1. **Introduction:**

Preoperative fasting instructions for healthy adults should be based on current evidence. The Winnipeg Regional Health Authority (WRHA) Anesthesia Program and the Anesthesia Program Council have reviewed the current literature and the varied preoperative fasting practices within the WRHA with the intent of standardizing the practice of preoperative fasting to align with guidelines from the Canadian Anesthesiologist Society (Merchant et al., 2013) and American Society of Anesthesiologists (Apfelbaum, 2011). In collaboration with the WRHA Surgery and Women’s Health Programs, this evidence informed guideline has been developed to facilitate the communication and implementation of preoperative fasting requirements for adult patients across the WRHA.

2. **Purpose:**

2.1 To balance the adverse effects of preoperative fasting with the risk of pulmonary aspiration of gastric contents under anesthesia

2.2 To standardize the preoperative fasting requirements for adult surgical patients across the Winnipeg Regional Health Authority.
3. Scope:

This guideline applies to adult surgical patients undergoing elective and ambulatory emergency surgeries where an anesthesiologist or designate is present, regardless of the type of anesthetic that may be administered. This guideline also includes women undergoing elective Cesarean section. This guideline does not include surgical procedures where an anesthesiologist or designate is not present such as endoscopy and other minor procedures where the physician/ surgeon directs the administration of sedation and minor surgical procedures where no sedation is given and local anesthetic is administered by the surgeon.

4. Definitions:

4.1 Preoperative fasting: a prescribed period of time before a procedure when patients are not permitted oral intake of liquids or solids.

4.2 Adult surgical patients: individuals undergoing surgery within WRHA facilities with the exception of Children’s Hospital and dental surgeries at Misericordia Health Center.

4.3 Elective surgery patients: individuals scheduled to undergo non-urgent surgery.

4.4 Ambulatory emergency surgery patients: individuals awaiting unscheduled, minor urgent surgeries (typically minor maxillofacial, plastic, or orthopedic surgery) and who have been discharged from hospital. These patients are re-admitted when operating room time becomes available for their procedure.

4.5 Clear fluids: water, apple juice, cranberry juice (no orange juice), clear tea or black coffee (no milk, cream, powdered creamer, sugar, or sweetener), clear broth (no noodles, vegetables, meat, or solids of any kind). Sports and carbonated drinks are not acceptable.
5. Background:

Because regurgitation and pulmonary aspiration in the perioperative period is associated with increased mortality and morbidity, emphasis should be placed on informing patients of the appropriate fasting requirement prior to elective procedures requiring general anesthesia, regional anesthesia, sedation, or analgesia (Fischer, Bader & Sweitzer, 2009). An adequate review of a patient’s pertinent medical records, physical examination, and a patient interview or survey should be performed as a part of a thorough preoperative assessment (Fischer et al., 2009). Conditions that might predispose the patient for an increased risk of regurgitation and pulmonary aspiration can be elicited from the perioperative assessment. Examples of patient-related factors and conditions that can increase the risk of perioperative aspiration can include gastro-esophageal reflux, raised intra-abdominal pressure (e.g. obesity, pregnancy), metabolic disorders (e.g. diabetes mellitus), known or potential difficult airway management, and dysphagia (Fischer et al., 2009).

Recent practice guidelines published by the Canadian Anesthesiologists’ Society (Merchant et al., 2013) and the American Society of Anesthesiologists (Apfelbaum, 2011) have reviewed the evidence and provide rationale for the adult preoperative fasting recommendations presented in this clinical practice guideline. Research suggests that a more liberal approach to restricted fluid intake prior to surgery is safe (Brady, Kinn, Stuart & Ness, 2010). Meta-analysis of randomized controlled trials comparing 2 – 4 hour fasting times for clear liquids with greater than 4 hours provides evidence that gastric pH is increased and gastric volumes are decreased with the 2 – 4 hour fast. (Apfelbaum, 2011; Merchant et al., 2013). Although the literature (Smith et al., 2011) suggests that fasting 6 hours from the intake of a light meal is sufficient in the preoperative period, the definition of what constitutes a light meal makes the implementation of a 6 hour
fasting guideline problematic. Therefore, fasting for 8 hours from the time of ingestion of a meal that contains fatty foods, fried foods, and dairy and meat products is recommended prior to procedures requiring general anesthesia, regional anesthesia, sedation, or analgesia (Apfelbaum, 2011; Merchant et al., 2013).

Prolonged fasting is not without discomfort or risk for the preoperative population. Adverse effects from a fasting state include thirst, hunger, irritability, dehydration, nausea and vomiting, confusion, electrolyte imbalance, insulin resistance, post-operative hypoglycemia, muscle wasting and a weakened immune system (Crenshaw, 2011; McAuthur, 2011; Stuart, 2006). Some have argued a period of prolonged restricted fluid intake may result in altered organ function and surgical outcomes (Lobo, Macafee, & Allison, 2006). Research, however, clearly supports a change to the strict practice of protracted fasting prior to elective surgery in the adult population.

6. **Recommendations:**

- For elective surgical patients: clear fluids (as previously defined) permitted up to 2 hours prior to *advised arrival time to hospital* on the day of surgery
- For ambulatory emergency patients awaiting call back to hospital: clear fluids (as previously defined) until call received from facility to come in for procedure
- No solid food or alcohol after midnight, the night before your surgery
- No chewing gum or chewing tobacco after midnight, the night before your surgery
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8. References:


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