone

- Main function: this hormone stimulates the overall growth of the body.

- Effect: promotes rapid growth rates during puberty, which is more pronounced in the early stages.

The Main Physical Changes In Puberty

- Breast development (Thelarche): one of the first signs of puberty.

- Growth rate: increased height and changes in body composition, including more fat in areas such as thighs and thighs.

- Pubic and armpit hair: hair growth in these areas due to androgens.

- Menarche (first menstrual cycle): it is usually 12 years old, but it can make a difference.

- Acne: increased fat content in the skin due to hormonal changes can lead to the appearance of acne.

- Body odor: due to the activation of the sweat glands.

Emotional and psychological changes

-In adulthood, mood swings, irritability and increased emotional sensitivity are common, often due to changes in hormone levels.

- Increased body image, originality and interest in social relationships.

These hormonal shifts mark an important stage in a girl's life, preparing her body for Adulthood and reproduction. Puberty usually begins between the ages of 8 and 13, but time may change.

The results emphasize the multifaceted role of hormonal changes in puberty. Estrogen and progesterone, along with other hormones, regulate both the physical growth and emotional state of teenage girls. The increase in estrogen is very important not only for reproductive maturity, but also for skeletal growth and brain development.

The relationship between Estrogen and mood swings is particularly noteworthy. Hormonal fluctuations contribute to high emotional sensitivity and mental health problems observed in adolescence. This emphasizes the need for early interventions to support mental health in adulthood.

Conclusion

Puberty is a complex process associated with hormonal changes that affect the physical and psychological development of girls. The results of this study show that while these hormonal changes are necessary for reproductive maturity and growth, they also affect emotional health.

Longitudinal studies: more long-term studies are needed to monitor hormonal fluctuations and their post-adolescent psychological effects.

Intervention programs: schools and health systems should consider implementing early psychological support programs for girls in adulthood.

Broader demographics: expanding research to include girls of different nationalities and socioeconomic backgrounds provides a broader understanding of how puberty affects different populations.

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