

## Understanding Anticipatory Nausea

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**Purpose/Objectives:** To address the concept of anticipatory nausea within the theoretical framework of classical conditioning.

**Data Sources:** Published articles, book chapters.

**Data Synthesis:** Although classical conditioning explains much in the development of anticipatory nausea, other factors also are at work. Preventing this phenomenon is necessary because it is difficult to treat and control once it develops.

**Conclusions:** Nurses are in a position to identify patients at highest risk for developing anticipatory nausea and implement interventional strategies to prevent/minimize it.

**Implications for Nursing Practice:** Many aspects of anticipatory nausea have not yet been researched well. Nurses must study how anticipatory nausea develops and interventions that can be used to reduce its prevalence.

As the population in the United States increases in age, so does the incidence of cancer. Nearly 80% of all cancers are diagnosed in individuals 55 years and older (American Cancer Society, 2000). As a result, an increasing number of individuals are receiving chemotherapy, radiation therapy, or both (Naylor & Rudd, 1996). With the advent of colony stimulating factors, chemotherapy agents are being administered in increasingly larger doses to effect a better response. Thus, the potential for side effects is greater than it was in the past (Wickham, 1996). The regimen prescribed by oncologists can only control or cure the cancer if patients complete the prescribed number of cycles. The side effects associated with these treatment modalities must be effectively controlled (Morrow, Lindke, & Black, 1991a).

Multiple studies have identified nausea and vomiting as common side effects of cancer treatments (Bovbjerg et al., 1992; Fetting et al., 1992; Foltz, Gaines, & Gullatte, 1996; Hursti et al., 1992; Jenns, 1994). From patients' perspectives, nausea and vomiting often are reported as the most distressing adverse effects associated with chemotherapy (Jenns).

### Nausea

Often, nausea and vomiting are treated as a single entity when, in fact, they are two separate physiologic conditions. Nausea is a subjective sensation that may or may not precede vomiting. Jenns (1994) defined nausea as "an awareness of potential vomiting" (p. 488). Accompanying this awareness are physical changes, such as diminished gastric tone, reduced

### Key Points . . .

- Ineffective treatment of chemotherapy-induced nausea leads to the development of anticipatory nausea.
- As a result of uncontrolled anticipatory nausea, patients may delay or discontinue treatment, or clinicians will delay or reduce the prescribed dose of chemotherapy. Any one of these can affect patient survival.
- Although prevention is the best strategy, behavioral interventions such as hypnosis, guided imagery, and progressive muscle relaxation, have been shown to mediate the effects of anticipatory nausea.
- The majority of studies reporting successful interventions have been described mainly in the psychology literature. Nurses need to be aware of and implement these strategies to make a positive impact on patients' quality of life.

### Objectives for CE Enrollees

On completion of this CE, the participant will be able to

1. Discuss key characteristics of anticipatory nausea.
2. List factors associated with the development of anticipatory nausea.
3. Discuss nursing interventions relevant to the treatment of anticipatory nausea.

peristalsis, and reflux of intestinal content into the stomach. Vomiting is the actual emptying of the stomach (Fessele, 1996).

### Types of Nausea

Although nausea is associated with chemotherapy, patients with cancer also experience nausea for other reasons. Nurses must assess their patients to determine the reason(s) for their nausea, as treatment varies with the cause. Metabolic alterations such as hypercalcemia, found in 10% of patients with cancer, and uremia may trigger the chemoreceptor trigger zone (CTZ) in the brain. Narcotics can cause a gastric stasis that leads to

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