

DIET & NUTRITION

FOR PATIENTS WITH PANCREATIC CANCER

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INTRODUCTION



Nutrition can be a major focus for patients diagnosed with pancreatic cancer and subsequent treatment. Questions about diet arise along with physical activity, dietary supplement use, and nutritional complementary therapies. Patients may receive dietary advice from a variety of sources including family, friends, and health care providers, as well as from the media, health food stores, magazines, books, nutritional supplement industry, etc. In addition, many claims about the use of dietary and nutritional supplements as alternatives to standard therapy abound. Making an informed choice can be difficult.

Pancreatic cancer and its treatment can place extra demands on the body, greatly increasing nutrient and caloric needs. Weight loss can contribute to fatigue, delay and lengthen recovery, and adversely affect quality of life. Choosing one's own course of treatment and disease management is extremely important for enhancing quality of life. Feeling comfortable with personal choices made and confidence in the health care professionals involved is also important.

AMERICAN CANCER SOCIETY GUIDELINES

There is scientific evidence on many issues regarding nutrition and cancer. But there are also many gaps and inconsistencies in the scientific evidence on the effects of nutrition after cancer diagnosis. The American Cancer Society's Guidelines on Diet, Nutrition, and Cancer Prevention should be regarded as a basis for a healthy diet.

1. Choose most of the foods you eat from plant sources.
 - Eat five or more servings of fruits and vegetables each day
 - Eat other foods from plant sources, such as breads, cereals, grain products, rice, pasta, or beans several times a day
2. Limit your intake of high fat foods, particularly from animal sources.
 - Choose foods low in fat
 - Limit consumption of meats, especially high-fat meats
3. Be physically active--achieve and maintain a healthy weight.

- Be at least moderately active for 30 minutes or more on most days of the week
 - Stay within your healthy weight range
4. Limit alcoholic beverages, if you drink at all.

DEALING WITH DIETARY COMPLICATIONS

Some of the changes that occur as a result of pancreatic cancer are unintentional loss of body weight and loss of lean body mass (muscle). Problems with eating, digestion and fatigue can also occur. Any treatment for pancreatic cancer (surgery, radiation therapy, and chemotherapy) can alter nutritional



needs and interfere with the ability to eat, digest, or absorb food. This is often due to side effects such as nausea, vomiting, changes in taste or smell, loss of appetite or bowel changes. At the same time, caloric intake needs are increased during any of these treatments.

When problems occur, usual food choices and eating patterns may need to be adjusted. Eating small, frequent meals or snacks may be easier to tolerate than three large daily meals. Food choices should be easy to chew, swallow,

digest, and absorb. Choices should also be appealing, even if they are high in calories or fat. If it is not possible to meet nutritional needs through regular diet alone, nutritious snacks or drinks may be advisable. Commercially prepared liquid nutritional products (such as Boost, Ensure, Resource, or NuBasics) can also be helpful to increase the intake of calories and nutrients.

SENSORY CHANGES

Patients with pancreatic cancer may complain of sensory changes that interfere with food intake. The sense of smell may be affected. Sensitivity to food odors can occur. Serving foods cold instead of hot may be helpful in decreasing unpleasant aromas. Using covered pots, boiling bags, or a kitchen fan can minimize cooking odors. Taste changes are also common. The use of plastic eating utensils and nonmetal cooking containers can help alleviate this problem.

INSULIN

The pancreas may not be able to function adequately to produce insulin (endocrine function) to help regulate blood glucose or to produce pancreatic enzymes (exocrine function) to help the body digest certain foods. Patients may need to be followed by their primary care physician or an endocrinologist to assist with controlling their blood glucose. In addition, assistance with diabetic management, including insulin use and administration, diabetic diet, and related health maintenance, can also be accomplished with the help of a diabetic educator and a registered dietitian.



PANCREATIC ENZYMES

Pancreatic enzymes, which contain amylase, lipase, and trypsin can be supplemented to counteract any malabsorption of food. Malabsorption syndrome is characterized by a patient's inability to digest fat or protein. The symptoms include bloating, indigestion, diarrhea, constipation, steatorrhea, and muscle weakness. Steatorrhea is characterized by stools that look oily, frothy, are foul smelling and may float in the water. To correct this problem oral tablets can be taken with or meals or snacks. The dosage is different for each person. It may take several adjustments before the most appropriate dosage is determined.

VITAMINS



The use of dietary supplements is a topic of considerable controversy, especially in the cancer treatment phase. These dietary supplements include nutrients, vitamins, and minerals that are essential for human health, as well as a wide variety of non-essential nutrients, such as phytochemicals, hormones, and herbs. As a general rule, dietary supplements should never replace whole foods and are best when used in moderate doses. The use of vitamin and mineral supplements at doses higher than

recommended levels can raise safety concerns as can the intake of high doses of herbal and botanical supplements.

There have been many questions regarding the benefit of vitamin supplements that contain higher levels of antioxidants (vitamins C and E) than those established by the Dietary Reference Intakes. Vitamin supplements that contain high levels of folic acid, or eating fortified food products that contain high levels of folic acid may be counterproductive when taken during the administration of certain chemotherapy agents. There are still many unanswered questions regarding the benefits and risks that may or may not be associated with these supplements. It is recommended that patients undergoing chemotherapy or radiotherapy should not exceed the upper intake limits of the Dietary Reference Intakes for vitamin supplements. Patient should also avoid other nutritional supplements that contain antioxidant compounds during chemotherapy or radiotherapy treatment.

A reasonable health recommendation for a patient with pancreatic cancer is to use a balanced multiple vitamin and mineral supplement (once or twice a day) to correct possible deficiencies. Multivitamin supplements of this type are manufactured by a wide variety of companies, with levels of nutrients at approximately the levels recommended for daily consumption [now expressed on labels as the % Daily Value (DV)], formerly known as the Recommended Daily Allowance.

HERBAL SUPPLEMENTS



The belief that an herbal or botanical supplement is "natural" and therefore can be only beneficial, even in high doses, is incorrect. Many vitamins and herbal compounds are toxic at high levels. There is currently no regulatory oversight of herbal supplements, which has led to hazardous doses and contaminants in marketed products. Consumers should be warned about the use of high-dose supplements of any type. There is no evidence that any nutritional supplements can reproduce the apparent benefits of a diet high in vegetables and fruits. It

is always advisable for patients to inform their health care providers about any vitamin, herbal or botanical supplement use. There are many uncertainties about the effects of vitamin, herbal or botanical supplements and their interactions with other treatments, including surgery, radiation therapy, and chemotherapy.

COMPLIMENTARY AND ALTERNATIVE NUTRITIONAL THERAPIES

Complementary and alternative nutritional approaches are very popular and many people consider these substances to be safe. But not much is known about the safety and efficacy of the active ingredients found in many of these substances/compounds.

Complementary therapies are supportive methods used to complement evidence-based treatment. Examples include meditation to reduce stress, acupuncture for pain, and ginger for nausea. Complementary methods are not given to cure disease, rather they may help control symptoms and improve quality of life.

Alternative therapies are promoted as cancer cures. They are unproven because they have not been scientifically tested, or were tested and found to be ineffective. Nutritional methods used within complementary and alternative medicine generally encompass vitamin and mineral supplements, herbal and botanical supplements, and dietary regimens. It is important for you to discuss any use of complementary or alternative therapies with your health care provider so that everyone is informed and open discussion about possible benefits and risks can occur.



CONCLUSION

Health information is extremely useful and can empower patients to make important health decisions. The search for information can be confusing, as there may be differences in information given regarding the best way to treat pancreatic cancer. Patients should seek out information and consult with a number of different health care providers specializing in the care of patients with pancreatic cancer to help formulate decisions on the use of supplements or complementary and alternative therapies. Patients are strongly encouraged to communicate all decisions involving complimentary/ alternative therapies with members of their health care team. This is important so that the entire team can be aware of any potential interactions that may interfere with conventional medical treatment.

AFTER SURGERY

POST-SURGERY FOOD AND DIET TIPS

1. How do I select a diet that is right for me?

Start with the Food Guide and American Cancer Society Cancer Prevention Guidelines. If you are having problems with particular foods, many others in the same food group can be substituted. Special problems might require consultation with a registered dietitian or nutritionist.

2. How many servings of fruit and vegetables should I eat every day?

Although everyone should eat at least five servings of fruits and vegetables each day, it may be difficult. Nevertheless, by incorporating balanced meals with nutritional snacks, and drinking juices, eating up to 10 servings of fruits and vegetables per day is quite possible, and may be beneficial.



3. Can I get the same nutritional value from frozen and canned fruits and vegetables?

Yes. In fact, frozen foods are often more nutritious than fresh foods because they are usually picked ripe and quickly frozen. Canning can reduce some of the nutrients, but the nutritional value of canned fruits and vegetables is often equivalent to those that are fresh.

4. Should I be juicing my fruits and vegetables?

Juicing is not necessary, but can add variety to the diet and is a good way to consume fruits and vegetables, especially if there are difficulties with chewing or swallowing. Juicing also improves the absorption of some of the nutrients in fruits and vegetables. If you buy commercially juiced products, avoid those that have not been pasteurized.

5. How much water should I drink?

Try to drink at least eight cups of water each day. Many symptoms of fatigue, lightheadedness, and nausea can be due to dehydration.

6. Should I limit my caffeine intake?

Although many heart problems can be better controlled without caffeine, and sleep disturbances are less common, caffeine will have no adverse effects on your surgery.

7. Should I eat high-fiber foods?



Yes, Fiber from whole grains and high-fiber cereals can improve bowel function and help to decrease heart disease risk. Other high-fiber foods, such as beans, are good meat substitutes. Fruits and vegetables are good choices for their fiber content, as well as for the many other nutrients they contain. Fiber supplements do not contain the beneficial vitamins and other substances in fruits and vegetables.

8. Should I reduce my fat content?

While consuming a diet that is low in fat has been shown to help reduce the risk of heart disease, the possible benefit for prevention of cancer recurrence is not yet proven. After surgery, adding moderate amounts of fats and fat-containing foods can help to improve caloric intake.

9. Should I avoid refined sugar?

Refined sugars can cause fatigue due to fluctuating blood sugar levels, and they do not contain the same level of nutritional value as sugars naturally present in whole foods. It is therefore wise to limit intake of refined sugars (including brown sugar) in favor of more nutritious foods.

10. Should I become a vegetarian?

It is not necessary to eliminate meat from the diet after surgery, but reducing red meat intake (and other sources of saturated fats) can reduce one's risk of heart disease, and may also reduce risk of colon and prostate cancers. Diets that include lean meats in small to moderate amounts can also be healthy.

DIETARY SUPPLEMENTS

1. Should I supplement my diet with vitamins and minerals?

The best source of vitamins and minerals is foods. During illness and recovery dietary intake may not be optimal, so a vitamin and mineral supplement may be needed. The best choice is a balanced multivitamin/mineral supplement containing as much as 100% of the "Daily Value" of most nutrients (formerly known as the "RDA"-Recommended Daily Allowance). Some people believe that if a little bit of a nutrient is good for you, then a lot must be better. There is no

scientific evidence to support that idea. In fact, high doses of nutrients can have harmful effects. Be sure to discuss vitamin and mineral supplement use with your health care provider.

2. Can I get the nutritional equivalent of fruits and vegetables in a pill?

No. Many hundreds of healthful compounds are found in fruits and vegetables. The small amount of dried powder contained in pills that are presented as being equivalent to fruits and vegetables includes only a small fraction of the levels contained in the whole foods.

3. Should I take antioxidants?

It is not a good idea to take "mega-doses" of any vitamin or mineral, including the antioxidant nutrients, at any time. High doses of antioxidants may interfere with the effectiveness of any further therapy such as chemotherapy or radiation therapy. Be sure to discuss your use of supplements with your health care provider. Fruits and vegetables are the best sources for naturally occurring antioxidants.



4. Should I take supplements containing beta-carotene?

Supplements containing 5 mg or less of beta-carotene are unlikely to be harmful, as this is similar to the levels available from foods. However, higher dose supplements should be avoided because studies have shown that higher doses may actually increase the risk for certain cancers such as lung cancer.

5. How do I know that alternative or complementary methods are safe for me?

Study all sources of information, but beware of testimonials or information that come only from those who are selling a product. Also, be sure to tell your health care providers about the methods you wish to use, so they may advise you about any particular interaction that might occur with conventional medical therapy. It is also best to remember, if it sounds too good to be true, it likely is not true.

DIET AND SYMPTOMS

1. Are there foods that will help with my loss of appetite?

Loss of appetite and nausea are commonly experienced after your surgery. Taste perceptions often change. Adding or increasing spices and condiments to meals may be needed temporarily to increase food appeal. Experiment with spices and flavorings often, as tastes may change. If you are having problems with food odors try cool or cold foods instead of hot to decrease aromas. Use covered pots, boiling bags, or a kitchen fan can minimize cooking odors. Taste changes are common. Try using plastic eating utensils and nonmetal cooling containers to help alleviate this problem. Try to eat small, more frequent meals and snacks. In some instances, medications can be helpful to reduce nausea. There are also medications that can help to stimulate appetite. Ask your health care provider if those might be good for you.

2. What can I do to reduce fatigue?

Fatigue can be reduced by nutrition and physical activity. After surgery, many patients become fatigued because they do not eat enough, do not drink enough fluids, or do not exercise enough. Starting slowly with an exercise regimen, even if only for a few minutes a day can help restore energy. The frequency and duration of a simple activity like walking can be steadily increased. Do not hesitate to tell your health care providers about your fatigue.



3. Should I be concerned about unintentional weight loss?

Weight loss often occurs after surgery. Continued weight loss should be avoided. Weight loss can be minimized by adequate dietary intake. Use of between-meal snacks that are good sources of calories, fat, and protein can help.

4. Is there a diet to help improve anemia?

A balanced diet can help support the body's repair system for producing new blood cells. Iron supplements should be taken only after consulting with your health care provider. Extra iron is useful to correct iron deficiency, but it is not helpful for other conditions, and it can cause digestive system side effects.