New research reveals that a low-calorie ketogenic diet can help testosterone levels in overweight men

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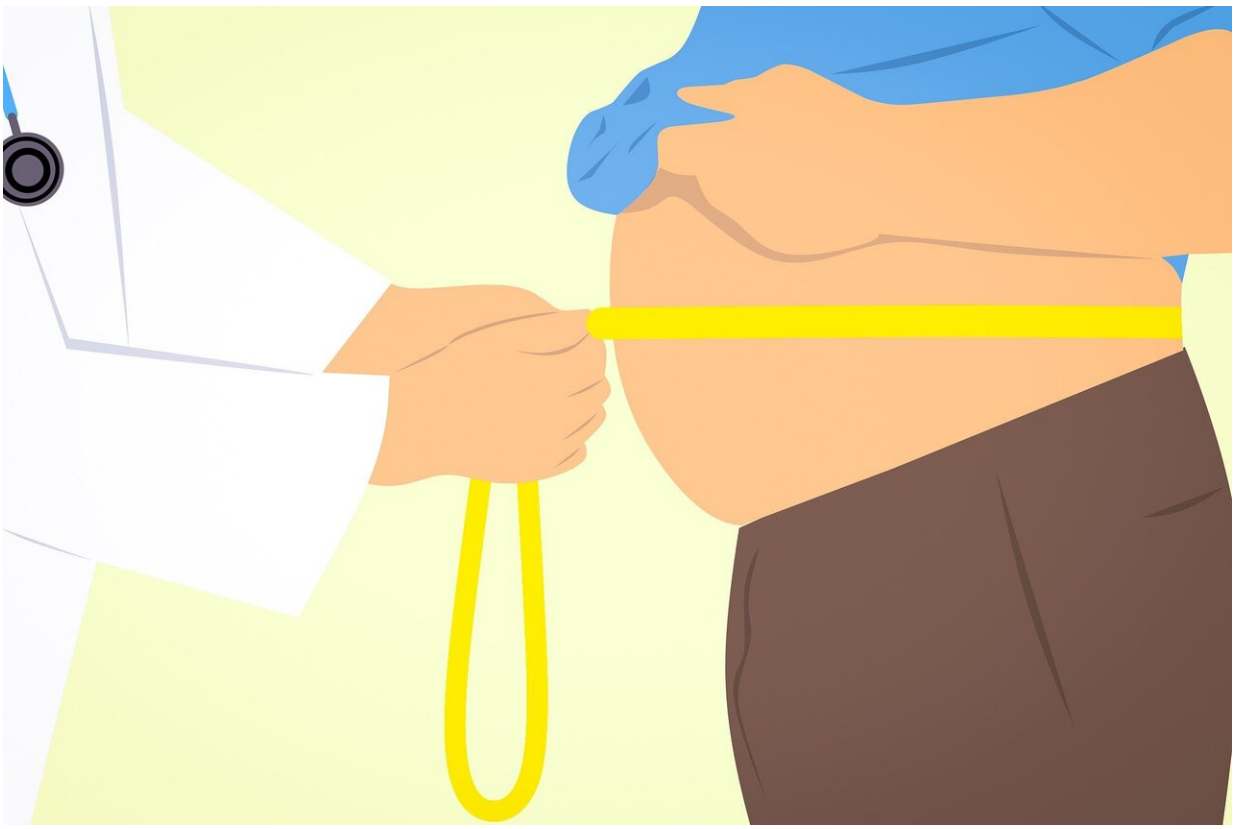

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A very low-calorie ketogenic diet can help testosterone and sex hormone (SHBG) levels in overweight men, according to a study being presented

at the 23rd European Congress of Endocrinology (e-ECE 2021), on Monday 24 May 2021. The study found that after following a recommended low-calorie ketogenic diet for four weeks, body weight, fat mass and body mass index (BMI) significantly decreased and a substantial increase of total testosterone and SHBG levels were also found. Testosterone is responsible for sexual and reproductive functions. However, it plays a significant role in calorie utilisation and metabolism as well.

This study was the first of its kind to examine the effect of a very low-calorie ketogenic diet on testosterone and SHBG levels and therefore highlighted the tight relation between insulin action, energy balance, and testicular function. As men who are overweight or obese can also suffer from low levels of testosterone and SHBG levels, the data suggests that further research into a low-calorie ketogenic diet and its effect on male testosterone and SHBG levels may be a promising area for additional research.

The worldwide prevalence of obesity nearly doubled between 1980 and 2008. According to country estimates for 2008, over 50% of men in the WHO European Region were overweight, and roughly 20% were obese. Obesity can lead to diabetes and heart disease, as well as psychological problems.

To tackle this, various lifestyle changes, activities and treatments are widely recommended, and a ketogenic diet is becoming increasingly recognised as one of them. The diet consists of little protein and very little carbohydrates, and when done as very-low calorie a daily intake of less than 800 calories is advised. A very low-calorie ketogenic diet has previously been found to reduce body weight, glycaemia and insulinemia, but its effects on total testosterone and SHBG levels were less clear, until now.

Dr. Angelo Cignarelli and a team of colleagues from the University of Bari in Italy investigated whether this controlled diet would have the same, positive effect that it does on overall bodyweight on total testosterone and SHBG levels. The 17 male subjects in the study underwent a low-calorie ketogenic diet for four weeks, and various tests were carried out before and after one (1) and four (4) weeks.

"We aimed to evaluate the response of total testosterone and sex hormone levels to a very low-calorie ketogenic diet in a cohort of overweight or obese non-diabetic male subjects and what we found was that there is a noticeable relation between a specific, controlled diet and insulin action, energy balance, and testicular function," says Dr. Cignarelli.

This is the first study that has evaluated the early response of androgen levels to the institution of a very low-calorie ketogenic diet, and highlights the relation between insulin action, energy balance, and testicular function. Results from this study now prove that a very low-calorie ketogenic diet can positively effect on total testosterone and SHBG levels. Further analysis will provide information about the effect of this nutritional intervention on additional clinical outcomes related to testosterone such as sexual function, muscle strength and quality of life.

More information: Abstract 743: Effects of a very low-calorie ketogenic diet on androgen levels in overweight/obese men: a single-arm uncontrolled study, http://www.ece2021.org

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