INE | INSTITUTE OF NUTRITIONAL ENDOCRINOLOGY

Macronutrients:

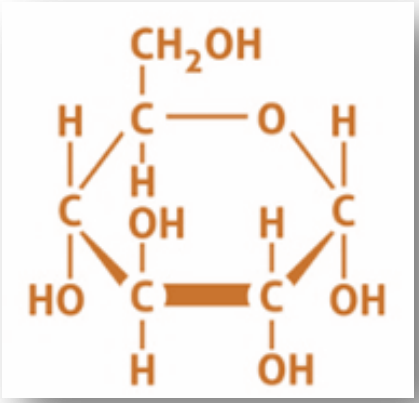
Carbohydrate Structure and Biochemistry

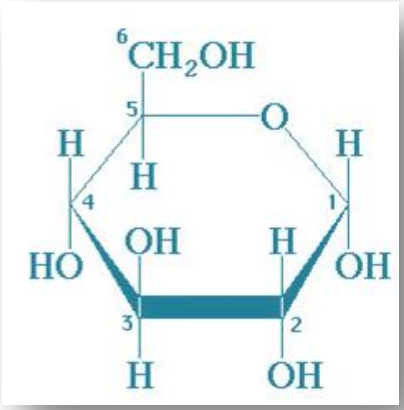
Dr. Ritamarie Loscalzo

Medical Disclaimer: The information in this presentation is not intended to replace a one-on-one relationship with a qualified health care professional, and is not intended as medical advice. It is intended as a sharing of knowledge and information from the research and experience of Dr. Ritamarie Loscalzo, drritamarie.com, and the experts who have contributed. We encourage you to make your own health care decisions based upon your research and in partnership with a qualified health care professional.

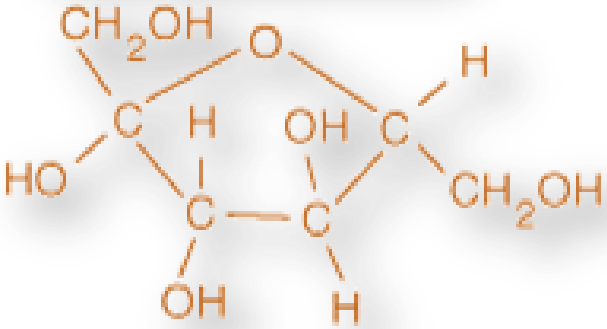
Monosaccharides

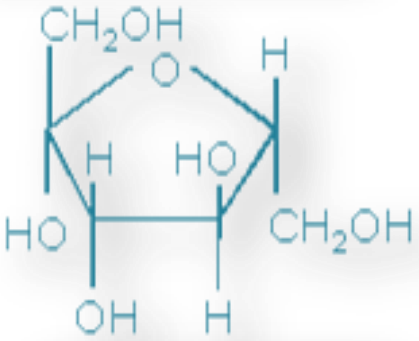
Glucose



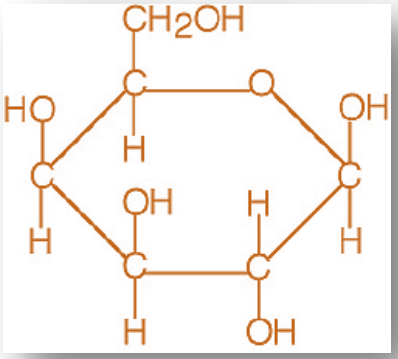


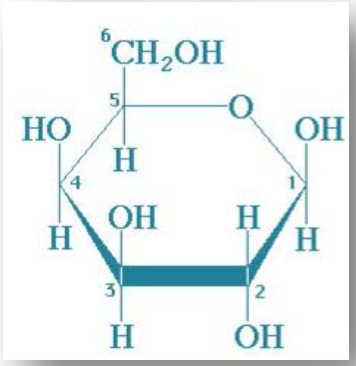
Fructose





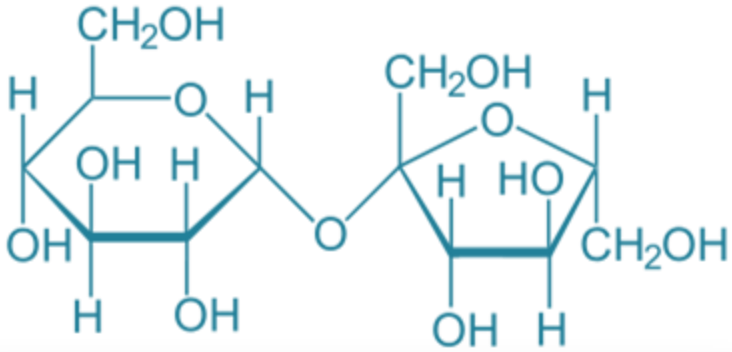
Galactose



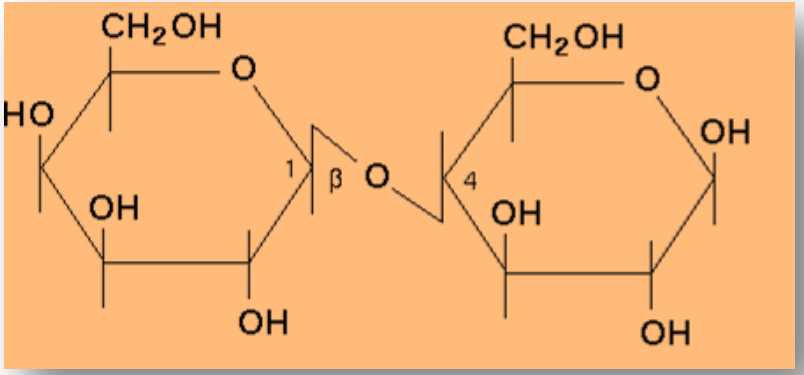


Disaccharides

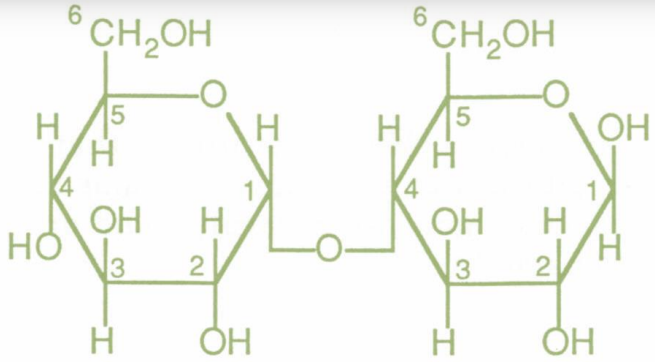
Sucrose



Lactose

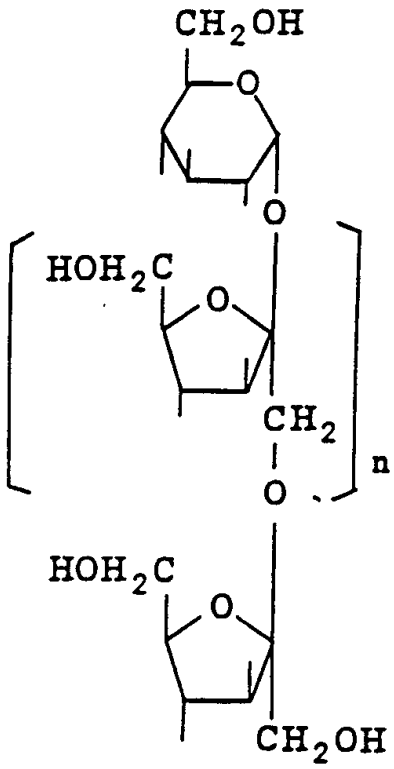


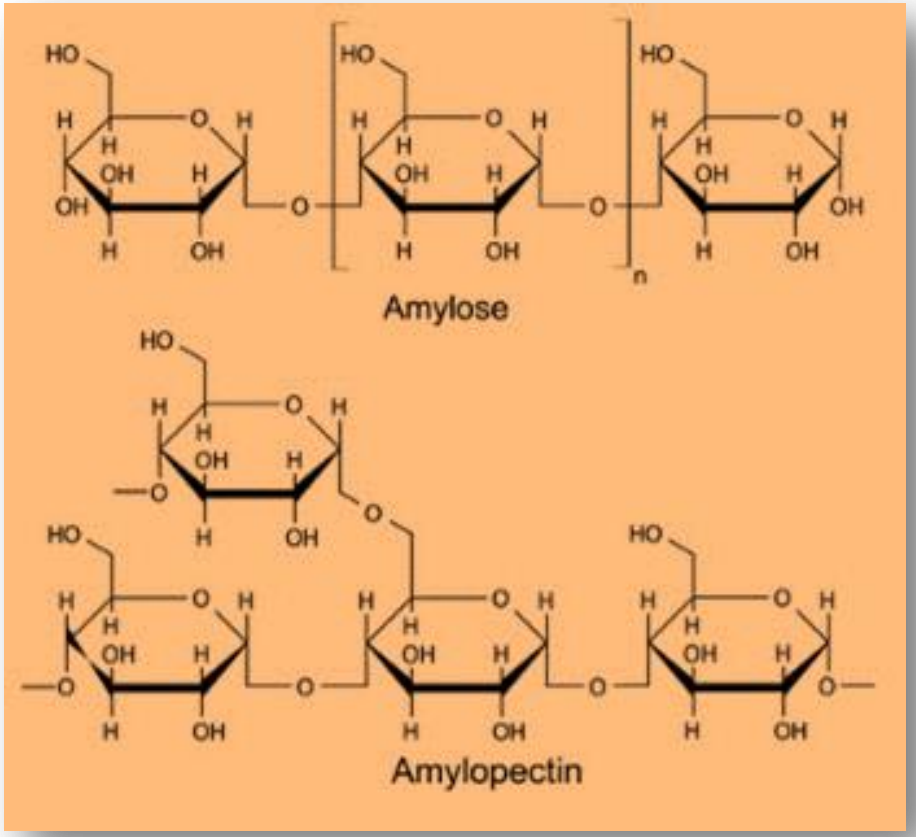
Maltose



Oligosaccharides

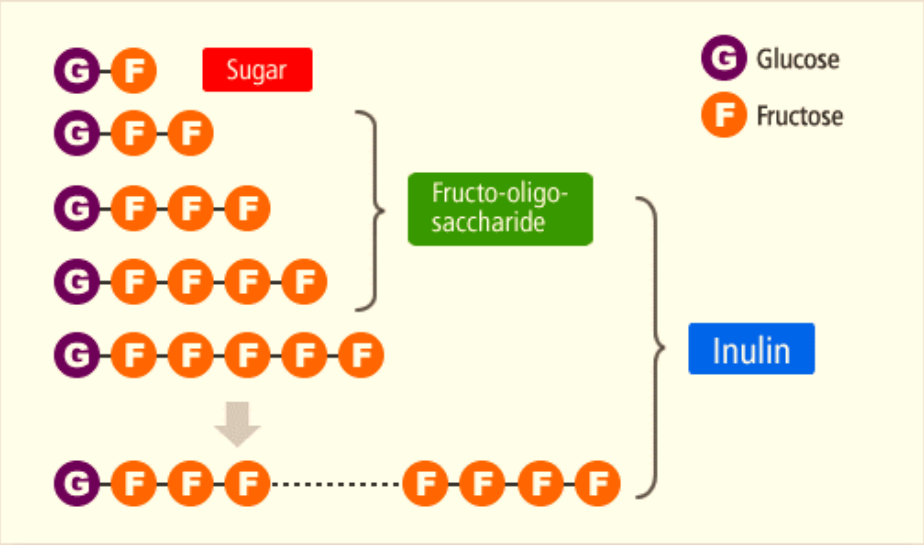
Fructooligosaccharides





Fructooligosaccharides (FOS)

- ✓ Food for gut bacteria
- ✓ Not digestible by pancreatic enzymes
- ✓ Also known as prebiotics
- ✓ Promotes calcium absorption

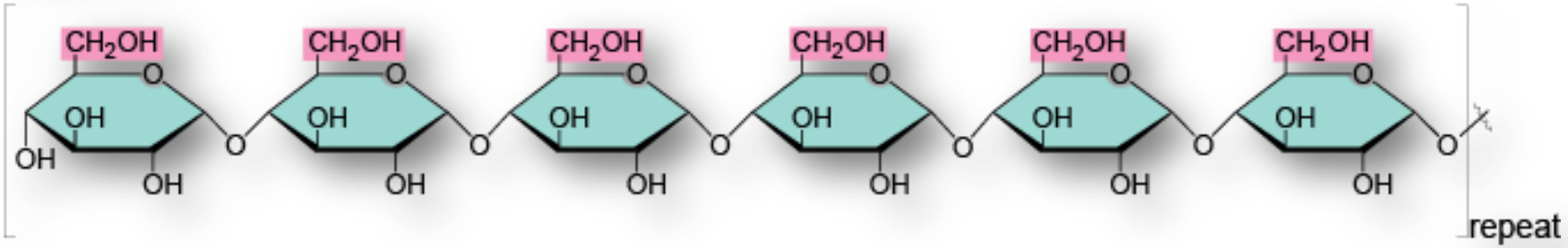


Food Sources:

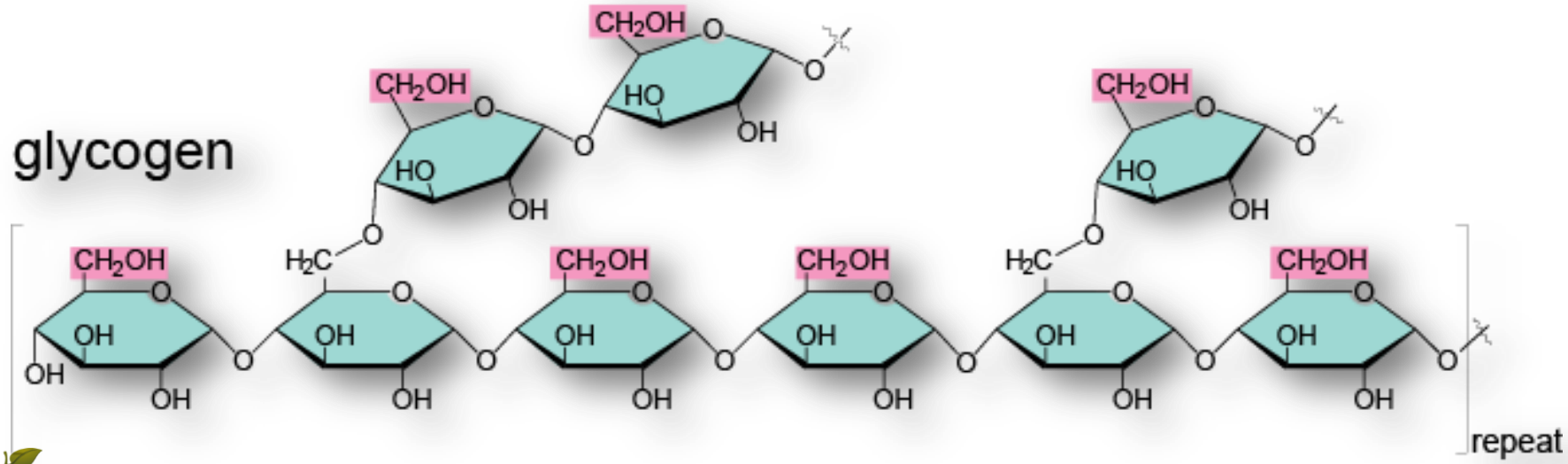
- ✓ Jerusalem artichoke
- ✓ Yacon
- ✓ Blue agave
- ✓ Bananas
- ✓ Onions
- ✓ Chicory root
- ✓ Garlic
- ✓ Asparagus
- ✓ Jicama
- ✓ Tomatoes
- ✓ Leeks

Polysaccharides

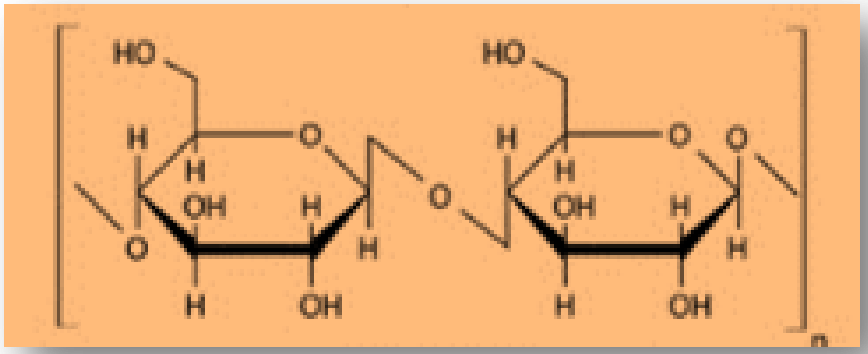
starch

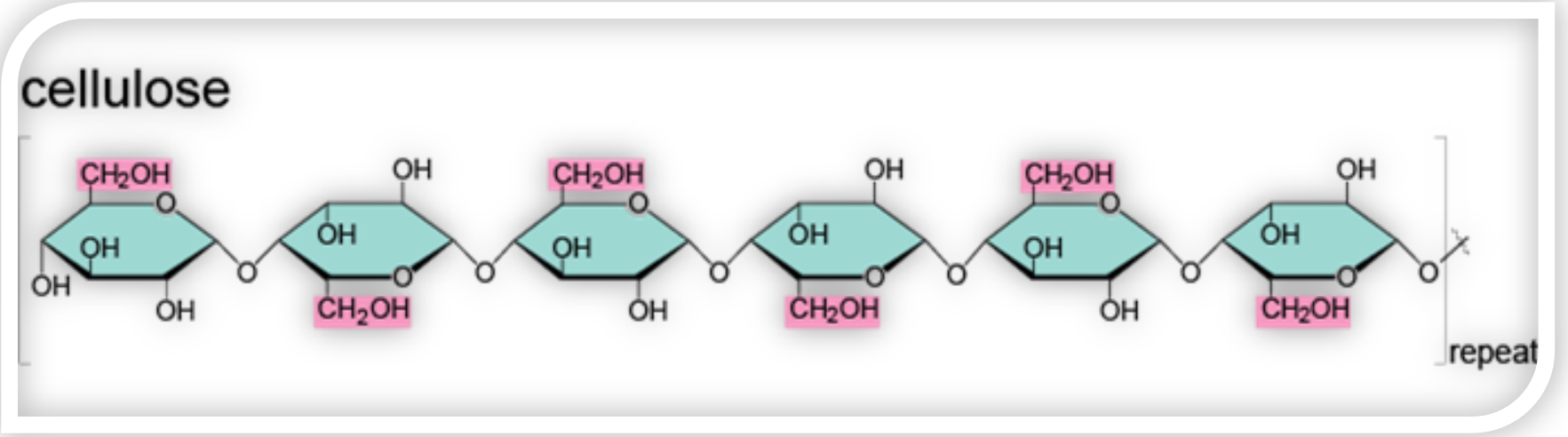


glycogen



Cellulose





***There can be several hundred to over 10,000 glucose molecules bonded together*

Sugar Alcohols

- ✓ Also known as polyols
- ✓ Do not contain ethanol
- ✓ Sweetness similar to sucrose
- ✓ Fewer calories than sugar
- ✓ Naturally occurring and chemically derived
- ✓ Do not raise blood sugar