

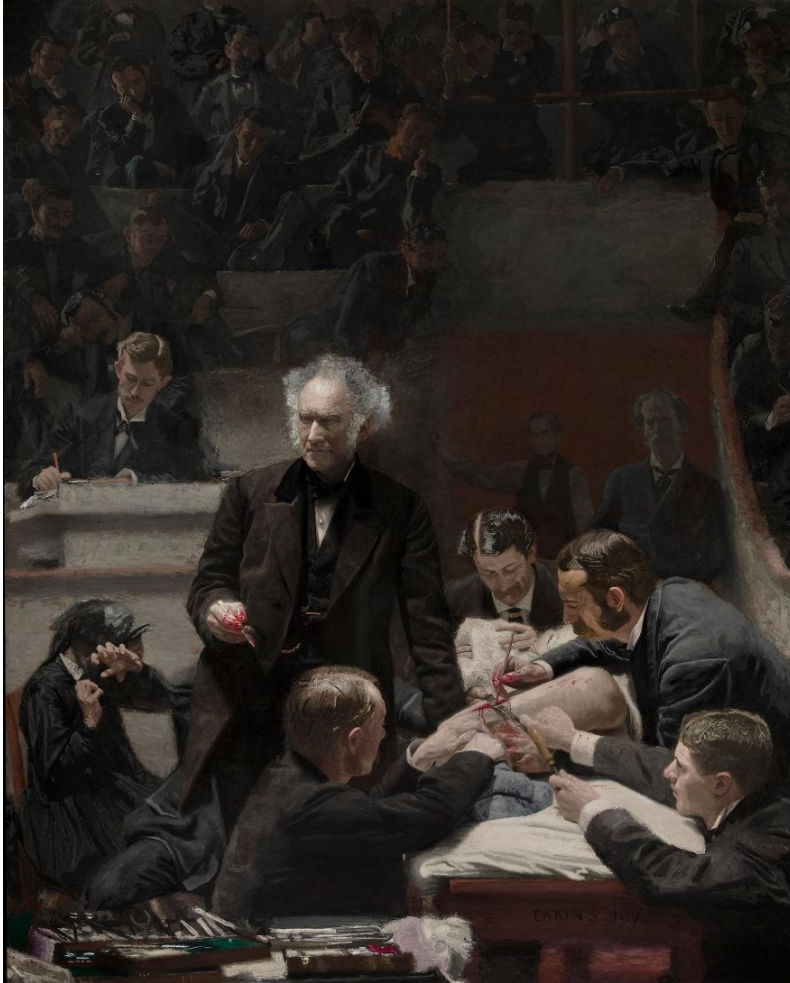


What (not) to eat before surgery and the benefits of commercializing it

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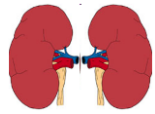
The Problem



- Surgery greatly advanced since 19th century, but still risk of peri-operative complications and poor outcomes
- Example in elective cardiovascular surgeries:
 - Perioperative mortality rates up to 10%;
 - 1-year re-occlusion rates up to 40%
- Currently few effective strategies to reduce surgical complications or improve outcome measures

A Potential Solution

Preoperative dietary restriction improves surgical outcomes in preclinical models

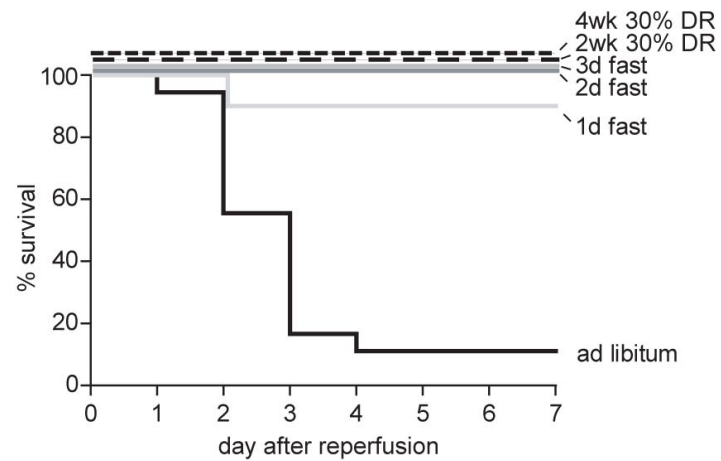


Bilateral renal ischemia reperfusion injury



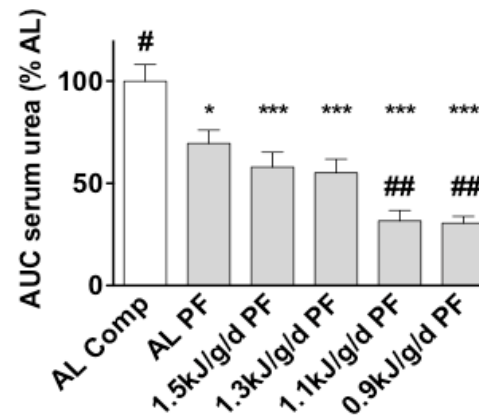
Vein graft disease

Reduced perioperative mortality



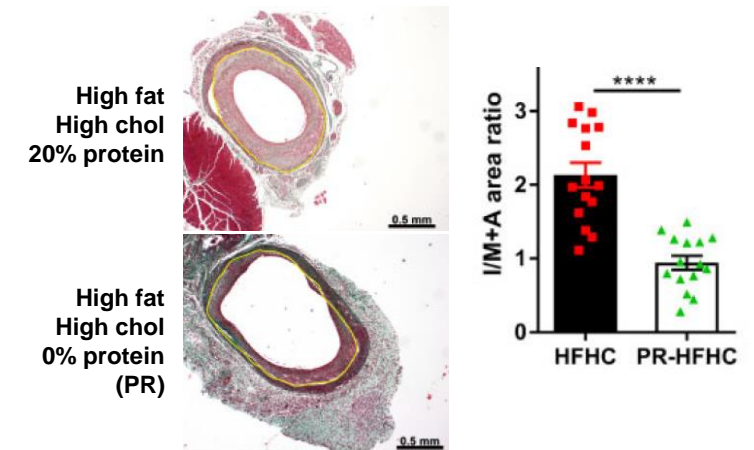
Mitchell et al. Aging Cell 2009

Improved organ function



Robertson et al. J Nutr 2015

Improved surgical outcome



Trocha et al. Cardiovas Res 2019

- Pre-operative DR effective in multiple preclinical surgical injury models
- Pre-operative DR feasible and safe in prospective clinical trials
- *Opportunity: No optimized/uniform preoperative nutritional protocol yet exists*

Perioperative Nutrition: State of the art



- Enhanced Recovery After Surgery (ERAS) guidelines: carbohydrate loading up to 4 hr prior



- Special considerations for bariatric/gastric surgery: Optifast800 for weight loss up to 2wk prior

Proposed commercialization strategy for what not to eat before surgery

Characteristics of proposed „Preop Diet“

Low protein/low calorie complete meal replacement

Shake or naturally sourced meals: standardized

Use up to two weeks prior to any elective surgery

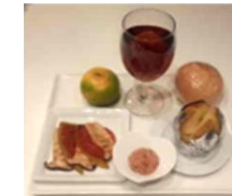


Predicted benefits in humans:

Reduced perioperative complication rates, improved healing, shorter hospital stays, better outcomes



Breakfast



Lunch



Snack



Dinner

Other Considerations:

- Full protein/calorie nutrition immediately after surgery (separate product)
- Recommended by doctor
- Paid for by insurance
- First to market rather than IP route

Thank you for your attention!

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