



Macronutrients: Carbohydrate Structure and Function Introduction

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.



A slide titled "Primary Macronutrients" in large red text. To the left is a list of four checked items: "Water", "Fat", "Protein", and "Carbohydrates". To the right is a glass of water and a pie chart divided into three equal sections: "FAT" (yellow), "PROTEIN" (orange), and "CARBOHYDRATES" (yellow).

- ✓ Water
- ✓ Fat
- ✓ Protein
- ✓ Carbohydrates

Primary Macronutrients

FAT

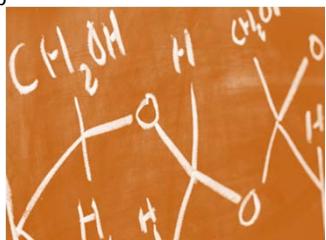
PROTEIN

CARBOHYDRATES

INE: Macronutrients - Carbohydrates Structure and Function Introduction

What You'll Learn:

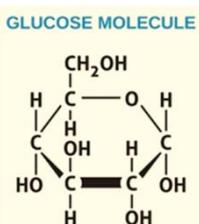
- ✓ What carbohydrates are
- ✓ Introduction to the carb family members
- ✓ Food sources of carbohydrates
- ✓ Refined vs whole carbs
- ✓ How to know which carbs work best
- ✓ Therapeutic diets related to carbs
- ✓ How to determine what's needed for each client – low, medium, or high carbohydrate intake



III, or high carbohydrate intake

What Are Carbohydrates?

- ✓ Large molecules consisting of carbon (C), hydrogen (H), and oxygen (O) atoms, usually with a hydrogen-to-oxygen ratio of 2:1
- $C_m(H_2O)_n$, i.e., glucose is $C_6H_{12}O_6$
- ✓ Hydrates of carbon: $H \rightarrow C \rightarrow O \rightarrow H$
- ✓ Also known as saccharides:
 - Monosaccharides (1 sugar)
 - Disaccharides (2 sugars)
 - Oligosaccharides (3-9 sugars)
 - Polysaccharides (many sugars)



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Function Of Carbohydrates

- ✓ Energy
- ✓ Fiber for intestinal function
- ✓ Spare protein for use as energy
- ✓ Transport of proteins, and other cellular recognition processes



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<h1>Carbohydrates in Foods</h1>	
<h2><u>Simple Carbs</u></h2> <ul style="list-style-type: none">✓ Sugar✓ Candy✓ Drink powders✓ White flour anything – crackers, cookies, pizza crust, cereal✓ White rice✓ Flour products	<h2><u>Complex Carbs</u></h2> <ul style="list-style-type: none">✓ Legumes✓ Whole grains✓ Nuts and seeds✓ Vegetables✓ Fruit✓ Tubers and root vegetables
	