



No Link Between Hormonal Milieu and Joint Injury in Female Athletes

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Taking oral birth control does not protect against the risk of anterior cruciate ligament (ACL) or ankle injury in female athletes, according to a recent study of 3,150 college basketball and soccer players.

Studies show that female athletes sustain more noncontact ACL injuries than do men, but researchers are not certain as to why. Potential causes include differences in muscle strength, joint laxity, and the hormonal environment, but no definitive risk factors have been pinpointed.

Based on earlier data revealing that the highest rate of ACL injuries occurred 7-9 days after the onset of menses among college athletes, Julie Agel of the University of Minnesota, Minneapolis, and her colleagues sought to verify this observation using an expanded data set that included ACL as well as ankle injuries. They also examined whether oral contraceptives provide a protective effect against injury (Med. Sci. Sports Exerc. 2006;38:7-12).

Among the women included in the data set, 45 incurred noncontact ACL injuries and 116 incurred noncontact ankle sprains.

The investigators found no difference in the rate of injury between those females who took oral contraceptives and those who did not. Analysis revealed that injuries peaked for athletes not taking hormonal contraceptives 7-9 days after the onset of menses when players were asked to recall the onset of the last period. However, a separate analysis did not corroborate this finding when these players predicted the onset of the next cycle, nor was this finding observed among women taking birth control by either retrospective or prospective analysis. Consequently, the authors noted that "the lack of periodicity in three of the four analyses in this data set would support the fact that there is no periodicity in the occurrence of noncontact ACL injury or ankle sprain."

The only significant difference found in the study involved the frequency of injury by sport, with basketball players sustaining injuries at significantly higher rates than soccer players for both ACL injuries (1.6% vs. 1.1%) and ankle sprains (4.5% vs. 2.1%).