

For big athletes: Possible future risk

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New primary research comparing the signs of metabolic syndrome in professional baseball and football players, reveals that the larger professional athletes -- football linemen in particular -- may encounter future health problems despite their rigorous exercise routines.

For today's athletes, size and strength can mean the difference between championships, scholarships and million-dollar paydays. But new research comparing the signs of [metabolic syndrome](#) in professional baseball and football players, presented at the American College of Gastroenterology's 74th Annual Scientific Meeting in San Diego, reveals that the larger professional athletes - specifically football linemen - may encounter future health problems despite their rigorous exercise routines. These findings come after previous media reports have suggested that [professional football players](#) are twice as likely to die before age 50 as professional baseball players.

Researchers collected and studied the cardiometabolic syndrome parameters of 69 current professional football players and 155 current professional baseball players. Parameters studied included blood pressure, fasting glucose, [triglycerides](#), waist circumference, high density lipoprotein (HDL) cholesterol, body mass index, waist-to-height ratio, insulin resistance and levels of alanine aminotransferase, an indicator of fatty liver disease.

As a whole, professional football players demonstrated higher fasting [glucose levels](#), increased body mass index, waist circumference and waist-to-height ratios as compared to their baseball counterparts. In particular, among the 19 professional football linemen studied (including guards, tackles, centers and defensive ends) there was a significant increase in these parameters and, as a result, an increased incidence of cardiometabolic syndrome, defined as exhibiting three or more risk factors.

"Most studies that have examined cardiometabolic

risks in professional athletes have been conducted after athletes retire. This is one of the first to study athletes in the midst of their playing careers," said ACG member Dr. Michael Selden, who authored the study. "We expect professional athletes to be in peak physical condition given the demands of their jobs and the amount of time they spend exercising heavily. However, there does not seem to be a complete protective effect of exercise, particularly among the larger athletes - football linemen. Instead, the impact of their sheer size may outweigh the positive benefits of exercise to mitigate their risk for cardiometabolic syndrome, fatty liver disease, and insulin resistance."

Recent studies suggest that this phenomenon may impact the next generation of players as well. A recent report in the Journal of the American Medical Association (JAMA Vol. 297 No. 4, January 24/31, 2007) that examined the incidence of overweight players and obesity among 3,683 high school football linemen found that 45 percent were classified as overweight and 9 percent would be classified with severe obesity.

"As younger athletes in high school and college are encouraged to get larger for competitive reasons, these conditions may manifest themselves in younger and younger populations," explains Dr. John Helzberg, FACG, Co-director of the Division of Gastroenterology, Saint Luke's Hospital of Kansas City, Clinical Professor of Medicine, University of Missouri- Kansas City School of Medicine, who co-authored the study. "For the population in general, the concept that you can be both fat and fit may simply not be true."

"Those players found to be at risk can undergo dietary and possibly medical interventions to reduce their risk, particularly after they stop playing when their risk would be expected to rise with increased age and presumed decreased exercise," concludes Dr. Helzberg.

Source: American College of Gastroenterology

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