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Pancreatic cancer: the importance of dietary fat

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The incidence of pancreatic cancer is increasing, especially in young adults under the age of 55. A recent study suggests that the nature of dietary fat may play a role in the development of this devastating cancer.

Although it is only the 12th most common type of cancer, pancreatic cancer is the third leading cause of cancer death in Canada, for both men and women. This high mortality reflects the very poor prognosis associated with this cancer, with less than 10% of patients still alive 5 years after diagnosis.

INCREASED INCIDENCE

The latest US statistics indicate that the incidence of pancreatic cancer has been rising steadily over the past 20 years, with an annual increase of 0.9% in men and 0.8% in women between 2000 and 2018 (1).

Further analysis, however, reveals the presence of an even more worrying trend among young adults, aged under 35: in this population, the annual increase in the incidence of pancreatic cancer reaches 4.2% in men and 7.7% for women. As with other types of cancer (colorectal cancer, for example), it therefore seems that a new trend is emerging in recent years and that pancreatic cancer develops abnormally early in young people, particularly in young women.

RISK FACTORS

Such a sharp change in the incidence of a disease cannot be hereditary and is therefore necessarily linked to lifestyle. Among the established risk factors for pancreatic cancer (smoking, excessive alcohol consumption, obesity and diabetes), the change most likely to contribute to the rise of early pancreatic cancer is certainly overweight and diabetes.

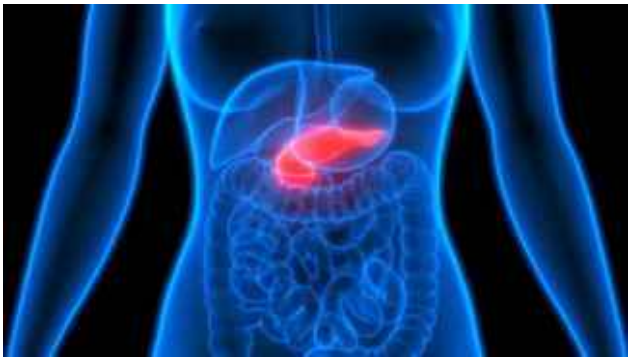
Childhood obesity has more than tripled in the past 40 years and the latest US statistics show that this rise has been accompanied by a 100% increase in the incidence of type 2 diabetes in children and adolescents since the beginning of the millennium (2).

The presence of overweight and early diabetes therefore creates favorable conditions for the early development of cancer, possibly including that of the pancreas.

BAD FAT

Overweight is most often caused by overconsumption of calories from sugary and fatty foods, such as the ultra-processed foods that have literally invaded our environment in recent years.

Regular consumption of these products often comes at the expense of healthier products, such as fruits, vegetables and other plants, and creates deficiencies in the supply of several nutrients essential for good health, including complex carbohydrates (not refined) and unsaturated fats.



A recent study suggests that the nature of the fat in the diet could greatly influence the risk of developing pancreatic cancer (3).

In this retrospective study, researchers compared the eating habits of 957 pancreatic cancer patients (cases) with those of 938 patients who were also hospitalized but were not affected by cancer (controls).

Looking specifically at fat intake, the researchers noted significant differences between cases and controls. Not in terms of the amount of fat consumed (the median intake being similar between the two groups), but rather in terms of the types of fat that made up their diet: for example, they observed that patients who consumed the highest amounts of saturated fat of animal origin had a twice the risk of cancer, while conversely, consumption of fat of plant origin had a protective effect, with a halving of the risk of cancer.

These differences are also observed for the classes of fats found in these two types of food, namely saturated fats of animal origin and unsaturated fats of plant origin. Thus, a high intake of animal fats is associated with an increase of about 30% in the risk of cancer, while a high intake of unsaturated fats (monounsaturated, polyunsaturated) of plant origin was associated with a decrease of 40% of the risk.

These observations are in agreement with several experimental data (models of pancreatic cancer induced by carcinogens or by xenografts) showing that animal fats favored the progression of this cancer, while unsaturated fats slowed it down.

Favoring sources of good unsaturated fats, such as vegetable oils (olive in particular), seeds (flax, chia) or nuts, could therefore represent a simple way to reduce the risk of developing pancreatic cancer.

(1) Gaddam S et al. Incidence of pancreatic cancer by age and sex in the US, 2000-2018. JAMA (Published online, October 24th, 2021)

(2) Lawrence JM et al. Trends in prevalence of Type 1 and Type 2 diabetes in children and adolescents in the US, 2001-2017. JAMA 2021; 326: 717-727.

(3) Li D et al. Dietary intake of fatty acids and risk of pancreatic cancer: a case-control study. J. Nutr. (Published online, October 19th, 2021)

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