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1: [J Environ Sci Health C Environ Carcinog Ecotoxicol Rev.](#) 2008 Apr-Jun;26(2):113-73.

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Early life and adult exposure to isoflavones and breast cancer risk.

[Tomar RS](#), [Shiao R](#).

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Soy and red-clover isoflavones are commonly consumed within the diet or as a dietary supplement due to a range of presumed beneficial health benefits. These isoflavones are thought to protect against heart diseases as well as breast and other types of cancer. Isoflavones are structurally similar to estrogens and may act as estrogen agonists or antagonists by binding to estrogen receptors. Because of an increased use of isoflavones in processed foods and dietary supplements as well as the greater consumption of soy products, dietary intakes of isoflavones are increasing in children and adolescents in North America. Estrogens are a known component of numerous hormone related cancers including breast cancer. It is with these facts in mind that we review the existing epidemiological and experimental animal studies for a resolution to a proposed correlation between increased isoflavone consumption and breast cancer. There is conflicting evidence from epidemiological, intervention and experimental animal studies regarding the chemopreventing effects of soy isoflavones in breast cancer. Isoflavones are weak estrogens and their effect depends upon the dose, time of exposure and species involved. It would, therefore, not be safe to indisputably accept soy or red-clover as a source of isoflavone resource to prevent breast cancer.

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