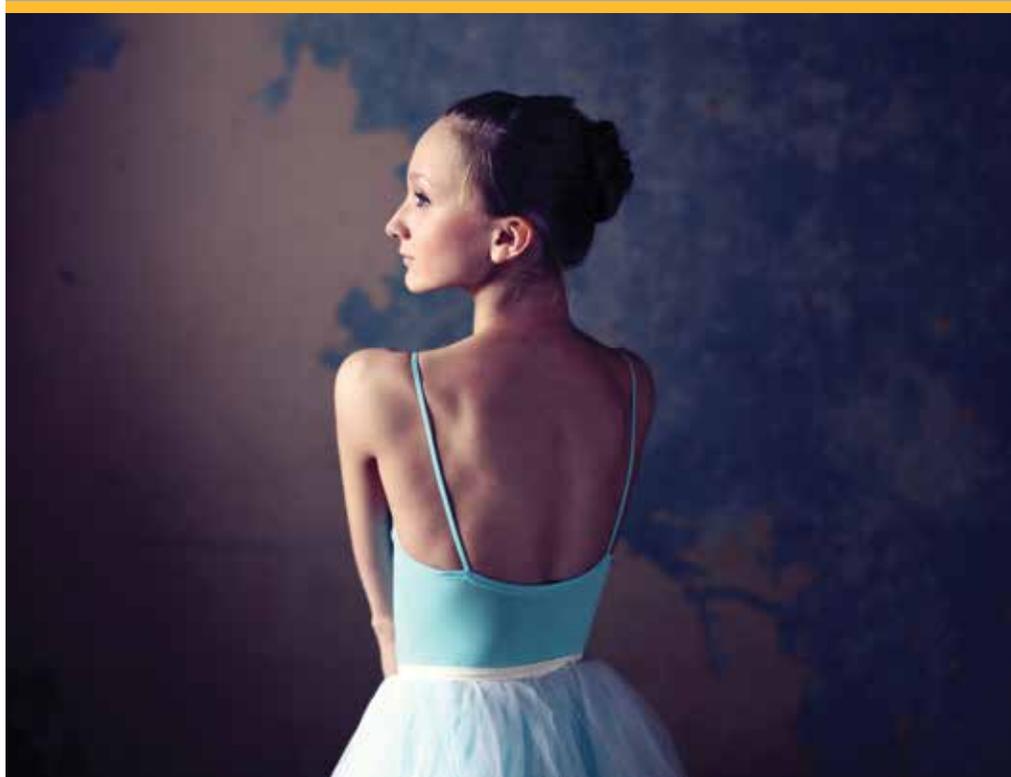


UCLA specialists offer expert evidence-based screening and treatment for Female Athlete Triad



Some girls and women who exercise intensely — whether competitive athletes or recreational — are at risk for a medical condition called the Female Athlete Triad, encompassing three interrelated components: low energy availability with or without disordered eating, menstrual dysfunction and low bone-mineral density.

In the short term, the triad can lead to stress fractures and other injuries. Long-term impacts can include bone weakness, along with reproductive and endocrine repercussions. Early intervention is considered essential to prevent progression to such serious medical issues as clinical eating disorders, amenorrhea and osteoporosis.

At special risk for the triad are women who pursue sports emphasizing leanness, such as figure skating, gymnastics and dance. Also at risk are endurance runners, who expend high amounts of energy relative to their nutritional intake, contributing to a chronic energy deficit that can disrupt menstrual cycles and bone health.

Nutrition and bone health

A three-year study at UCLA is analyzing the effectiveness of nutritional interventions on bone health — the reduction of stress fractures and bone stress injuries — one aspect of the Female Athlete Triad. The cooperative project with Stanford University involves middle and distance runners, at highest risk for such injuries.

The study examines increasing energy intake to equal or exceed expenditure, along with bone-building nutrients and supplements such as Vitamin D and calcium, which may optimize bone health. “I believe we’re onto something with the emphasis on optimizing energy intake and balance and avoidance of chronic energy deficits,” says Aurelia Nattiv, MD, professor in the departments of Family Medicine and Orthopaedic Surgery and director of the UCLA Metabolic Bone Disease & Osteoporosis Center. “Our ultimate objective is to keep our patients’ bones healthy for a lifetime.”

Dr. Nattiv is principal investigator and a lead author of the *2014 Female Athlete Triad Consensus Statement*. The project received funding from the American Medical Society for Sports Medicine and UCLA Clinical and Translational Research Laboratory.

UCLA has an extensive history of treatment and research into the triad components and the health of female athletes. The UCLA Sports Medicine Center, part of the Department of Orthopaedic Surgery, treats competitive and recreational athletes of all levels with a multidisciplinary approach combining nonoperative and operative sports medical care. The UCLA Metabolic Bone Disease & Osteoporosis Center has expertise with bone conditions in patients with eating disorders.

New guidelines issued to assist physicians

The *2014 Female Athlete Triad Coalition Consensus Statement on Treatment and Return to Play of the Female Athlete Triad* provides clinical guidelines for physicians, athletic trainers and other healthcare providers for the screening, diagnosis and treatment of the triad, along with recommendations for return to play. The statement, crafted by an international consortium of triad physicians and researchers that includes representatives from UCLA and other academic medical centers, was published simultaneously in the *British Journal of Sports Medicine* and the *Clinical Journal of Sports Medicine* in 2014.

Screening for the triad is recommended as part of any female athlete's pre-participation physical evaluation, at both the high school and collegiate levels. Risk factors include a history of dieting, menstrual irregularities, depression, stress fractures, overtraining, recurrent injuries and personality traits such as perfectionism. The *2014 Female Athlete Triad Consensus Statement* includes a risk stratification algorithm and point system that guides physicians through the exam and bases participation clearance on the athlete's history, risk factors and physical exam findings.

Comprehensive approach and assessment

UCLA orthopaedic and family medicine specialists come together regularly to discuss athletes and patients at high risk for the triad, as well as for recurrent injuries. Other specialists join the team as needed, including dietitians, trainers, physical therapists, psychologists and endocrinologists.

A comprehensive assessment for competitive or recreational athletes begins with a full metabolic workup, and analysis of nutritional, hormonal and biomechanical issues.

Improving nutritional intake is used as a first option to increase bone health before prescribing medications. The same holds true for achieving regular menstruation, for which pharmacological interventions remain mostly experimental.

With treatment, the three triad components recover at different rates. First to show improvement is energy status, within days or weeks of increased energy intake and/or decreased expenditure. Recovery of healthy menstrual status typically takes several months and recovery of bone-mineral density can take years. The UCLA team works closely with each athlete and her primary care physician in designing a treatment plan suited to her health needs.

Participating Physician

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