

Metformin may lower risk for oral cancer development

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New findings published in *Cancer Prevention Research*, a journal of the American Association for Cancer Research, suggest that metformin may protect against oral cancer.

J. Silvio Gutkind, Ph.D., chief of the Oral and Pharyngeal Cancer Branch of the National Institute of Dental and Craniofacial Research at the National Institutes of Health, and colleagues induced premalignant lesions in [laboratory mice](#) and studied the effect of metformin on progression of these lesions to oral cancers.

“We saw strong activity against mTORC1 (mammalian target of rapamycin complex 1), which we know contributes to oral cancers, so this is strong preclinical information that there is a protective effect,” said Gutkind.

Metformin is the most widely used treatment for patients with type 2 diabetes, and scientists have started to notice a trend toward cancer reduction in a number of organ sites.

Gutkind and colleagues found that administration of metformin reduced the size and number of carcinogen-induced oral tumoral lesions in mice and significantly reduced the development of squamous cell carcinomas by about 70 to 90 percent.

They found that metformin inhibited mTORC1 function in the basal layer of oral premalignancies and prevented their spontaneous

development into head and neck squamous cell carcinomas.

Provided by American Association for Cancer Research

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