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Rice Bran

National Cancer Institute

Source

National Cancer Institute. *Rice Bran*. NCI Thesaurus. Code C111686.

The nutrient-rich hard outer layer of the rice cereal grain, with potential chemopreventive, antioxidant, iron chelating, anticholesterol and anti-inflammatory activities. Rice bran is rich in fiber, such as beta-glucan, pectin and gum; it also comprises vitamins and minerals, such as iron, magnesium and phosphorus, and essential fatty acids. In addition, Rice bran contains various bioactive components, including ferulic acid, tricin, beta-sitosterol, gamma-oryzanol, phytic acid, and inositol hexaphosphate (IP6). The potential anticancer activity of rice bran may be due to the synergistic effects of these phytochemicals on their ability to induce apoptosis, inhibit cell proliferation, and alter cell cycle progression in cancer cells. Rice bran's bioactive components also protect against tissue damage by scavenging free radicals and blocking chronic inflammatory responses. In addition, they are able to modulate the gut microflora and carcinogen-metabolizing enzymes, thereby further exerting a chemopreventive effect.