

# Carbohydrates Lecture

## Carbohydrates

### Types of carbohydrates:

Monosaccharides

Disaccharides

Polysaccharides

### Glycogen:

Storage form of glucose

Stored in liver and muscle

Limited storage capacity

Broken down when blood glucose level are low

### Function of Carbohydrates

### Control of blood glucose levels

Insulin

Glucagon

## **Fiber and Health**

### Dietary Fiber

Nondigestible parts of plants that form the support structures of leaves, stems and seeds

### Functional Fiber

Nondigestible forms of carbohydrates that are extracted from plants or manufactured in a laboratory. Added to foods or used in fiber supplements.

Examples; cellulose, guar gum, pectin and psyllium.

### Benefits

May reduce risk of colon cancer

Promotes bowel health

Reduces risk of diverticulosis

Reduces risk of heart disease

Enhance weight loss

Low risk of type 2 diabetes

### Recommendations

14 g of fiber for every 1,000 kcals consumed

Adequate intake:

Women = 25 g per day

Men = 38 g per day

Most eat 12-18 grams per day

## Tips

## **Diabetes**

### Definition

A chronic disease in which the body can no longer regulate glucose levels

Typically untreated diabetes results in hyperglycemia

### Statistics

8.3% of US population has diabetes

Estimated that 7 million have diabetes and do not know it

### Diagnosis

A1C test

A measure of average blood glucose for the past few months.

Diabetes diagnosis A1C  $>6.5$

Fasting plasma glucose

Diabetes diagnosis blood glucose  $>126\text{mg/dl}$

Oral glucose tolerance test

Checks blood glucose before and 2 hour after a sweet drink

Diabetes diagnosis  $> 200 \text{ mg/dl}$

### Symptoms