perplexity

dim from cruciferous vegetables

DIM (diindolylmethane) is a plant compound formed in your body during the digestion of cruciferous vegetables like broccoli, Brussels sprouts, cauliflower, cabbage, and kale. When you eat these vegetables, they provide a substance called indole-3-carbinol, which your stomach acid converts into DIM.[1] [2] [3] [4]

Health Benefits

- DIM has been studied for its potential to promote hormone balance, especially relating to estrogen metabolism.[4]
- It may support healthy estrogen processing in the body, which can be beneficial for breast health, PMS, and may reduce risk for some hormone-related cancers.[5] [4]
- Some studies show DIM from cruciferous vegetables may have anticancer properties and provide overall hormone support, but more research is needed to confirm dosage and effectiveness from food alone versus supplements.[6] [7] [5]

Sources of DIM

- High-DIM cruciferous vegetables include broccoli, Brussels sprouts, cabbage, cauliflower, kale, arugula, bok choy, collard greens, radish, and kohlrabi.[8] [9] [4]
- While consuming these vegetables is the best natural source, DIM is also available in supplement form, providing a concentrated dose.[5] [4]

Notes on Amount

- The exact DIM intake from vegetables can vary, but a typical serving of cruciferous vegetables contains only a small amount of DIM compared to what is found in supplements.[10] [5]
- For most people, a diet rich in these vegetables contributes to overall health, with DIM being one beneficial compound among many.[2] [8]

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DIM removes dental biofilm

Recent laboratory research shows that DIM (diindolylmethane), a compound found in cruciferous vegetables, can remove up to 90% of dental biofilm formed by Streptococcus mutans, the main bacteria responsible for plaque and cavities. DIM works by significantly disrupting the formation

of the sticky bacterial layer and reducing the substances bacteria use to adhere to tooth surfaces.[21] [22] [23] [24] [25] [26] [27] [28]

How DIM Targets Biofilm

- DIM inhibits biofilm formation and decreases the durability of plaque, making it easier to remove.[24] [21]
- It lowers production of extracellular polymeric substances (EPS), which are crucial for biofilm stability and bacterial adhesion.[29] [26] [21]
- These effects have been observed primarily in lab settings, and DIM's action is not the result of killing the bacteria but rather preventing their ability to stick together and form mature plaque.[21] [24]

Potential for Dental Health

- Scientists are exploring the possibility of incorporating DIM into oral care products, such as toothpaste and mouthwash, to offer more effective natural plaque control.[25] [30] [31]
- DIM may complement regular brushing and flossing, especially for populations with limited access to dental care.[30] [25]

Important Considerations

- Most current studies are laboratory-based, meaning further research is necessary to confirm its safety and efficacy in humans for daily use.[22] [32]
- DIM is recognized for its low toxicity and safety profile in other contexts, which is promising for future dental applications.[30] [21]

DIM from cruciferous vegetables shows exciting promise as a natural agent against dental plaque, but clinical trials are needed before it becomes a routine part of dental hygiene.[32] [22] [21]

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