

Waist Circumference obesity and the risk of rheumatoid arthritis: a prospective cohort study of middle-aged women

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Objectives: There is an increasing trend of obesity globally, however its effect on rheumatoid arthritis(RA) development remains debatable. Overweight or obesity may affect the risk of RA through mediation by immune activation. Our aim was to evaluate the association between overweight, obesity in general, and abdominal obesity, and the risk for development of incident RA.

Methods: The UK Women's Cohort Study (UKWCS) is a large population-based, prospective cohort, which has collected demographic, anthropometric, dietary, lifestyle, and health-related information from 35,372 women aged 35-69 years. Body mass index(BMI; kg/m²) and waist circumference (WC; cm) as exposures were used in conditional logistic regression models adjusting for smoking status, education levels and physical activity. Cases were matched to controls by age and time at entry to the study. BMI was categorized according to the World Health Organization (WHO) criteria: obesity (≥ 30 kg/m²), overweight (25.0-29.9 kg/m²), normal weight (18.5-24.9 kg/m²), or underweight (<18.5 kg/m²). Abdominal obesity was defined as waist circumference > 88 cm (women).

Results: 293 RA cases (12.2% with seropositive RA) and 879 matched controls were identified. The adjusted odds ratios (OR) per unit of BMI and waist circumference with RA risk were 1.03 (95% Confidence Interval (CI): 0.99,1.06) and 1.00 (95% CI: 0.98, 1.02). An association was observed for overweight individuals, with an adjusted OR 1.52(95%CI: 1.07, 2.13) when compared with those with normal weight. Women with abdominal obesity were associated with a 4 times increased risk of RA (OR= 4.24, 95% CI: 2.91, 6.17). This risk was especially notable in women under the age of 55 years OR: 8.43, 95%CI(4.88,14.56).

Conclusions: Our findings suggested that being overweight, or having abdominal obesity, were independently associated with an increased risk of RA. This appeared to be more relevant for younger women. These associations need to be examined in longitudinal studies further.

Health Profile of Sumo Wrestlers

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Introduction: Sumo wrestling, an ancient and sacred traditional sport in Japan with a 2000-year history, has recently become a worldwide sport. The International Sumo Federation was established in 1992 and has 88 member countries. The top ranked sumo wrestlers are from Japan and Mongolia. Sumo wrestlers are the heaviest athletes in the world. Their average weight is over 160 kg. The heaviest sumo wrestler weighed 293 kg. This review presents an update on the health profile of sumo wrestlers.

Methods: A systematic search of literature was conducted using the search terms sumo wrestlers, obesity, body composition, health profile, comorbidities, mortality, and life expectancy.

Results: Sumo wrestlers have a high body mass index. Their body composition shows high fat mass and high muscle mass. They also have high bone mineral content and high bone mineral density. Sumo wrestlers have a high resting energy expenditure, but their energy intake (up to 10,000

calories/day) exceeds their energy expenditure over a long period of time for the voluntary objective of weight gain. Because of the type of combats that they are involved in, many sumo wrestlers are at increased risk of multiple injuries including fractures. The most common location of injuries is the lower extremities. The heavy weight and the high fat mass (especially visceral fat) expose the sumo wrestlers to the development of several comorbidities such as insulin resistance, prediabetes, type 2 diabetes, hypertension, dyslipidemia, ischemic heart disease, and osteoarthritis. However, with intensive daily exercise, most sumo wrestlers can maintain normal serum glucose and triglycerides levels but without completely correcting their insulin resistance or normalizing their low serum high-density lipoprotein cholesterol levels. Japanese sumo wrestlers who are in the age group of 35-74 years have a significantly higher mortality rate in comparison to the control population. Cardiovascular diseases are the major cause of death in these people. The life expectancy of Japanese sumo wrestlers is around 65 years, at least 10 years shorter than controls.

Conclusion: Sumo wrestlers are exposed to multiple injuries including fractures and are predisposed to develop comorbidities such as insulin resistance, prediabetes, type 2 diabetes, hypertension, dyslipidemia, ischemic heart disease, and osteoarthritis. The comorbidities associated with excessive fat mass significantly shorten the life expectancy of sumo wrestlers.

Trends in the Utilization of Sodium-Glucose Co-Transporter 2 Inhibitors after Type 2 Diabetes diagnosis in South Korea

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Aims: This study aims to assess the usage trends of SGLT2i in South Korea.

Methods: Using the Korean national insurance claims database, we estimated the prevalence and proportion of SGLT2i use from January 2015 to December 2021. Additionally, we assessed the mean time to SGLT2i initiation following type 2 diabetes diagnosis, considering factors such as cardiovascular and renal disease (CVRD), from January 2015 to December 2019.

Results: From 2015 to 2021, there was an increase in both the number and proportion of SGLT2i users across various treatment types. Specifically, the use of SGLT2i in monotherapy increased from 1.0% to 4.5%, in double therapy from 3.2% to 16.1%, in triple therapy from 2.0% to 19.8%, and in quadruple or more therapies from 9.5% to 26.1%. This upward trend was evident among individuals with or without CVRD, with the most pronounced increase observed in those with heart failure (2.2% to 16.6%). However, despite these increases, the overall rate of SGLT2i use in 2021 was still low at 14.1%. The mean time from diabetes diagnosis to the initiation of SGLT2i treatment decreased from 249 days in 2015 to 158 days in 2019, consistently across sex, age, type of institution, and CVRD status.

Conclusion: In South Korea, there has been an increase in the use of SGLT2i, accompanied by a reduction in the initiation time for SGLT2i treatment. However, the overall utilization of SGLT2i remains relatively low, particularly among individuals with CVRD. This underscores the necessity for strategies to enhance awareness and improve access to SGLT2i, particularly for high-risk patient groups.