



This occasional section within the journal surveys visions and achievements, often not on the main track of the developing biomedical sciences, but all relating to discoveries and developments of medicinals-both ancient and modern. What they have in common, in one way or another, is providing further background and glances around the edges of the core discipline of pharmacognosy, as it has been and continues to evolve within our times.

The use of Ozempic® and Similar GLP-1 Agonists Significantly Decrease the Risk of Developing Breast Cancer in Women

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Glucagon-like peptide-1 receptor agonists (GLP-1) are well known for their effective treatment of Diabetes mellitus (DM), their positive effects on renal and cardiovascular function, as well as for promoting weight loss.¹ A recent study reported that they also significantly reduce the incidence of breast cancer in women.² That study examined the medical records of nearly 220,000 women aged 45 to 80 years old who underwent breast imaging and analysed the rates of breast cancer detection. Interestingly, a significantly lower incidence of breast cancer was evident in women who used GLP-1 agonists compared to women not exposed to this treatment. The findings were independent of age,

race and ethnicity, body mass index (BMI) and medical history of DM. Whilst this study is encouraging, directed clinical trials and determination of the protective mechanism are required to fully evaluate the potential of GLP-1 agonists as breast cancer preventative agents.

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Caffeine Consumption is Linked to Significantly Decreased Risks of Dementia and Modestly Increases Cognitive Function

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Anecdotal reports and several meta-analysis studies¹⁻⁴ have linked coffee and tea consumption with decreased risks of dementia and to slowing cognitive decline. However, those studies failed to differentiate between caffeinated and decaffeinated beverages and therefore the effects of caffeine had not been definitely characterised. A recent study examined the effects of caffeinated coffee and tea in approximately 130,000 participants and compared it to the effects of decaffeinated coffee.⁵ For inclusion in the study, all participants were evaluated to be devoid of cancer, Parkinsons Disease, and all types of dementia. Dietary consumption data was monitored across a four-year period. The development of dementia was identified by physician diagnosis, or by post mortem evaluations where appropriate. Additionally, cognitive decline was assessed by questionnaires, as well as via multiple established cognitive function tests.

Notably, the consumption of high levels of caffeinated coffee significantly reduced the risks of developing dementia compared to the consumption of decaffeinated beverages. Furthermore, high

caffeine intake also resulted in greater cognitive performance, although this improvement was not statistically significant. Similar trends were reported for the consumption of caffeinated tea. Notably, the most substantial effects were reported for the consumption of 2-3 cups of caffeinated beverage per day. Whilst these results are promising, further studies are required to determine the mechanism of action.

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