

Berries may help prevent oral cancer

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Research has suggested that compounds that give colourful fruits their rich hues, especially berries, promote health and might even prevent cancer.

But for the first time, scientists have exposed extracts from numerous berries high in those pigments to human saliva to see just what kinds of health-promoting substances are likely to survive and be produced in the mouth.

It's too early to name the best berry for health promotion based on this initial work. But the researchers have discovered that two families of pigments that provide berries with their colours, called anthocyanins, are more susceptible to degradation in the mouth than are the other four classes of these pigments.

The Ohio State University study also showed that bacteria living in the mouth are responsible for most of the breakdown of these compounds that occurs in saliva.

Researchers are investigating whether it's the berry pigments themselves, or instead the products of their degradation, that actually promote health.

Scientists said that these early findings would contribute to the further development of confectionaries, gums and other delivery devices for the prevention and possibly the treatment of conditions such as periodontal disease and oral cancers.

The researchers exposed extracts of anthocyanin pigments from blueberries, chokeberries, black raspberries, red grapes and strawberries to the saliva collected from 14 people.

Black raspberries, in particular, have been shown in numerous previous studies to have chemopreventive effects on tumors in the mouth, esophagus and colon, mostly in animal studies. Their high anthocyanin content has been linked to those benefits.

"All fruits are unique because their chemical composition, or fingerprint, varies," Mark Failla, professor of human nutrition at Ohio State and interim chair of the Department of Human Sciences said.

“There are many different edible berries. Some might be better for providing health-promoting effects within the oral cavity, whereas others may be more beneficial for colonic health. We simply do not know at this time.

The research is published in the journal Food Chemistry.