



**PREcovery™ is a carbohydrate-rich beverage that contains no artificial fillers, sweeteners, or flavours.**

### **SURGICAL PATIENTS NEED NUTRITIONAL SUPPORT**

Preoperative carbohydrate therapy is designed to reduce postoperative insulin resistance and improve recovery after surgery.

Overnight fasting before surgery is an outdated protocol that leaves patients in a vulnerable and starved state leading to adverse postoperative outcomes (1).

Consuming complex carbohydrates before surgery is an effective way of hydrating and nourishing patients, as well as speeding up recovery time (2).

### **HOW DOES PREcovery™ IMPROVE SURGICAL RESULTS?**

**Compliance:** PREcovery™ is easily mixed with water and has a natural citrus flavour with uniform consistency.

**Efficacy:** PREcovery™ contains 50g of complex carbohydrates per serving. This amount of carbohydrate has been shown to promote an anabolic state before surgery. In comparison to a fasted state, PREcovery™ offers protection against surgical trauma in terms of metabolic efficiency and psychosomatic status, contributing to a 20% reduction in hospital length of stay (5).

**Safety:** PREcovery™ delivers the lowest osmolality compared to competitors (114 mOsmol/kgH2O) which promotes digestion, gastric emptying, and water absorption (3).

**Clinical Guideline:** Preoperative carbohydrate-containing clear liquids have been included in the Enhanced Recovery After Surgery (ERAS®) Society’s recommendations as part of a multimodal approach to reduce surgical patients’ length of stay and complication rates. Applicable surgical specialties include colorectal, gastrointestinal, liver, orthopaedics, head and neck, urology, and gynaecology (4).

*ERAS is a registered trademark of the Enhanced Recovery After Surgery Society*

<b>Nutrition Facts</b>	
Per 1 container (54 g)	
	% Daily Value*
<b>Calories</b> 200	
<b>Fat</b> 0 g	0 %
Saturated 0 g + Trans	0 %
0 g	
<b>Carbohydrate</b> 50 g	
Fibre 0 g	0 %
Sugars 2 g	0 %
<b>Protein</b> 0 g	
<b>Cholesterol</b> 0 mg	
<b>Sodium</b> 150 mg	6 %
Potassium 0 mg	0 %
Calcium 0 mg	0 %
Iron 0 mg	0 %
<small>*5% or less is a little, 15% or more is a lot</small>	




All Natural Carbohydrate-Rich Beverage.

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Citation	Surgery Type, Number of Subjects	Intervention	Outcomes
Singh, Basant Narayan, et al. Surgical Endoscopy 29.11 (2015): 3267-3272	Laparoscopic cholecystectomy (n = 120)	Preoperative oral carbohydrate, placebo, or fasting	Preoperative consumption of a carbohydrate-rich drink <b>can minimize postoperative nausea, vomiting and pain</b> in patients undergoing cholecystectomy. Consumption of carbohydrate drinks up to 2 h prior to surgery is not associated with additional complications.
Smith, Mark D., et al. The Cochrane Library (2014).	Elective surgery meta-analysis (n =1351)	Preoperative oral carbohydrate, placebo, or fasting	Preoperative carbohydrate treatment was associated with <b>shortened length of hospital stay compared with placebo or fasting (by 0.3 days)</b> .
Yagci Gokhan, et al. Nutrition 24.3 (2008): 212-216.	Cholecystectomy, thyroidectomy (n = 70)	Preoperative oral carbohydrate or fasting	The preoperative intake of carbohydrate-rich fluids does not appear to alter the amount or pH of gastric contents, suggesting <b>this is a safe procedure, in terms of aspiration risk</b> . Furthermore, the intake of such fluid might prevent energy malnutrition.
Yuill, K. A., et al. Clinical Nutrition 24.1 (2005): 32-37.	Upper GI (n = 72)	Preoperative oral carbohydrate or placebo	The study has shown a significant benefit in relation to amelioration of lean body mass following surgical intervention and suggests that patients given a preoperative glucose load have <b>improved preservation of muscle mass when compared to those given a placebo drink</b> .
Hausel, Jonatan, et al. Anesthesia & Analgesia 93.5 (2001): 1344-1350.	Laparoscopic cholecystectomy, major colorectal (n = 252)	Preoperative oral carbohydrate, placebo, or fasting	This study shows that preparation with CHO increased preoperative well being compared with intake of placebo (water) or overnight fasting. This treatment <b>relieved preoperative thirst, hunger, anxiety, and, to some extent, malaise and unfitness</b> .
Soop, Mattias, et al. American Journal of Physiology-Endocrinology And Metabolism 280.4 (2001): E576 – E583.	Total hip replacement (n = 15 patients)	Preoperative oral carbohydrate or placebo	Whole body <b>insulin sensitivity decreased by 18% in the treatment group versus 43% in the placebo group</b> . Insulin sensitivity was measured by the gold standard: hyperinsulinemic-euglycemic clamp technique.

Studies show that preoperative carbohydrate loading therapy improves patient well-being, preserves muscle mass, and reduces hospital length of stay and postoperative insulin resistance.

 Stir or shake PREcovery™ in 400ml of cool water, drink entire contents immediately (citrus flavour).

Ingredients: Maltodextrin, citric acid, sodium chloride, natural citrus flavour, stevia.  
 Use only under medical supervision.  
 Not suitable for intravenous use.  
 Not suitable as sole source of nutrition.  
 Not suitable for use in children under 1 year of age.

Clinical studies were conducted with similar nutrient profiles as PREcovery™

SOURCES

1. Bilku, D. K., et al. "Role of preoperative carbohydrate loading: a systematic review." The Annals of The Royal College of Surgeons of England 96.1 (2014): 15-22. 2. Nygren, Jonas. "The metabolic effects of fasting and surgery." Best practice & research Clinical anaesthesiology 20.3 (2006): 429-438. 3. Mettler, Samuel, Carmen Rusch, and Paolo C. Colombani. "Osmolality and pH of sport and other drinks available in Switzerland." Schweizerische Zeitschrift für Sportmedizin und Sporttraumatologie 54.3 (2006): 92. 4. Pogatschnik, Cassandra, and Ezra Steiger. "Review of preoperative carbohydrate loading." Nutrition in Clinical Practice (2015): 0884533615594013. 5. Nygren, Jonas, Anders Thorell, and Olle Ljungqvist. "Preoperative oral carbohydrate nutrition: an update." Current Opinion in Clinical Nutrition & Metabolic Care 4.4 (2001): 255-259.



Recommended Intake:

Stage	PREcovery™ (pouches)
Loading dose: evening before surgery	2
Final dose: 2-3 hours before anesthesia	1



Enhanced Medical Nutrition

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