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ФІЗИЧНА РЕАБІЛІТАЦІЯ ТА
ЗДОРОВ'ЯЗБЕРЕЖУВАЛЬНІ ТЕХНОЛОГІЇ:
РЕАЛІЇ ТА ПЕРСПЕКТИВИ

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THE IMPACT OF THE MENSTRUAL CYCLE ON STRENGTH TRAINING PERFORMANCE IN FEMALE ATHLETES

In recent years, there has been increased interest in the scientific literature regarding the impact of the menstrual cycle (MC) on athletic performance in women. However, there are still controversial issues regarding the impact of the MC in women who participate in strength training. Ignoring hormonal fluctuations in female athletes can lead to poorly substantiated training recommendations that may be detrimental to women's athletic progress.

The aim of this paper was to summarize the data in the current scientific literature on the role of the MC on the success of strength training in female athletes.

Hormonal fluctuations in the MC cause many processes in the body related to reproduction. Regular MC leads to a repetitive and cyclical process of rises and falls of estrogen and progesterone; during her lifetime, a woman will experience 451 MCs and should be considered the most important indicator of metabolic and physical health [1]. As part of their regular menstrual cycle, many women experience a wide range of symptoms related to hormonal fluctuations and menstrual bleeding, including physical pain and mood disorders. It is therefore not surprising that menstrual symptoms such as menstrual pain and heavy menstrual bleeding reduce participation in sports in both the general population and athletes [2]. Resistance-trained athletes, competitive or not, experience menstrual symptoms similar to those reported in other training women and the general population. Research has shown that 50% of female athletes perceive their MC to have a negative impact on performance during both training and competition. Therefore, further understanding of all components of MC, including the perception of its impact on training, is important to consider the impact of MC as a whole [1].

Another important topic that impacts MC and potentially athletic performance is the use of hormonal contraceptives. These drugs create a unique hormonal environment that differs from the natural MC, using exogenous hormones to modulate the hormonal ups and downs typically seen in the natural MC. Previous studies have reported that

approximately 29.0–49.5% of training women worldwide use some form of HC for a variety of reasons [3].

Resistance training is an important aspect of general exercise and is the primary training regimen for strength sports. Strength sports include Olympic weightlifting, powerlifting, CrossFit, physique-based sports, throwing sports, and other related strength-oriented competitions. Because resistance training and strength sports rely on different training styles than endurance training, the impact of any changes in MC symptoms may be different in these sports because different body regions and training styles are used. For example, a decrease in explosive power due to changes in MC symptoms may be more detrimental in throwing sports than in marathon running.

There are currently no data on the impact of MC on strength performance in resistance-trained athletes. Understanding athletes' perceptions of the effects of the MC is an essential component in establishing any actual performance effects, but there is a dearth of data in this area, particularly in the resistance-trained population. There has been an increasing popularity of the topic of adjusting resistance training programs around the MC, but more normative data on the MC in the target population is needed to better inform these theories and practices [4].

In summary, women who participate in strength training, competitive or not, experience MC symptoms similar to those reported in other athletic women and the general population. Research continues to reveal more details about the mechanisms underlying these experiences, so at this time, understanding and individualizing the fatigue, pain, and other severe MC symptoms in female athletes is the best approach.

Literature

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