



## 5. Increased Body Mass Index Among RA Patients.

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**Background:** The reduced lifespan and increased mortality of rheumatoid arthritis (RA) patients is largely attributed to elevated cardiovascular (CV) death. RA-specific factors and traditional CV comorbidities account for the increased CV risk in RA. Obesity is a significant contributor to CV disease and a modifiable CV risk factor.

**Objective:** To define the burden of obesity among RA patients in a large urban center in Montreal.

**Methods:** Consecutive adults followed at the McGill RA program who attended the outpatient clinic between January 2012 and January 2013 were evaluated. Anthropometric assessment for obesity was performed measuring body mass index (BMI). Patients were classified according to the World Health Organization guidelines (obese: BMI  $\geq 30$  kg/m<sup>2</sup>; overweight: BMI 25-29.9 kg/m<sup>2</sup>). BMI from RA patients were compared to 2008 age and sex based values from Statistics Canada.

**Results:** The sample consisted of 95 RA patients, mostly females (79%) with a mean  $\pm$  SD age of  $56.4 \pm 17.1$  years and disease duration of  $5.8 \pm 7.6$  years. There were no differences ( $p > .05$ ) in age or frequency of early RA (disease duration  $< 1$  year) among females and males. Seventy five percent of RA patients were sero-positive for rheumatoid factor, 50% for anti-CCP antibodies, and 30% had evidence of erosive disease. The mean BMI for the RA group was  $28.1 \pm 7.3$  kg/m<sup>2</sup>. The BMI of RA patients was 1.3 to 1.9 times higher than that of age matched Canadians. Females had higher mean BMI than males ( $28.8 \pm 7.7$  vs.  $25.3 \pm 4.6$ ;  $p = .05$ ). Twenty seven % of the sample was classified as overweight and 35% as obese. There was a trend for older RA patients to have higher BMI ( $p = .08$ ), As compared to normal and overweight patients, obese patients were more likely to be hypertensive ( $p = .02$ ). Obese RA patients had a significantly greater odd ratio of having a HAQ  $> 1$  (OR 3.1, 95% CI 1.3, 7.5).

**Conclusions:** In this sample of urban RA patients seen at a teaching hospital, the prevalence of obesity is significantly higher than that of age-matched Canadians, especially in older patients. Obesity was associated with a greater likelihood of hypertension and disability. Prospective confirmation of our BMI observation in RA patients with the application of strategies aimed at lowering obesity may improve both RA-outcomes and RA-CV co-morbidity.