МИНИСТЕРСТВО ОБРАЗОВАНИЯ И НАУКИ РФ ТОМСКИЙ ГОСУДАРСТВЕННЫЙ УНИВЕРСИТЕТ БИОЛОГИЧЕСКИЙ ИНСТИТУТ

СТАРТ В НАУКУ

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CANCER ALSO LIKES SWEETS

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Excess weight increases the risk of diseases, and cancer as well. Excessive consumption of sweets could be one of the factors in the development of obesity, but it is not yet clear whether sweets can directly stimulate cancer without developing obesity. The relationship between the consumption of sweets and the increased risks of cancer in humans is shown in a recent statistical study involving more than 100 thousand people. These results indicate that further studies of the relationship between sweet consumption and oncogenesis are likely to provide clues to new cancer treatment and prevention strategies.

This paper is devoted to experiments on genetically modified mice. It has been shown that sweet syrup, analogues of which are used in the food industry as sweeteners, activates the growth of intestinal forms of cancer even in the absence of signs of obesity.

Scientists conducted experiments on model mice. They developed a special line, the animals of which could artificially shut off the APC gene. This gene is one of the suppressors of tumors. In order to exclude the effect of obesity-related metabolic disorders on oncogenesis, three control groups of mice were used in the experiments: the first group was fed with plain water, the second was not limited in the consumption of diluted syrup, and the mice in the third group were limited in their consumption of syrup. In mice from the first and third groups in the lower part of the small intestine and in the large intestine after 8 weeks of observation, the same number of tumors developed, i.e., the syrup did not affect the number of tumors. The mice that drank the syrup had much larger tumors. Also, the cells of these tumors were noticeably worse differentiated and this is a sign of their increased malignancy.

Studies have shown that even moderate consumption of syrup, regardless of obesity and obesity-related metabolic disorders, has contributed to tumor growth.

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