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# CANCER FACTS

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National Cancer Institute • National Institutes of Health  
Department of Health and Human Services

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## Marijuana Use in Supportive Care for Cancer Patients

Cancer, and cancer therapies and their side effects, may cause a variety of problems for cancer patients. Chemotherapy-induced nausea and vomiting, and anorexia and cachexia are conditions that affect many individuals with cancer.

### Nausea and Vomiting

Some anticancer drugs cause nausea and vomiting because they affect parts of the brain that control vomiting and/or irritate the stomach lining. The severity of these symptoms depends on several factors, including the chemotherapeutic agent(s) used, the dose, the schedule, and the patient's reaction to the drug(s). The management of nausea and vomiting caused by chemotherapy is an important part of care for cancer patients whenever it occurs. Although patients usually receive antiemetics, drugs that help control nausea and vomiting, there is no single best approach to reducing these symptoms in all patients. Doctors must tailor antiemetic therapy to meet each individual's needs, taking into account the type of anticancer drugs being administered; the patient's general condition, age, and related factors; and, of course, the extent



to which the antiemetic is helpful. There has been much interest in the use of marijuana to treat a number of medical problems, including chemotherapy-induced nausea and vomiting in cancer patients. Two forms of marijuana have been used: compounds related to the active chemical constituent of marijuana taken by mouth and marijuana cigarettes. Dronabinol (Marinol®), a synthetic form of the active marijuana constituent delta-9-tetrahydrocannabinol (THC), is available by prescription for use as an antiemetic. In 1985, the U.S. Food and Drug Administration approved its use for the treatment of nausea and vomiting associated with cancer chemotherapy in patients who had not responded to the standard antiemetic drugs.

National Cancer Institute (NCI) scientists feel that other antiemetic drugs or combinations of antiemetic drugs have been shown to be more effective than synthetic THC as "first-line therapy" for nausea and vomiting caused by anticancer drugs. Examples include drugs called serotonin antagonists, including ondansetron (Zofran®) and granisetron (Kytril®), used alone or combined with dexamethasone (a steroid hormone); metoclopramide (Reglan®) combined with diphenhydramine and dexamethasone; high doses of methylprednisolone (a steroid hormone) combined with droperidol (Inapsine®); and prochlorperazine (Compazine®). Continued research with other agents and combinations of these agents is under way to determine their usefulness in controlling chemotherapy-induced nausea and vomiting. However, NCI scientists believe that synthetic THC may be appropriate for some cancer patients who have chemotherapy-induced nausea and vomiting that cannot be controlled by other antiemetic agents. The expected side effects of this compound must be weighed against the possible benefits. Dronabinol often causes a "high" (loss of control or sensation of unreality), which is associated with its effectiveness; however, this sensation may be unpleasant for some individuals.

Marijuana cigarettes have been used to treat chemotherapy-induced nausea and vomiting, and research has shown that THC is more quickly absorbed from marijuana smoke than from an oral preparation. However, any antiemetic effects of smoking marijuana may not be consistent because of varying potency, depending on the source of the marijuana contained in the cigarette.

To address issues surrounding the medical uses of marijuana, the National Institutes of Health convened a meeting in February 1997 to review the scientific data concerning its potential therapeutic uses and explore the need for additional research. The group of experts concluded that more and better studies are needed to fully evaluate the potential use of marijuana as supportive care for cancer patients.

### **Anorexia and Cachexia**

Anorexia, the loss of appetite or desire to eat, is the most common symptom in cancer patients. It may occur early in the disease process or later, in cases where the cancer progresses. Cachexia is a wasting condition in which the patient has weakness and a marked and progressive loss of body weight, fat, and muscle. Anorexia and cachexia frequently occur together, but cachexia may occur in patients who are eating an adequate diet but have malabsorption of nutrients. Maintenance of body weight and adequate nutritional status can help patients feel and look better, and maintain or improve their performance status. It may also help them better tolerate cancer therapy.

There are a variety of options for supportive nutritional care of cancer patients, including changes in diet and consumption of foods, enteral or parenteral feeding (delivery of nutrients by tube), and the use of drugs. An NCI-supported study to evaluate the effects of THC and megestrol acetate (a synthetic female hormone) used alone and in combination for

treatment-related and cancer-related anorexia and cachexia completed patient accrual earlier this year. Researchers will compare the appetite, weight, and rate of weight change among patients treated with THC to patients treated with megestrol acetate or with both therapies. Researchers will also evaluate the effects of the drugs alone or in combination on nausea and vomiting, assess for toxic effects of the drugs, and evaluate differences in quality of life among those patients who were treated with THC.

The Institute of Medicine (IOM), part of the National Academy of Sciences, has published a report assessing the scientific knowledge of health effects and possible medical uses of marijuana. The IOM project was funded by the White House Office of National Drug Control Policy. The IOM released its report on March 17, 1999.

Copies of the report, *Marijuana and Medicine: Assessing the Science Base*, are available from National Academy Press, Lockbox 285, 2101 Constitution Avenue, NW., Washington, DC 20055; (202) 334-3313 or 1-888-624-8373. The full text of the IOM report is also available at <http://pompeii.nap.edu/books/0309071550/html/index.html> on the Internet.

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### **Sources of National Cancer Institute Information**

#### **Cancer Information Service**

Toll-free: 1-800-4-CANCER (1-800-422-6237)

TTY (for deaf and hard of hearing callers): 1-800-332-8615

#### **NCI Online**

##### ***Internet***

Use <http://cancer.gov> to reach the NCI's Web site.

##### ***LiveHelp***

Cancer Information Specialists offer online assistance through the *LiveHelp* link on the NCI's Web site.

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