



## Medical Use of Marijuana: ACS Position

Some anti-cancer drugs cause nausea and vomiting because they affect parts of the brain that control vomiting and/or cause irritation of the stomach lining. The severity of these symptoms depends on several factors, including the chemotherapeutic agents used 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 many cancer patients. Although patients usually receive anti-emetics (drugs that help control nausea and vomiting), there is no single best approach to reducing these symptoms in all patients. Doctors must tailor anti-emetic therapy to meet each individual's needs, taking into account the type of anti-cancer drug(s) being administered; the patient's general condition, age, and related factors; and the extent to which the anti-emetic 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:

- Cigarettes
- Compounds related to active chemical constituents of marijuana taken orally. One such compound that is currently available by prescription for use as an anti-emetic is dronabinol (Marinol®), a synthetic form of one of the active marijuana constituent delta-9-tetrahydrocannabinol (THC).

## Effects of marijuana

Marijuana is a powerful drug that produces a variety of biological effects. While the most common effect is euphoria, marijuana also can lower the user's control over movement and cause occasional disorientation and sometimes unpleasant feelings. Some chronic users can develop dependence on marijuana, though withdrawal symptoms are relatively mild and short-lived.

Although marijuana smoke delivers THC and other cannabinoids (THC-like substances) to the body, it also delivers harmful substances, including many of the cancer-causing substances found in tobacco smoke. In addition, plants contain a variable mixture of biologically-active compounds and cannot be expected to provide a precisely defined drug effect. For those reasons, chemically-defined drugs that act on the cannabinoid receptors of the brain are likely to provide the safest and most effective cannabinoid.

Marijuana's effects as a medicine are limited to symptom relief, not cures of disease, and are generally modest. For most symptoms, there are more effective drugs already on the market. However, physicians frequently encounter patients who do not respond well to standard

medications, or for whom adjunct therapies are needed. For these patients, cannabinoids appear to hold potential for treating pain, chemotherapy-induced nausea and vomiting, and the poor appetite and wasting caused by AIDS or advanced cancer.

## Institute of Medicine's (IOM) Scientific Review

In January 1997, the White House Office of National Drug Control Policy (ONDCP) asked the Institute of Medicine to conduct a review of the scientific evidence to assess the potential health benefits and risks of marijuana and its constituent cannabinoids. That review began in August 1997 and was completed with a report in March 1999.

Information for this study was gathered through scientific workshops, site visits to cannabis buyers' clubs and HIV/AIDS clinics, analysis of the relevant scientific literature, and extensive consultation with biomedical and social scientists.

In the Institute of Medicine's report the following recommendations were made:

- Research should continue into the physiological effects of synthetic and plant-derived cannabinoids and the natural function of cannabinoids found in the body.
- Clinical trials of cannabinoid drugs for symptom management should be conducted with the goal of developing rapid-onset, reliable, and safe delivery systems.
- Psychological effects of cannabinoids such as anxiety reduction and sedation, which can influence perceived medical benefits, should be evaluated in clinical trials.
- Studies to define the individual health risks of smoking marijuana should be conducted, particularly among populations in which marijuana use is prevalent.
- Clinical trials of marijuana use for medical purposes should be conducted under the following limited circumstances: trials should involve only short-term marijuana use (less than 6 months); be conducted in patients with conditions for which there is reasonable expectation of efficacy; be approved by institutional review boards; and collect data about efficacy.
- Short-term use of smoked marijuana (less than 6 months) for patients with debilitating symptoms (such as intractable pain or vomiting) must meet the following conditions:
  - Failure of all approved medications to provide relief has been documented
  - The symptoms can reasonably be expected to be relieved by rapid-onset cannabinoid drugs
  - Such treatment is administered under medical supervision in a manner that allows for assessment of treatment effectiveness
  - Involves an oversight strategy comparable to an institutional review board process that could provide guidance within 24 hours of a submission by a physician to provide marijuana to a patient for a specified use

# ACS Position

The IOM's report suggests that there may be a benefit to cancer patients from the chemicals, or cannabinoids, contained within marijuana. These studies appear to show that cannabinoids will help alleviate the nausea, vomiting, wasting, and muscle spasms caused by chemotherapy in some patients.

The ACS is supportive of more research into the benefits of cannabinoids. Better and more effective treatments are needed to overcome the side effects of cancer and its treatment.

The ACS does not advocate the use of inhaled marijuana or the legalization of marijuana.

## References

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