

# Determining Health Personnel's Application Trends of New Guidelines for Preoperative Fasting: Findings From a Survey

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**Introduction:** For over a century, the discontinuation of oral food intake preoperatively after midnight has been routinely applied. Although routine fasting during the night before elective surgery has been abandoned by many modern centers, preoperative fasting after midnight continues as a routine practice.

**Purpose:** The purpose of this study was to determine trends in health personnel's application of new guidelines for preoperative fasting.

**Materials and Methods:** The research sample of this descriptive study consisted of 73 nurses and physicians who were working in the surgical clinics during the time when the study was conducted and who agreed to participate in the study. The data of the study were collected using a questionnaire designed by the researchers.

**Finding:** Of the health personnel included in the study group, 43.8% routinely kept adult patients fasting after midnight, 34.2% discontinued solid food intake 8 hours preoperatively, 5.5% discontinued solid food intake 6 hours preoperatively, and 34.2% discontinued the intake of clear and particulate liquids 4 to 8 hours preoperatively. Compliance of the American Society of Anesthesiologists' "2-4-6-8 rule" by health staff was very low.

**Conclusions:** This study was carried out in a hospital and based on the statements of health staff. Therefore, the findings of the study are suggestive in nature and cannot be generalized. We recommend that the study should be conducted with larger sample groups and that actual preoperative fasting periods of the patients should be determined.

**Keywords:** preoperative fasting, surgery, general anesthesia, nurse knowledge, new guidelines for preoperative fasting.

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**FIVE PERCENT OF PEOPLE** undergo elective surgery in their life.<sup>1,2</sup> The success of the surgical procedure depends on the appropriate preparation of the patient for the process. Preoperative fasting is one of the most important steps in patient preparation. For more than a century, the discontinuation of oral food intake preoperatively after midnight has routinely been applied.<sup>3-6</sup> This standard practice stems from the concerns that gastric contents could be aspirated. Preoperative fasting is a distressing and anxiety-inducing state for the patient. Long-term fasting and thirst

preoperatively causes symptoms such as xerostomia, halitosis, headache, unrest, dehydration, hypovolemia, and hypoglycemia. In addition, it can also increase the incidence of postoperative nausea.<sup>7-10</sup>

Researchers have questioned the necessity of fasting all night to reduce the risk of aspiration. Studies have shown that the administration of 150 mL of clear liquid up to 2 to 4 hours preoperatively has not affected gastric contents and pH during anesthesia.<sup>3,4,6-8,11</sup> The new guidelines for preoperative fasting are presented in **Box 1**. Today, routine fasting during the night before elective surgery has been abandoned by many modern centers. In many countries, the problems experienced by patients during long-term preoperative fasting have been recognized, and continuing clear liquid intake up to 2 to 3 hours before the induction of anesthesia has been considered to be safe.<sup>2,6,11,12</sup> In 1994, Norway was the first country to accept “the new national principles for preoperative fasting.” In 1996, a questionnaire assessed compliance with the new principles, and in 69% of the hospitals responding to the questionnaire, clinical applications were seen to undergo a change in terms of a more liberal fasting policy. In addition, it was noted that there was no increase in complications such as aspiration.<sup>13</sup> The preoperative fasting protocols applied in different countries and Turkey are shown in **Boxes 2 and 3**.

Despite the abundance of evidence that long-term preoperative fasting is unnecessary and even harmful, the practice of preoperative fasting after midnight continues to be routinely implemented in many centers.<sup>1,2,5,10</sup> There is sufficient evidence that although solid food intake just before the operation poses risks, allowing clear liquid intake up to 2 hours before the induction of anesthesia in most patients undergoing elective surgery is safe.<sup>3,7,8,11,14</sup>

In countries such as United Kingdom, Canada, the United States, Norway, and Sweden (**Box 2**), the preoperative fasting policies are much more liberally implemented for elective surgical procedures.<sup>8,11-13,15</sup> With respect to adult patients preparing to undergo elective surgical procedures, the 2-4-6-8 hour rule is defined to recommend the following cessations: 2—the consumption of water up to 2 hours before the induction of anesthesia; 4—the consumption of

### Box 1. Recommendations of ASA for Preoperative Fasting

Fluid and Food Intake*	Minimum Fasting Duration (h)
Clear fluids (water, light tea, clear fruit juice, etc.)	2
Breast milk	4
Cow's milk, newborn formulas	6
Light breakfast (light tea, toast, etc)	6
Stodge (fatty foods, meat, chicken, etc)	8

\*Valid for healthy patients of all ages to undergo elective surgery (excluding emergency surgery, gastrointestinal surgery, slow draining stomach, and pregnant women).<sup>3,4,7-9,11,13,15,19</sup>

mother's milk by infants and children up to at least 4 hours; 6—the consumption of solid food (light foods: eg, a cheese sandwich), milk and beverages containing milk up to at least 6 hours; and 8—the consumption of heavy foods (greasy foods, meat, chicken, and similar foods) up to at least 8 hours.<sup>8,11-13,15</sup> This liberal fasting policy allows for the patient to experience less hunger and thirst before surgery, and for this reason, reduces discomfort and anxiety related to such experiences.<sup>2</sup>

### Box 2. Preoperative Fasting Protocols in Different Countries\*

Country	Clear Fluid (h)	Solid Food (h)
United Kingdom	3	6
Canada	2	6 to 8
Norway	2	6
Sweden	2 to 3	Solid foods are discontinued after midnight. Yogurt or clear soup is allowed 4 h preoperatively
United States	2	6; light breakfast
Scandinavian	2	6

Excluding emergency surgery, gastrointestinal surgery, slow draining stomach, and pregnant women.

\*Adapted with permission from references 8, 11-13, and 15.

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