Female hormone cycle affects knee joints (w/Video)

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New research from the Faculty of Kinesiology at the University of Calgary has found a connection between the laxity of a woman's knee joint and her monthly hormone cycle.

The research project — a collaboration between kinesiology, engineering and health sciences researchers — has found that not all woman experience knee laxity at the same time of their menst rual cycle. The researchers speculate that this is likely why previous research in the area has largely discounted a connection between the hormone cycle and knee injury.

In a series of recent papers published in the British Journal of Sports Medicine and The *American Journal of Sports Medicine* the researchers noted that while 14 of 26 subjects exhibited the greatest amount of knee laxity during the ovulation phase, while 10 others had the greatest laxity during the follicular phase and 2 subjects during the luteal phase.

"What this shows us is that the connection between the hormonal cycle and knee laxity is not a cookie-cutter relationship," says one of the studies' lead authors, Faculty of Kinesiology professor Darren Stefanyshyn. "Individuals have significant differences and I think that finding out why these differences occur could go a long way to helping athletes understand if they are more at risk and perhaps in designing interventions to help prevent injury."

In the University of Calgary study, 26 women were monitored throughout the course of their monthly course of cycle. Their knee laxity was measured at each phase and they were asked to perform several athletic movements like quick cuts, or sharp jumps. The researchers found that the greater knee laxity lead to biomechanical differences that could lead to injury in a game situation.

Female athletes are between two and eight times more likely to injure their ACL knee ligaments than men. ACL injuries remain one of the biggest concerns in orthopaedic sports medicine and it is estimated that these injuries cost the health care system nearly $2 billion annually.

Young athletes who suffer knee injuries are far more likely to suffer knee osteoarthritis when they age, and are at risk for a much less active life-style following injury.

Source: University of Calgary (news : web)