

**MCNER and NOVAfit! present:**

**Fuel Your Day Nutrition Series**

**Session 1.**

**Smart Eating for Steady Sugar:  
Nutrition and Blood Sugar  
Management**

**NOVA** *fit!*



**VILLANOVA UNIVERSITY**  
M. LOUISE FITZPATRICK COLLEGE OF NURSING

MacDonald

CENTER FOR NUTRITION EDUCATION AND RESEARCH

**9.19.24**

# Presenter Introduction

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Ashley Mayes MS, RD, LDN, CDCES  
Employee Wellness Dietitian  
MacDonald Center for Nutrition Education and  
Research  
Fitzpatrick College of Nursing  
Villanova University

# Chat and Q&A and Recording

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The chat box will remain open.

Please submit question via the Q&A box. Questions will be answered at the end of the presentation. Remaining questions can be sent to [ashley.mayes@villanova.edu](mailto:ashley.mayes@villanova.edu).

This presentation is being recorded.

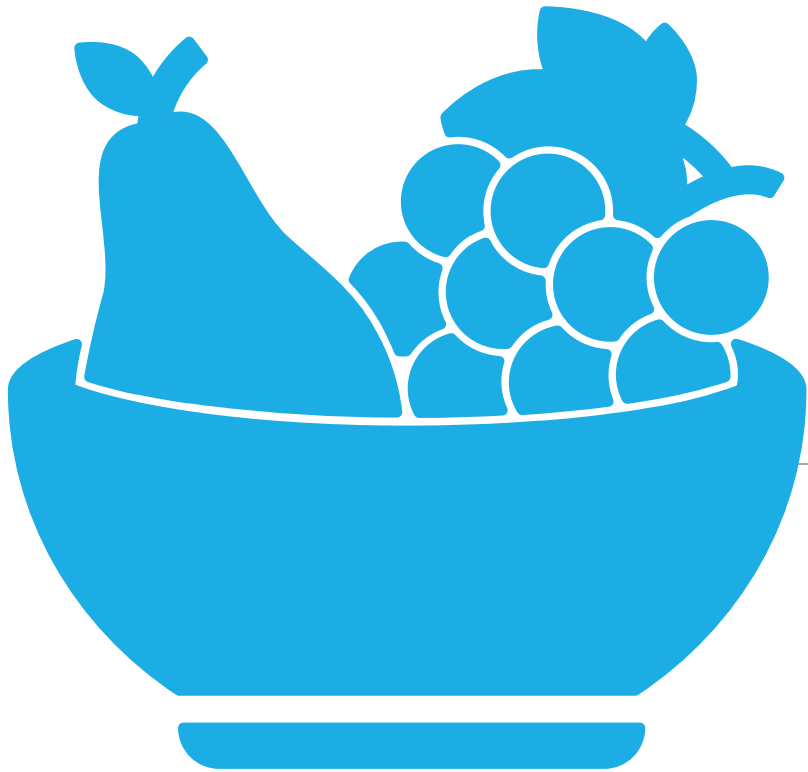
# MCNER Virtual Programming Code of Conduct

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MCNER is committed to providing a safe, productive, and welcoming environment for all participants in our learning community.

MCNER has zero-tolerance for any form of discrimination, harassment, or disrespectful behavior. All participants are expected to behave with common courtesy and civility; conduct themselves in a professional, ethical, and respectful manner; and avoid engaging in or facilitating any discriminatory or harassing behavior.

**Session 1.**  
**Smart Eating for Steady Sugar:**  
**Nutrition and Blood Sugar**  
**Management**



# Blood Sugars: The Basics

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Blood sugar = measurement of amount of sugar/glucose in blood stream

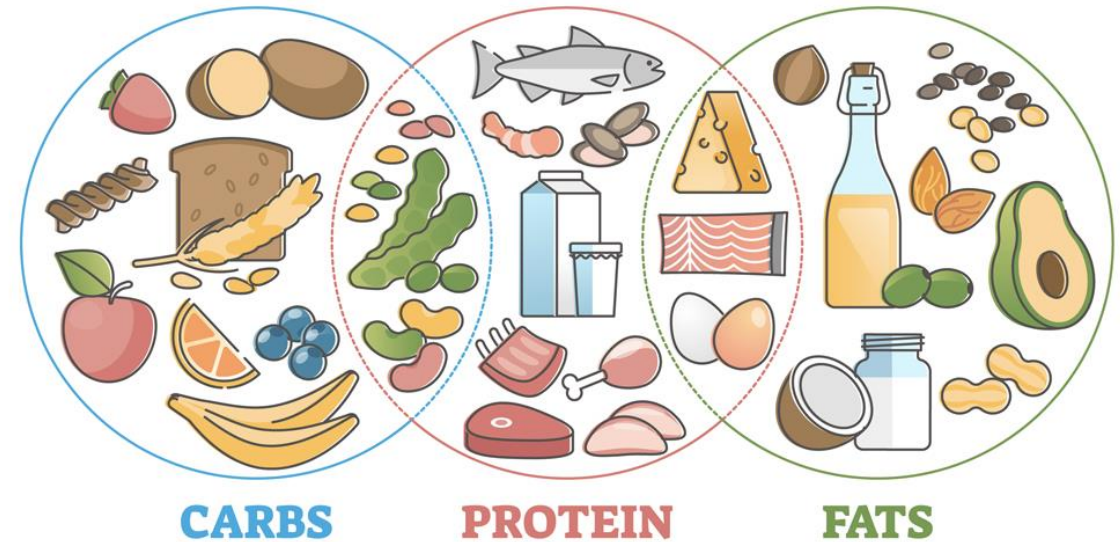
Blood Sugars fluctuate throughout the day. Fluctuations are normal!

Pre-diabetes and Diabetes: larger and more frequent fluctuations = higher averages (hemoglobin A1c)

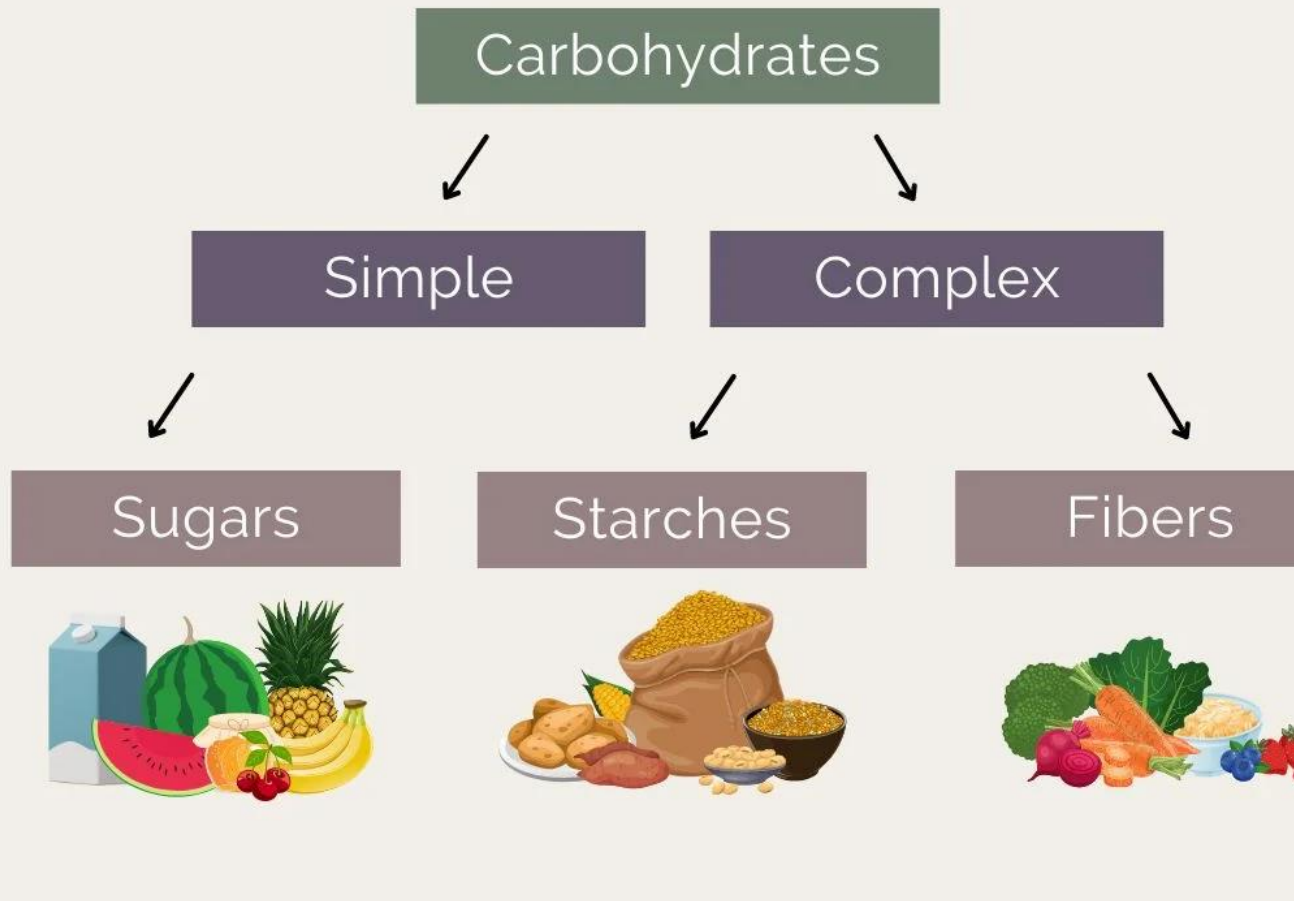
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# Food and Blood Sugars: The Basics

## MACRONUTRIENTS



# Types of Carbohydrates



Food and blood  
sugars:  
Carbohydrates



# Carbohydrates and Blood Sugars

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Eat carb containing food

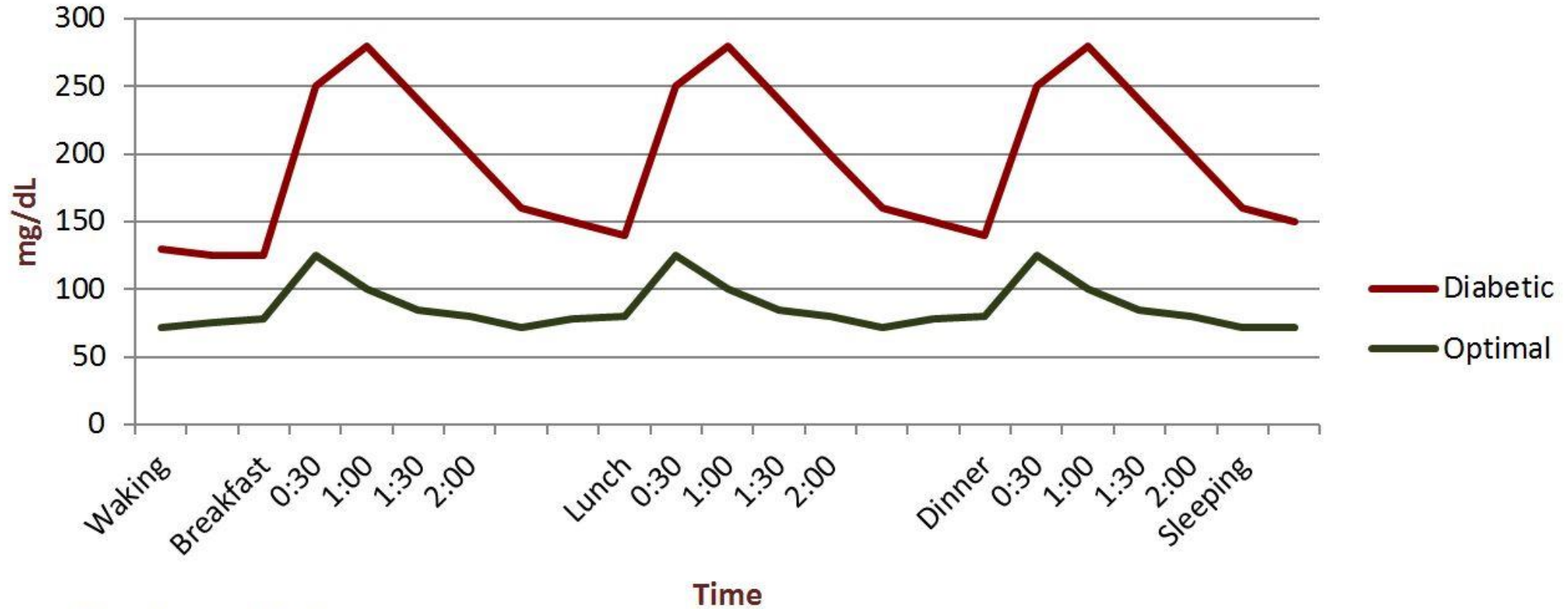
Carbs break down into sugar during digestion

Sugar is absorbed into blood stream

Blood sugar rises

Insulin also rises to “take care” of the sugar

## Diabetic vs Optimal Blood Sugar Levels



<b>Nutrition Facts</b>				
About 9 servings per container				
<b>Serving size 1 cup (38g)</b>				
		Cereal Alone	with 1/2 Cup of Vitamin A&B Fortified Skim Milk	
<b>Calories</b>	<b>150</b>	<b>210</b>		
	% DV*	% DV*	% DV*	
<b>Total Fat</b>	2g	2%	2g	3%
Saturated Fat	0.5g	4%	1g	4%
Trans Fat	0g		0g	
Polyunsaturated Fat	0g		0g	
Monounsaturated Fat	0.5g		0.5g	
<b>Cholesterol</b>	0mg	0%	<5mg	1%
<b>Sodium</b>	290mg	12%	350mg	15%
<b>Total Carb.</b>	33g	12%	41g	15%
Dietary Fiber	<1g	3%	<1g	3%
Total Sugars	17g		25g	
Incl. Added Sugars	17g	33%	17g	33%
<b>Protein</b>	2g		7g	
Vitamin D	0mcg	0%	2mcg	8%
Calcium	0mg	0%	200mg	15%
Iron	7.5mg	40%	7.6mg	40%
Potassium	50mg	0%	310mg	6%
Thiamin	0.3mg	25%	0.4mg	30%
Riboflavin	0.3mg	25%	0.6mg	45%
Niacin	4.8mg	30%	4.8mg	30%
Vitamin B <sub>6</sub>	0.4mg	25%	0.5mg	30%
Folate DFE	200mcg	50%	200mcg	50%
Folic Acid	(134mcg)		(134mcg)	

\* The % Daily Value (DV) tells you how much a nutrient in a serving of food contributes to a daily diet. 2,000 calories a day is used for general nutrition advice.

<b>Nutrition Facts</b>				
About 22 servings per container				
<b>Serving size 1 cup cereal (40g)</b>				
		Per 1 cup cereal	Per 1 cup cereal with 1/2 cup skim milk	
<b>Calories</b>		<b>160</b>	<b>200</b>	
		% DV*	% DV*	
<b>Total Fat</b>	1.5g	2%	1.5g	2%
Saturated Fat	0g	0%	0g	0%
Trans Fat	0g		0g	
<b>Cholesterol</b>	0mg	0%	0mg	0%
<b>Sodium</b>	170mg	7%	220mg	10%
<b>Total Carb.</b>	31g	11%	37g	13%
Dietary Fiber	7g	25%	7g	25%
Total Sugars	5g		11g	
Incl. Added Sugars	5g	10%	5g	10%
<b>Protein</b>	5g		9g	
Vitamin D	0mcg	0%	2mcg	8%
Calcium	0mg	0%	150mg	10%
Iron	2mg	10%	2mg	10%
Potassium	200mg	4%	390mg	8%

\* The % Daily Value (DV) tells you how much a nutrient in a serving of food contributes to a daily diet. 2,000 calories a day is used for general nutrition advice.

# How to manage blood sugars through food

## Be smart with carbs!

<https://naturespath.com/products/heritage-flakes-cold-cereal-np-us>

<https://www.capncrunch.com/products/cap-n-crunch-original>



# Be smart with carbs continued:

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If more fiber is better...what about net carbs? What are they? Should we pay attention to these?

- Total carbs – total fiber and sugar alcohols = net carbs
- The American Diabetes Association and the FDA do not recognize net carbs
- Simply look for foods with natural sources of fiber
- When eating carbs, choose sources like whole grains, fruits, vegetables, beans, low fat milk and yogurt
- LESS refined grains, added sugars

# Natural source of fiber explained:

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## Magic Spoon Cereal

- Milk protein blend, **sweetener blend (allulose and monkfruit extract)**, oil blend, tapioca starch, **chicory root inulin**, peanut flour, peanut extract, cocoa powder, natural flavors, cocoa powder, natural flavors, vegetable juice, salt, turmeric extract, spirulina extract

## Nature's Path Heritage Flakes

- Khorasan wheat flour\*, wheat bran\*, whole wheat meal\*, cane sugar\*, whole oat flour\*, spelt flour\*, barley flour\*, whole millet\*, barley malt extract\*, quinoa\*, sea salt, honey\*. \*Organic.

# Food and Blood Sugars: Protein

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In small to moderate doses (2-3 oz.), protein has negligible effect on blood glucose

“Studies have shown that meal plans with higher levels of protein can contribute to weight loss”

- Protein digests more slowly compared to carbs.
- A balance of carbs and protein in a meal is more satiating → stay full for longer → less overeating

Very high amounts of protein in a meal can result in elevated blood sugar levels 3-5 hours after a meal



# Food and Blood Sugars: Fat

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Chronic intake of higher levels of total dietary fat, especially saturated fat, seems to lead to insulin resistance

Higher intake of fat → more likely to overconsume calories → excess calories leads to excess weight gain → insulin resistance.

- Fat slows down digestion.
- High intake of fat can result in a “delayed” rise in blood sugar levels.
- Decreasing saturated fats helps improve insulin sensitivity
- Unsaturated fats may have beneficial effect on blood sugar control



# Better blood sugar management: Other tips

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## Exercise and movement

- Increases insulin sensitivity → Muscles are better able to take sugar from the blood stream for energy
- Exercise can lower blood sugars up to 24 hours after the workout.

## Sleep

- 7-9 hours of quality sleep each night
- Insomnia increases risk of developing type 2 diabetes
- Sleep hygiene tips:
  - Stick to a schedule, even on weekends
  - Avoid distractions and stimulation: TV, phone, eating in bed
  - Dark, cool room



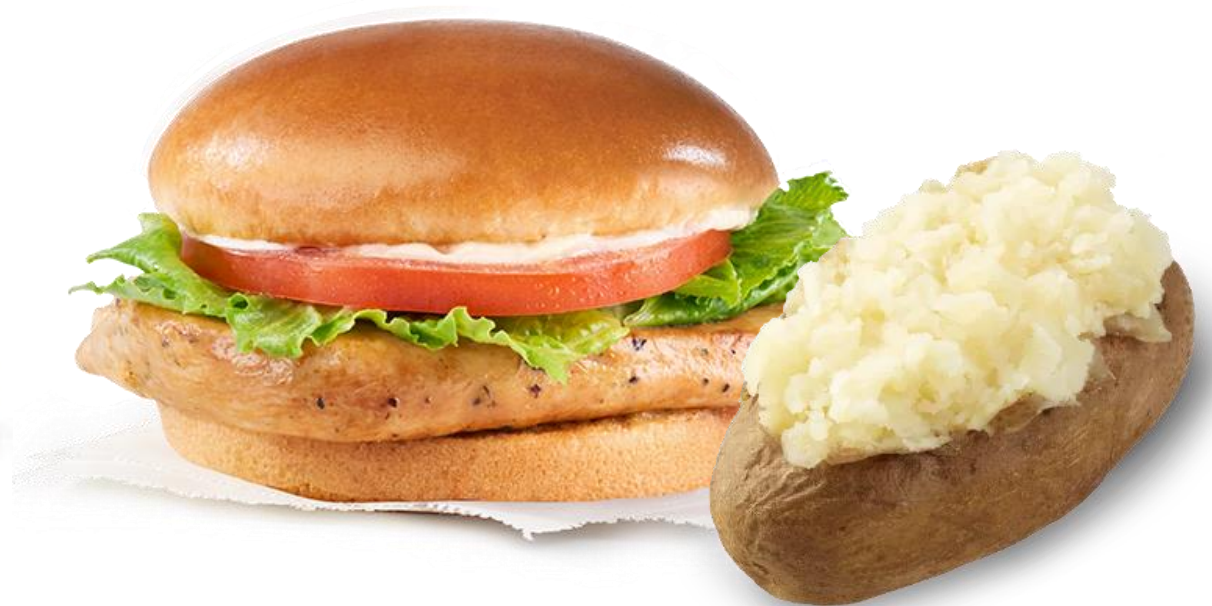
# Activity: this or that! Which is more blood sugar friendly?

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Cheeseburger and French fries



Chicken sandwich and baked potato



# This or That

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# This or That

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# This or That

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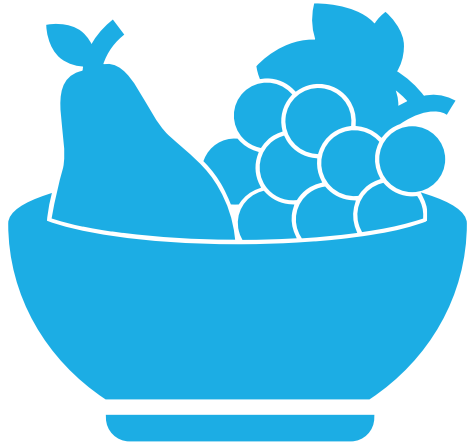
Catherine D'Orazio MBA, RDN, LDN, RYT  
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## Schedule a nutrition counseling session with a MCNER dietitian





## Register now for fall 2024 *Fuel Your Day* sessions

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October 25<sup>th</sup> from 12-12:30pm

### **MINDFUL MOVEMENT & BREATHWORK**

Presented by Katie D'Orazio, MBA, RDN,  
LDN, RYT

November 21<sup>st</sup> from 12-12:30pm

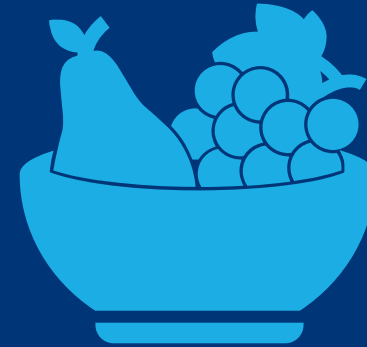
### **FROM AISLE TO TABLE: NAVIGATING PROCESSED FOODS FOR HEALTH**

Presented by Ashley Mayes, MS, RDN,  
LDN, CDCES

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**V**  
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# Q&A



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Additional concerns or questions, please email MCNER Director  
Rebecca Shenkman, MPH, RDN, LDN  
[rebecca.shenkman@villanova.edu](mailto:rebecca.shenkman@villanova.edu)

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