

Adiposity and bone mineral density of Chilean elderly women in relation to toll-like receptor 4 gene polymorphisms

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Background: It has been proposed that the toll-like receptor-4 gene (TLR4) may participate in the development of obesity and osteoporosis, in addition to its well-known role in the immune response. On the other hand, the adipose tissue of obese subjects shows an increased expression of the proinflammatory cytokine, tumour necrosis factor-alpha (TNF- α), which is released after lipopolysaccharide recognition by TLR4. **Aim:** To estimate the allele/genotype frequencies and linkage disequilibrium measures of Asp299Gly and Thr399Ile polymorphisms of the TLR4 gene in the Chilean elderly population, and to screen for their association with variables related to adiposity or bone mineral density. **Subjects and methods:** The study group included 227 unrelated Chilean elderly women (61-95 years) recruited from a population-based sample. Adiposity and bone mineral density measures were obtained using dual-energy X-ray absorptiometry. **Results:** The allele frequencies for TNF -308A, TLR4 299Gly and TLR4 -