

Metformin use is associated with a lower risk of osteoporosis in adult women independent of type 2 diabetes mellitus and obesity. REDLINC IX study

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Abstract

Metformin may decrease cell senescence, including bone; hence we aimed at evaluating the association between metformin use and osteoporosis. This was a cross-sectional study carried out in 1259 Latin American adult women aged 40 or more who were not on anti-osteoporotic drugs, were on metformin and had a bone densitometry performed. Of the whole sample, 40.3% reported being on metformin (at least 1 year), 30.2% had type 2 diabetes mellitus and 22.6% had osteoporosis. Median (interquartile range) body mass index (BMI) for the whole cohort was 27.7 (4.6) kg/m² and 30.2% had type 2 diabetes mellitus. Current use of hormone therapy, calcium, and vitamin D corresponded respectively to 10.7%, 47.7%, and 43.1% of all surveyed women. A logistic regression model was used to analyze the association of osteoporosis with various covariates incorporated into the model such as age (OR: 1.07, 95% CI: 1.05-1.09), BMI (OR: 0.92, 95% CI: 0.89-0.96) and metformin use (OR: 0.44, 95% CI: 0.32-0.59). Metformin use, regardless of the presence of type 2 diabetes or obesity, was associated with a lower risk of osteoporosis in adult women. We propose that one explanation for this observation could be the effect of the drug over cellular senescence.

Palabras clave

Palabras clave de autor: [Metformin](#); [osteoporosis](#); [senescence](#); [aging](#)

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