While it is desirable that there should be no solid matter in the stomach when chloroform is administered, it will be found very salutary to give a cup of tea or beef-tea about two hours previously.

—Lord Lister, 1882

The practice of recommending NPO (non per os or nil per os, Latin for “nothing by mouth”) after midnight on the day of surgery is believed to have originated in 1946, when Mendelson reported a high incidence of pulmonary aspiration among obstetric patients receiving general anesthesia. Subsequent animal studies suggested that the severity of lung injury increased as the volume of the aspirate increased and its pH decreased. Thus the custom of recommending NPO after midnight, further reinforced by these animal studies, continued for decades. But recent research shows that pulmonary aspiration is a rare complication of modern anesthesia, and that prolonged fasting prior to surgery is not necessary and, in fact, can lead to adverse effects such as irritability, headache, dehydration, hypovolemia, and hypoglycemia. In 1999, the American Society of Anesthesiologists (ASA) developed guidelines that support more liberal preoperative fasting protocols.

National surveys of physicians suggest that fasting policies and practices began changing before 1999. The authors sought to determine whether the publication of the revised ASA recommendations had changed preoperative fasting practices. They interviewed 155 patients in one hospital about their preoperative fasting, comparing instructed, actual, and ASA-recommended fasting durations for liquids and solids. Their findings demonstrate that the majority of patients continued to receive instructions of NPO after midnight for both liquids and solids, whether they were scheduled for early or late surgery. On average, the patients fasted from liquids and solids for 12 and 14 hours, respectively, with some patients fasting as long as 20 hours from liquids and 37 hours from solids. These fasts were significantly longer than those recommended by the ASA, indicating that inappropriate preoperative fasting is an issue that demands attention.

The authors conclude that more collaboration between nurses and physicians is needed to assure that fasting instructions are consistent with the ASA guidelines and that patients understand these directives.

Key Words: preoperative fasting, evidence-based practice, elective surgery

Corresponding author: Jeannette T. Crenshaw
Presbyterian Hospital of Dallas
8200 Walnut Hill Lane
Dallas, TX 75231-4496
jeannettecrenshaw@texashealth.org

Jeannette T. Crenshaw is a family education coordinator and Elizabeth H. Winslow is a research consultant at Presbyterian Hospital of Dallas. The authors wish to thank Richard Gilder, BSN, RN, for assistance with data analysis, defining surgical time intervals, and categorizing types of surgery; Cathie Gazetta, PhD, RN, FAAN, and Ann Jacobson, PhD, RN, for reviewing and critiquing a draft of the manuscript; Judith Marshal, RPh, for helping to categorize routine medications; Margaret Martin, MSN, RN, for providing administrative support; Mark Raccasi, MD, for supporting the research and reviewing the research proposal and a draft of the manuscript; the nurses who helped with data collection; and the nursing research committee.
these guidelines were published. A 1995 survey of 1,040 ASA members revealed that at least 50% no longer routinely ordered NPO after midnight before elective surgery in adults. Almost all of the anesthesiologists (94%) were aware of the literature that calls the NPO tradition into question, and 68% of them reported changing their practices because of it. A 1996 survey of the chairpersons of 85 university anesthesiology programs and the medical directors of 106 ambulatory surgery centers revealed that more than half (57%) had revised their policies regarding fasting before elective surgery in the preceding three years, and 41% reported allowing some clear liquids to be consumed two to four hours before surgery in adults. None of the respondents reported any adverse outcomes that could be attributed to the more relaxed policies.

Yet even in institutions that have adopted more liberal fasting policies, practice has lagged behind. After the ASA guidelines were revised, Pandit and colleagues surveyed 361 active members of the Society for Ambulatory Anesthesia to determine whether the revision had resulted in a more liberal approach to preoperative fasting. Most of the respondents (62%) reported that their institutional policies allowed patients to consume clear liquids two to three hours before elective surgery, but only 35% told patients to eat a light breakfast, such as tea and toast, six hours before surgery. Two British studies—both published after the revised ASA guidelines were released—further demonstrate that unnecessarily long fasts persist. Most strikingly, one of these studies found that patients fasted from liquids for more than 10 hours, on average, even though the hospital’s policy called for a two-hour fluid fast. It's generally agreed that fasting does not ensure that the stomach will be empty or that the gastric contents will be less acidic.

The growing body of research that supports more liberal fasting instructions led the ASA to revise its practice guidelines for preoperative fasting in healthy patients undergoing elective procedures. The Practice Guidelines for Preoperative Fasting and the Use of Pharmacologic Agents to Reduce the Risk of Pulmonary Aspiration are based on an exhaustive review of the literature, commentary

BACKGROUND

Systematic reevaluation of the long-standing practice of prolonged preoperative fasting began in the 1980s. A retrospective study of 185,358 surgical patients both with and without risk factors (such as emergency surgery, upper-abdominal surgery, or esophageal disorders) revealed that the incidence of X-ray–confirmed aspiration pneumonitis after anesthesia was one in 4,521. In a more recent retrospective study of 172,334 surgical patients who underwent 215,488 procedures, the rate of pulmonary aspiration (confirmed by chest X-ray or the presence of particulate matter in the tracheobronchial tree) was determined to be one in 3,886 among patients undergoing elective surgery; in patients who were healthy or had mild systemic disease (a total of 119,351 elective procedures), the rate was only one in 8,000, and none of the cases of aspiration led to serious pulmonary complications or deaths.

Numerous studies in which tubes were placed in patients’ stomachs to recover gastric contents after anesthesia induction have failed to demonstrate a relationship between duration of fasting and gastric volume or pH. For example, one study of 45 patients undergoing gynecologic surgery found no significant differences in gastric volume or in pH between patients who fasted for an average of 12 hours before surgery and those who had toast and tea or coffee with milk two to four hours before surgery. In a similar study, no significant differences were found between the gastric volumes of 200 patients who drank 150 mL of either coffee or orange juice two to three hours before surgery and those of 100 patients who fasted overnight. It’s generally agreed that fasting does not ensure that the stomach will be empty or that the gastric contents will be less acidic.
from an open forum, expert consensus, and the results of a poll of clinicians on the feasibility of implementing these guidelines.\(^7\) In particular, the guidelines were influenced by findings that

- pulmonary aspiration is a rare complication of modern anesthesia.
- there is little relationship between fasting duration and gastric volume or pH.
- prolonged fasting can be associated with adverse effects.
- liquids and solids are eliminated differently from the stomach (clear liquids leave the stomach almost immediately after ingestion, but solids can’t be eliminated until they’ve been broken down into small particles).

The revised guidelines allow for the consumption of clear liquids up to two hours before elective surgery requiring general anesthesia, regional anesthesia, or sedation–analgesia. (The task force that developed the ASA guidelines recommend a two-hour fast from clear liquids, although they acknowledge that the clinicians consulted were equivocal on the subject, with recommendations ranging from two to four hours. For the purposes of this study, we used the two-to-four-hour range, since most physicians and nurses are likely to be conservative in their recommendations.) A light breakfast (for example, tea and toast) is permitted six hours before the procedure, but a heavier meal cannot be consumed within the eight hours before surgery (see Table 1, above).

**Methods**

This descriptive study was conducted in a 935-bed medical center in the Southwestern United States that did not have a fasting policy. To be eligible to participate, subjects had to be 18 years of age or older and admitted to the hospital from home for elective, nonobstetric, nongastrointestinal surgery. They were also required to be in stable condition, to have been without an IV infusion for more than four hours prior to surgery (since such infusions can influence thirst ratings), to have been admitted to a non–critical care unit after surgery (this was to facilitate the recruitment of stable patients who could be interviewed soon after surgery and who would be likely to remember their fasting instructions and practices), and to consent to participate. Of the 167 subjects chosen by convenience sampling, 155 were interviewed (from November 12, 1999 to May 18, 2000). Seven patients declined to participate because they were too drowsy, too nauseated, or ready to go home. We excluded five patients from the sample because their medical records indicated they didn’t meet all inclusion criteria. The subjects included 72 men and 83 women, and their average age was 53 years (SD 17 years; range, 20 to 90 years).

Staff nurses trained in the study protocols interviewed patients using a semistructured instrument developed for this study by the investigators. The interviews lasted approximately 15 minutes. The nurses wrote patients’ responses by hand on data collection sheets which they later submitted to us for review. The subjects were interviewed after rather than before surgery because the morning of surgery (which is when most patients are admitted) is usually a busy time, and patients are often anxious. By interviewing the patients after surgery, we hoped to facilitate data collection and to increase the likelihood that patients who hadn’t adhered to fasting instructions would respond honestly. Questions addressed the instructions patients were given, the substances (liquids or solid foods) they had consumed, and the times at which they had consumed them. Patients’ responses were compared with ASA recommendations. (See More on Methods, page 42, for a more complete description.)

Instructed fasting duration was defined as the time between when the patient was told to begin fasting and the scheduled time of surgery. Actual fasting duration was defined as the time between the last consumption of any liquid or food (regular or heavy meals; none of the subjects had eaten a light meal)—excluding sips of water taken with morning medication—and anesthesia induction.

**Results**

We found that patients fasted from liquids and solids for an average of 12 and 14 hours, respectively, with some patients fasting for as long as 20 hours from liquids (see Figure 1, page 39) and 37 hours from solids (all of the patients had meals categorized as “regular or heavy” in regard to the ASA guidelines). One hundred fifty of the patients (97%) fasted from liquids for more than six hours. Most patients (n = 135; 87%) reported that their last liquid con-

**Table 1**

<table>
<thead>
<tr>
<th>Liquid and Food Intake</th>
<th>Minimum Fasting Period (hours)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clear liquids (for example, water, clear tea, black coffee, carbonated beverages, and fruit juice without pulp)</td>
<td>2</td>
</tr>
<tr>
<td>Breast milk</td>
<td>4</td>
</tr>
<tr>
<td>Nonhuman milk, including infant formula</td>
<td>6</td>
</tr>
<tr>
<td>Light meal (for example, toast and clear liquids)</td>
<td>6</td>
</tr>
<tr>
<td>Regular or heavy meal (may include fried or fatty food, meat)</td>
<td>8</td>
</tr>
</tbody>
</table>

*For healthy patients of all ages undergoing elective surgery (excluding women in labor).*

Source: Practice guidelines for preoperative fasting and the use of pharmacologic agents to reduce the risk of pulmonary aspiration: application to healthy patients undergoing elective surgery requiring general anesthesia, regional anesthesia, or sedation–analgesia. (The task force that developed the ASA guidelines recommend a two- to four-hour fasting period the scheduled time of surgery. Actual fasting duration was defined as the time between the last consumption of any liquid or food (regular or heavy meals; none of the subjects had eaten a light meal)—excluding sips of water taken with morning medication—and anesthesia induction.

**Preoperative Fasting Recommendations**

of the American Society of Anesthesiologists

**Results**

We found that patients fasted from liquids and solids for an average of 12 and 14 hours, respectively, with some patients fasting for as long as 20 hours from liquids (see Figure 1, page 39) and 37 hours from solids (all of the patients had meals categorized as “regular or heavy” in regard to the ASA guidelines). One hundred fifty of the patients (97%) fasted from liquids for more than six hours. Most patients (n = 135; 87%) reported that their last liquid con-
Consumption had consisted of clear liquids. Actual fasting durations were found to be significantly longer than both the instructed fasting durations (mean instructed fasting durations were nine hours for liquids and 10 hours for solids \(P < 0.0005\)), and the ASA recommendations (see Figure 2, page 41).

Most patients \(n = 145; 94\%\) fasted from liquids longer than instructed (mean, 2.8 hours; SD ± 1.9 hours; range, five minutes to 10 hours longer); only 10 \(6\%\) fasted for less time than instructed (mean, 1.8 hours; SD ± 2.1 hours; range, 10 minutes to 5.6 hours less). All patients except two fasted from solids longer than instructed (mean 4.7 hours; SD ± 2.5 hours; range, three minutes to 14.8 hours longer). Of the other two patients, one fasted exactly as instructed and one fasted for two hours less than instructed. One patient was told to fast “after 2400 hours”; not understanding military time, she fasted for nearly 24 hours.

Instructions and rationale. Most patients \(n = 141; 91\%\) were instructed to maintain NPO status after midnight. Of the 33 patients \(21\%\) scheduled to have surgery at noon or later, 26 \(79\%\) were told to maintain NPO status after midnight. One patient was instructed to begin fasting after the evening meal and another reported being given no instructions. The other five patients scheduled for afternoon surgery were told they could have some liquid in the morning; two of these were also told they could have a light breakfast.

We asked the patients if they were told why they should fast prior to the procedures. Forty-four patients \(28\%\) reported being told why it was important to fast, whereas the others said it wasn’t explained to them. We also asked the patients (whether or not they reported being told this) why, in their understanding, it was important to fast before the procedures. Fifty-five \(35\%\) thought it was to prevent nausea and vomiting; 15 \(10\%\) said they already knew (before the current hospitalization) but didn’t specify why; six \(4\%\) didn’t know; four \(3\%\) thought it had something to do with blood work; and six \(4\%\) gave a variety of other responses (to empty the bowels, to prevent hemorrhaging, and to prevent a reaction to anesthesia, for example). Sixty-nine patients \(45\%\) didn’t comment on the reason. (Because of rounding, percentages don’t equal 100%.)

A nurse was involved in preoperative fasting instruction of 97 patients \(63\%\). Forty-nine of

![Figure 1. Duration of Liquid Fast* in 155 Preoperative Patients](image-url)
these patients (32%) reported that a nurse alone had instructed them, and 48 (31%) said a nurse and others, such as a physician or secretary, had instructed them.

**Medication instruction.** One hundred eighteen patients (76%) reported taking medications regularly. Thirty-eight subjects (32%) who routinely took medications reported that they didn’t receive instructions about whether to take them on the morning of surgery. Thirty-seven patients (31%) were told to take medications with a sip of water in the morning, 19 (16%) were told not to take them, and 26 (22%) received specific instructions (for example, to take some medications but not others on the morning of surgery).

We reviewed the reported medications with a pharmacist and a nurse practitioner and, by consensus, designated medications as either “significant” or “not significant.” A medication was termed “significant” if, in our opinion, patients required counseling about whether to take it on the morning of surgery. Significant medications included antibiotics, anticoagulants, antivirals, diuretics, and oral contraceptives (in women of childbearing age), as well as asthma, blood pressure, diabetes, cardiac, and seizure medications. Of the 108 patients (92%) who identified their medications, most (n = 63; 58%) were taking significant ones. Fourteen of the patients (22%) taking significant medications reported that they hadn’t received instructions on whether to take them the morning of surgery.

**Scheduled and actual times of surgery.** We examined the differences between the scheduled and actual times of surgery and determined which procedures were early, late, or on time. “Early” procedures were defined as those in which induction took place more than 20 minutes before the scheduled time of surgery; “late” procedures were those in which induction occurred more than 20 minutes after the scheduled time. “On time” meant that induction took place no more than 20 minutes early or late. More than half (n = 91; 59%) of the operations were on time, 8 (5%) were early, and 56 (36%) were late. The eight early operations took place an average of 33 minutes early (range, 25 to 50 minutes) and the 56 late operations occurred an average of 56 minutes late (range, 25 to 348 minutes).

**Thirst, hunger, and worry.** The patients were asked to rate their thirst, hunger, and worry about the pending procedure on a scale of 0 to 10, with 0 representing no thirst, hunger, or worry and 10 representing the severest possible thirst, hunger, or worry. Almost half of the patients rated thirst and worry at 5 or higher, whereas more than one-third rated hunger at 5 or higher (see Table 2, at left). Thirst was positively related to hunger (r = 0.36; P < 0.0005) and to worry (r = 0.21; P = 0.009). Age was inversely associated with hunger (r = –0.30; P < 0.0005). The relationships between level of thirst and duration of liquid fast and between level of hunger and duration of solid fast were not significant (ns) (r = 12 [ns] and r = 0.08 [ns], respectively).

**DISCUSSION**

Our study of actual practices showed little change in preoperative fasting in response to the revised ASA guidelines. The patients we interviewed reported fasting from liquids for an average of 12 hours and from solids for an average of 14 hours, with the vast majority being given the traditional NPO-after-midnight instructions for both liquids and solids, whether they were scheduled for early or late surgery. The instructed duration of the liquid and solid fast did not seem to be influenced by evidence-based guidelines, by the known differences in gastric transit of liquids and solids, or by the scheduled time of surgery.

Several studies of actual practice published before the 1999 revision of the ASA guidelines and two studies published afterward have documented unnecessarily long preoperative fasts. Four studies of a total of 543 elective surgery patients in the United States and Britain showed mean fasting durations of 10 to 14 hours.6, 21-23 In a British study published after the revision of the ASA guidelines, the mean duration of fasting among 153 patients was found to be 12.5 hours for liquids (range, 4.5 to 20 hours) and 14.3 hours for solids (range, 4.5 to 48 hours).11 Another recent British study, this one of 90 surgical patients, found that liquid fasts lasted for an average of 10 hours (range, three to 18 hours) despite a hospital policy advising two-hour liquid fasts for elective surgical patients.12 These studies, like ours, show that excessive preoperative fasting continues despite research and guidelines recommending more liberal fasting protocols.

Our colleagues working in hospitals in the Dallas–Fort Worth area and across the country also report that ordering NPO after midnight is still the rule rather than the exception. The inconvenience of departing from traditional practice, the belief that longer fasts are better, the difficulty of individualizing fasting instructions, the concerns about changes in surgery schedules, the fear of litigation, the lack of concern about the adverse consequences of fasting, and the exaggerated concern about aspiration may help explain why fasting instructions aren’t consistent with current guidelines.24-26

---

**TABLE 2**

<table>
<thead>
<tr>
<th></th>
<th>Mean ± SD</th>
<th>&lt; 5</th>
<th>≥ 9</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thirst (n = 155)</td>
<td>4 ± 3</td>
<td>45% (n = 69)</td>
<td>10% (n = 16)</td>
</tr>
<tr>
<td>Hunger (n = 155)</td>
<td>3 ± 3</td>
<td>37% (n = 57)</td>
<td>6% (n = 10)</td>
</tr>
<tr>
<td>Worry (n = 155)</td>
<td>4 ± 3</td>
<td>44% (n = 68)</td>
<td>12% (n = 18)</td>
</tr>
</tbody>
</table>

SD = standard deviation
To address some of these concerns, anesthesiologists from Chicago prospectively assessed the effects of a liberalized preoperative fasting policy. During the first 15-week period, 2,646 patients were instructed to consume no liquids or solids after midnight; in the second 15-week period, 2,774 patients were allowed to consume unlimited clear liquids until three hours before surgery. No differences in incidence of aspiration were found between the groups (there was no incidence in either group); however, clear gastric contents in the posterior pharynx were observed significantly more frequently in the traditional fasting group (n = 12) than in the liberalized fasting group (n = 9). No significant differences were found between the groups in regard to the number of cases canceled or delayed.

Discomfort and other problems associated with fasting. The adverse effects of prolonged fasting include thirst, hunger, irritability, headache, dehydration, hypovolemia, and hypoglycemia. Almost half of our subjects (45%) rated their thirst at 5 or higher on a 0-to-10 scale. We were initially surprised that our findings showed no significant relationship between duration of liquid fast and thirst. However, this can be explained by the lack of variability in the duration of the liquid fast, since most patients fasted from liquids for prolonged periods. A significant relationship might have been found if more patients

---

**Figure 2. Differences Between Actual and Instructed Fasting Durations in 155 Preoperative Patients**

<table>
<thead>
<tr>
<th>Mean fasting duration (hours)</th>
<th>Liquids†</th>
<th>Solids††</th>
</tr>
</thead>
<tbody>
<tr>
<td>SD, ± 2; range, 4–20</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SD, ± 3; range, 3–20</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SD, ± 4; range, 4–37</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SD, ± 3; range, 7–31</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Study results were compared to the more conservative ASA recommendations for fasting from clear liquids (2–4 hours) and solids (6–8 hours).
†Paired samples t-test for actual versus instructed liquid fasts: t = 13.951; P < 0.0005.
††Paired samples t-test for actual versus instructed solid fasts: t = 22.179; P < 0.0005.
had received clear liquids two to four hours prior to surgery. The mean thirst rating (4) was equal to the mean worry rating; hunger was less bothersome, with a mean rating of 3.

Some researchers have found that preoperative IV fluid administration reduces postoperative thirst, drowsiness, and dizziness,7 and others have suggested that shorter preoperative fluid fasts might reduce postoperative emesis.6

**Time of surgery.** One reason often cited for prolonged fasting is that the procedure may be performed earlier than expected if another procedure is finished early or canceled. However, our data show that only 5% of operations were started 20 or more minutes before the scheduled time, and on average, these began only 33 minutes early (range, 25 to 50 minutes). This minimal change in schedule shouldn’t affect the risk of aspiration in patients who are instructed to fast from clear liquids for two to four hours.

**Medication.** The majority of patients in this study regularly took medications. Almost one-quarter of the patients taking significant medications said that they had received no instructions about whether to take them on the morning of surgery. Pearse and Rajakulendran also have documented the omission of medication doses on the day of surgery.13 They found that 43% of the 53 patients taking medications regularly didn’t receive one or more drugs preoperatively, and 45% of the patients taking cardiac med-

[42 AJN ▼ May 2002 ▼ Vol. 102, No. 5](http://www.nursingcenter.com)
ications didn’t receive them on the day of surgery.

Limitations and recommendations. This study was conducted in only one hospital with a convenience sample of 155 elective surgery patients who described their experiences and perceptions to several different data collectors. The patients’ memories may have been inaccurate, and patients may not have been able to differentiate among nursing, medical, and clerical staff.

Similar studies with larger and different samples are needed in order to confirm our findings. It’s important to study pediatric and obstetric patients as well as patients in free-standing ambulatory surgery settings to determine whether fasting policies and practices vary according to setting. Furthermore, it may be useful to compare fasting in patients undergoing surgery for the first time with fasting in those who have undergone multiple procedures, because the compliance rates in these groups may vary.

It would be worthwhile to ask patients to rate their thirst, hunger, and worry immediately before rather than after surgery; doing so may provide a more accurate rating than would asking patients to recall this later. Finding out how many patients were given instructions to eat or drink (for example, “You can have a light meal at 10 PM but nothing before midnight,” or “You may have one cup of tea or coffee without milk before arriving at the hospital”) but elected not to, would also be useful. We also recommend testing the effects of consuming clear liquids two to four hours before surgery on thirst, hunger, and worry. In future studies, interrater reliability should be assured to increase the confidence that different interviewers collected and recorded responses in the same manner; in addition, researchers may want to tape-record interviews to verify the accuracy of response documentation and assess interrater reliability. Finally, a study comparing the fasting instructions of anesthesiologists, surgeons, and pediatricians would demonstrate whether differences in practice exist among these specialists; identifying these discrepancies could lead to interdisciplinary discussion and possibly to resolution.

CONCLUSIONS

Nurses share the responsibility for recommending excessively long and unkind fasts, and for patients’ lack of understanding of the issue.

Nurses share the responsibility for recommending excessively long and unkind fasts, and for patients’ lack of understanding of the issue. Most of the patients in our study reported receiving instruction on preoperative fasting from either a nurse or a physician or nurse. Nurses should be more assertive in collaborating with physicians—by discussing preoperative fasting instructions and relevant studies and by developing and implementing hospital policies with them—so that fasting instructions are based on evidence and patients understand when and why fluid and food should be stopped. In addition, physicians and nurses must determine which medications the patient is taking and which must be taken on the day of surgery. They must then give the patient specific instructions about which medications to take and with how much water.

Hung found in 1992, as Chapman did in 1996, that patients need more comprehensive fasting instructions. Consequently, physicians (surgeons or anesthesiologists) and nurses should give patients both written directions (at an appropriate reading level) and oral instructions to clarify fasting rationales. Through this verbal exchange, the physician or nurse can ensure that the patient understands the instructions and knows whom to contact with additional questions.

Because thirst is so bothersome, nurses should teach patients strategies for coping with it (such as brushing teeth, rinsing the mouth, sucking ice chips, chewing gum, and sucking hard candy). Nurses should also question inappropriate fasting instructions, such as those requiring patients to maintain NPO status after midnight for afternoon surgery. In addition, when an operation is going to be delayed by two hours or longer, nurses could offer the patient clear liquids. In fact, as Simini suggested, anesthesiologists could prescribe clear liquids up to three hours before surgery, making this a normal part of preoperative care.

If fasting practices are to be based on evidence rather than custom, nurses and physicians must work together to ensure that fasting instructions are congruent with the ASA guidelines and that patients understand them. As a result of the findings reported here, we recommend that physicians, nurses, and administrators collaborate to establish evidence-based preoperative fasting policies at their institutions, educate staff about those policies, and monitor their effectiveness.
REFERENCES


GENERAL PURPOSE: To provide registered professional nurses with an opportunity to review a study designed to evaluate preoperative fasting practices.

LEARNING OBJECTIVES: After reading this article and taking the test on the next page, you will be able to:

• Describe the findings of a literature review on preoperative fasting practices and guidelines.
• Discuss the purpose, methods, and findings of this study.
• Delineate the implications of this study for nursing practice.

To earn continuing education (CE) credit, follow these instructions:

1. After reading this article, darken the appropriate boxes (numbers 21–36) on the answer card between pages 32 and 33 (or a photocopy). Each question has only one correct answer.

2. Complete the registration information (Box A) and help us evaluate this offering (Box C).*

3. Send the card with your registration fee to: Continuing Education Department, Lippincott Williams & Wilkins, 345 Hudson Street, New York, NY 10014.

4. Your registration fee for this offering is $13.95. If you take two or more tests in any nursing journal published by Lippincott Williams & Wilkins and send in your answers to all tests together, you may deduct $0.75 from the price of each test.

Within six weeks after Lippincott Williams & Wilkins receives your answer card, you’ll be notified of your test results. A passing score for this test is 12 correct answers (75%). If you pass, Lippincott Williams & Wilkins will send you a CE certificate indicating the number of contact hours you’ve earned. If you fail, Lippincott Williams & Wilkins gives you the option of taking the test again at no additional cost. All answer cards for this test on Preoperative Fasting: Old Habits Die Hard must be received by May 31, 2004.

This continuing education activity for 2 contact hours is provided by Lippincott Williams & Wilkins, which is accredited as a provider of continuing nursing education (CNE) by the American Nurses Credentialing Center’s Commission on Accreditation and by the American Association of Critical-Care Nurses (AACN 9722, category O). This activity is also provider approved by the California Board of Registered Nursing, provider number CEP11749 for 2 contact hours. Lippincott Williams & Wilkins is also an approved provider of CNE in Alabama, Florida, and Iowa, and holds the following provider numbers: AL #ABNP0114, FL #FBN2454, IA #75. All of its home study activities are classified for Texas nursing continuing education requirements as Type 1.

*In accordance with Iowa Board of Nursing administrative rules governing grievances, a copy of your evaluation of this CNE offering may be submitted to the Iowa Board of Nursing.