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The association of BMI and knee pain among persons with radiographic knee osteoarthritis: a cross-sectional study.

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BACKGROUND: Many people with radiographic knee osteoarthritis (RKOA) do not present with pain. It is suspected that such persons tend toward lower body mass index (BMI). The purpose of the study was to explore the relationship between BMI and knee pain among persons with RKOA.

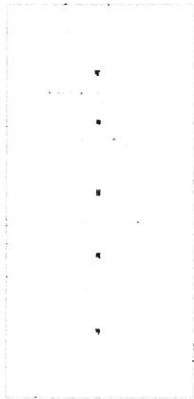
METHODS: Subjects in the Clearwater Osteoarthritis Study with RKOA (N = 576) were classified as reporting knee pain (Pain) or no knee pain (No Pain). WHO-classified BMI categories were compared by pain status. Odds ratios were calculated for the four elevated BMI groups, with the normal BMI group as the reference group. Elevated BMI was the risk factor, and knee pain status was the outcome factor.

RESULTS: Pain subjects presented with a higher mean BMI (30.4 kg/m²) compared with No Pain subjects (27.5 kg/m²) (p < 0.0001). Unadjusted and adjusted odds ratios demonstrated a positive association between BMI group and pain for each successive elevated BMI category. Adjusted odds ratios ranged from 1.6 for the Pre-obese group (p < 0.05) to 7.5 for the Obese III group (p < 0.0001).

CONCLUSION: Among subjects with RKOA, those presenting with an elevated BMI had a greater likelihood of knee pain compared to subjects with a normal BMI, and this chance rose with each successive elevated BMI category. As BMI is a modifiable risk factor, longitudinal research is needed to confirm these findings and elucidate the mechanisms underlying this relationship.

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