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# S-equol

National Cancer Institute

## Source

National Cancer Institute. *S-equol*. NCI Thesaurus. Code C120313.

An orally bioavailable, non-steroidal estrogen naturally produced by the metabolism of the isoflavonoid daidzein by human intestinal microflora, with potential chemoprotective and estrogen receptor (ER) modulating activities. S-equol preferentially binds to and activates the beta isoform of ER in certain target tissues, while having an antagonistic effect in other tissues. This modulates the expression of ER-responsive genes in a tissue-specific manner. This agent may increase bone mineral density, affect vasomotor symptoms, and may decrease the proliferation rate of susceptible cancer cells. In addition, this agent interferes with the activity of enzymes involved in steroid biosynthesis. S-equol inhibits dihydrotestosterone (DHT) production and may inhibit the proliferation of androgen-driven prostate cancer. S-equol is the biologically active enantiomer while R-equol is essentially inactive and has a weak affinity for alpha-ER.