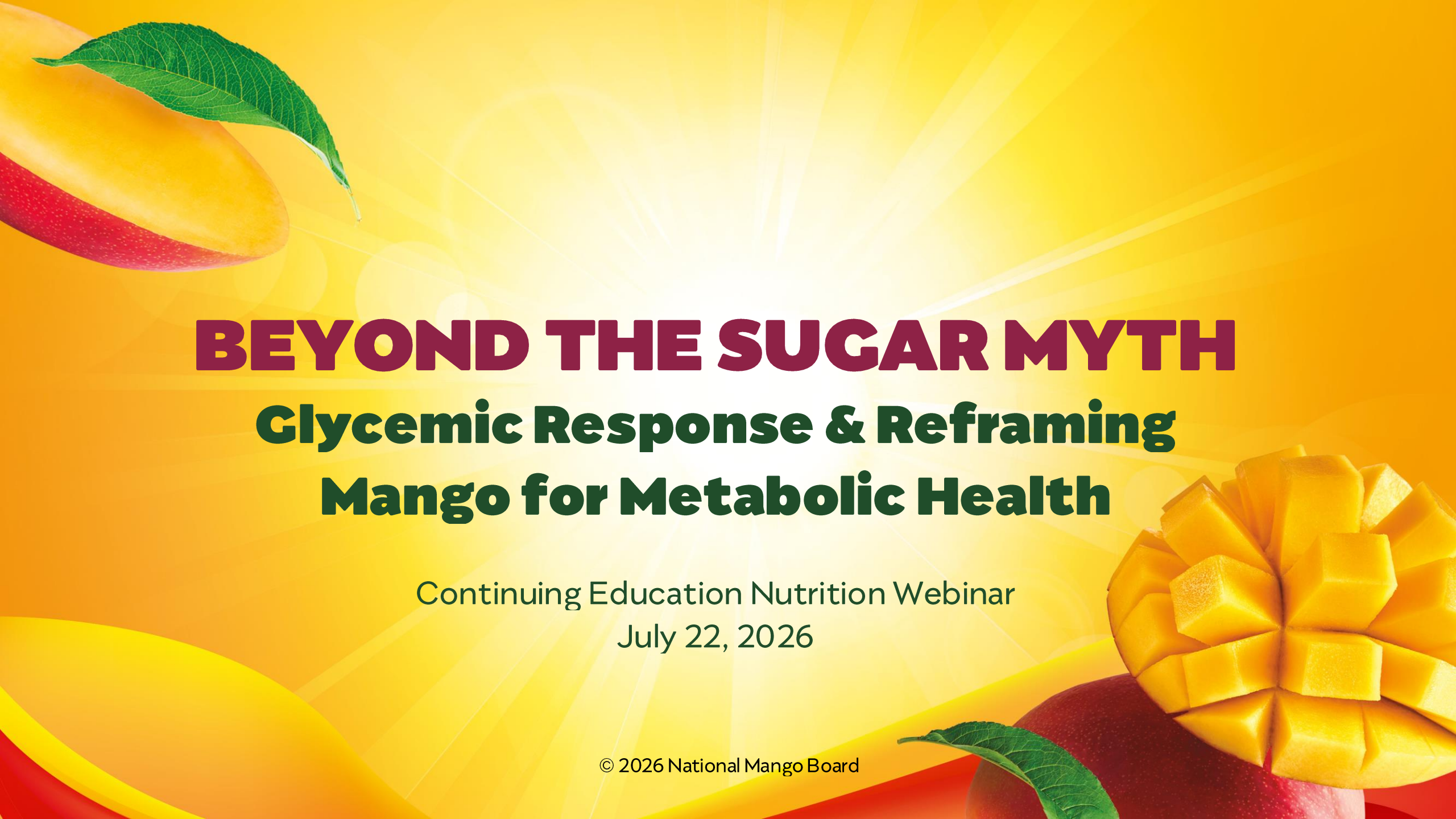


The background is a vibrant yellow-orange gradient with a sunburst pattern radiating from the center. In the top-left corner, there is a whole mango with a green leaf. In the bottom-right corner, there is a mango that has been cut into a grid of small cubes, also with a green leaf. The text is centered in the middle of the image.

# **BEYOND THE SUGAR MYTH**

## **Glycemic Response & Reframing Mango for Metabolic Health**

Continuing Education Nutrition Webinar  
July 22, 2026

# MEET TODAY'S SPEAKERS



**Gisela Bouvier, MBA, RDN, LDN**

Founder, Gisela Bouvier Nutrition  
Media Spokesperson & TV Show Host



**Kary Laskin**

Wild Hive, on behalf of the National Mango  
Board

# SPEAKER DISCLOSURES

Presenting on behalf of the National Mango Board

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Presenters have no conflicts of interest to disclose related to this presentation unless otherwise noted

---

The content presented today is intended for educational purposes only



# TODAY'S AGENDA

Naturally Invigorating Mango

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The Sweetness Tension

---

Science of Mango & Metabolic Health

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Mango Myth-busting

---

The Power of Nutrient Pairing and Dietary Patterns

---

Culinary Demonstration + Q&A



# LEARNING OBJECTIVES

## WHAT WE'LL COVER TODAY



### BY THE END OF THIS SESSION, PARTICIPANTS WILL BE ABLE TO:

✓ Interpret current research on mango intake and metabolic health

✓ Communicate the differences between whole fruit sugars and added sugars using consumer-friendly messaging

✓ Identify common misconceptions around mango and blood sugar

✓ Apply behavior-focused counseling strategies

✓ Recommend practical pairing and preparation techniques



The background is a vibrant yellow with abstract, flowing red and orange shapes at the bottom. In the top right corner, there is a close-up of a ripe, red mango with a green leaf. In the bottom left corner, there is a close-up of a yellow-orange mango with a green leaf.

**GET TO KNOW**  
**THE NATURALLY  
INVIGORATING  
MANGO**

THE NATURALLY INVIGORATING MANGO

# MANGO NUTRITION

One 3/4 Cup Serving of Mango Has

70

Calories

50%

DV Vitamin C

15%

DV Copper

15%

DV Folate

8%

DV Vitamin A

8%

DV Vitamin B6

8%

DV Vitamin E

7%

DV Fiber

83%

Water content

0

Saturated Fats,  
Sodium, Cholesterol

Beta Carotene  
Lutein  
Mangiferin  
Callotannins  
Gallic Acid  
Flavonoids

>20

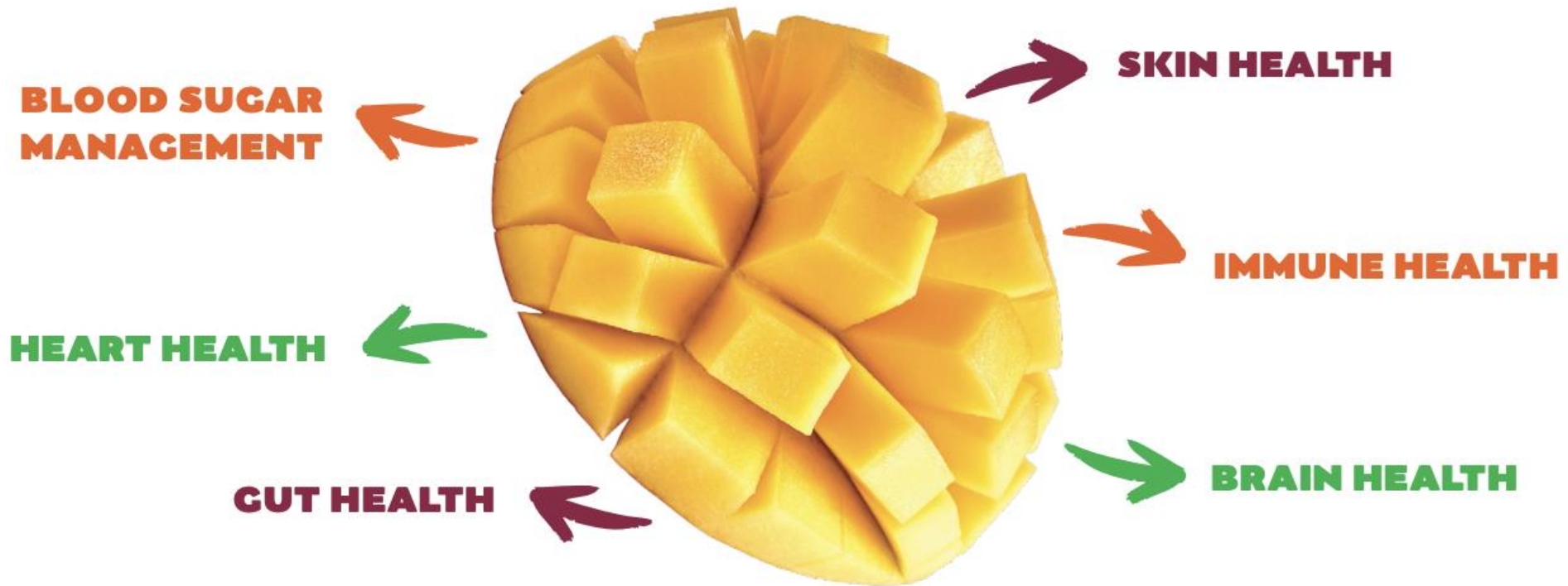
Vitamins, Minerals  
and Antioxidants

| Nutrition Facts                                                                                                                                                     |                |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|
| 3/4 cup pieces (124g)                                                                                                                                               |                |
| Serving Size                                                                                                                                                        |                |
| Amount per serving                                                                                                                                                  |                |
| Calories                                                                                                                                                            | 70             |
|                                                                                                                                                                     |                |
|                                                                                                                                                                     | % Daily Value* |
| Total Fat 0g                                                                                                                                                        | 0%             |
| Saturated Fat 0g                                                                                                                                                    | 0%             |
| Trans Fat 0g                                                                                                                                                        |                |
| Cholesterol 0mg                                                                                                                                                     | 0%             |
| Sodium 0g                                                                                                                                                           | 0%             |
| Total Carobohydrate 19g                                                                                                                                             | 7%             |
| Dietary Fiber 2g                                                                                                                                                    | 7%             |
| Total Sugars 17g                                                                                                                                                    |                |
| Includes 0g Added Sugars                                                                                                                                            | 0%             |
| Protein 1g                                                                                                                                                          | 2%             |
|                                                                                                                                                                     |                |
| Vitamin D 0mcg                                                                                                                                                      | 0%             |
| Calcium 14mg                                                                                                                                                        | 2%             |
| Iron 0.2mg                                                                                                                                                          | 2%             |
| Potassium 208mg                                                                                                                                                     | 4%             |
| Vitamin A 67mcg RAE                                                                                                                                                 | 8%             |
| Vitamin C 45mg                                                                                                                                                      | 50%            |
| Vitamin E 1.11mg                                                                                                                                                    | 8%             |
| Vitamin K 5.2mcg                                                                                                                                                    | 4%             |
| Thiamin 0.035mg                                                                                                                                                     | 2%             |
| Riboflavin 0.047mg                                                                                                                                                  | 4%             |
| Niacin 0.828mg                                                                                                                                                      | 6%             |
| Vitamin B6 0.147mg                                                                                                                                                  | 8%             |
| Folate 53mcg                                                                                                                                                        | 15%            |
| Vitamin B12 0mcg                                                                                                                                                    | 0%             |
| Phosphorus 17mg                                                                                                                                                     | 2%             |
| Magnesium 12mg                                                                                                                                                      | 2%             |
| Zinc 0.11mg                                                                                                                                                         | 2%             |
| Copper 0.137 mg                                                                                                                                                     | 15%            |
| Manganese 0.078 mg                                                                                                                                                  | 4%             |
| Selenium 0.7 mcg                                                                                                                                                    | 2%             |
| Pantothenic Acid 0.244 mg                                                                                                                                           | 4%             |
| Choline 9.4 mg                                                                                                                                                      | 2%             |
|                                                                                                                                                                     |                |
| *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 nutritiuon advice. |                |

Source: USDA National Nutrient Database for Standard Reference

# THE NATURALLY INVIGORATING MANGO

**THE NUTRIENTS IN MANGO HELP SUPPORT  
OVERALL BODY WELLNESS, IN PARTICULAR:**



## THE NATURALLY INVIGORATING MANGO

# UNDERSTANDING NATURAL SUGARS IN MANGO

**Ripened mango contains three naturally occurring sugars:**

---

Sucrose

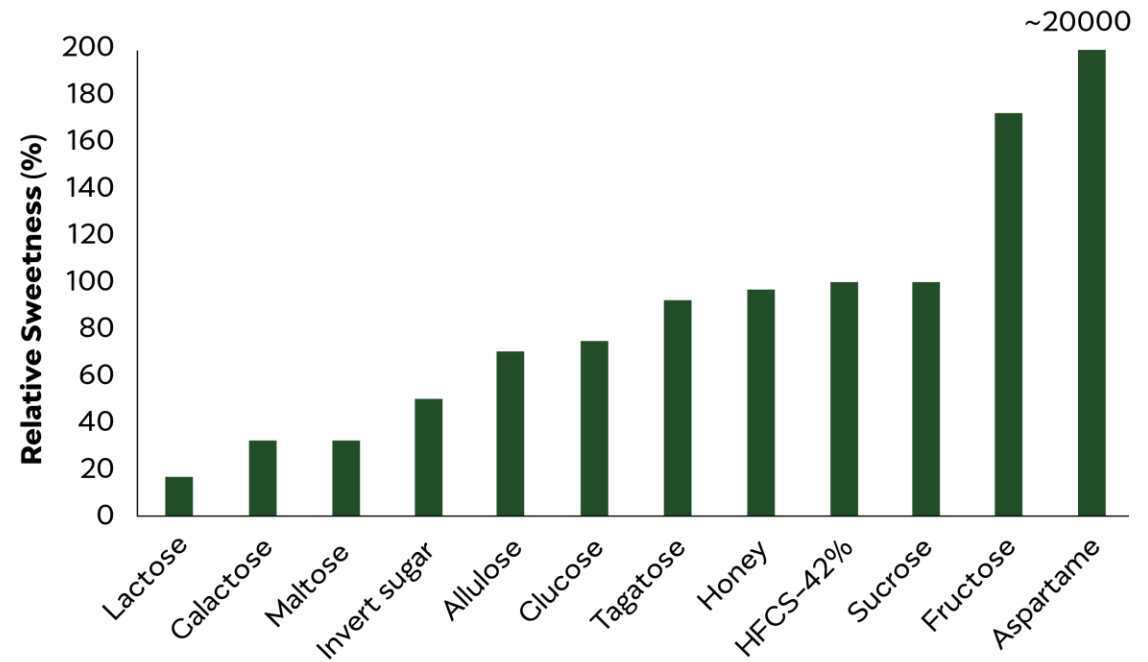
(primary sugar in ripe mango;  
fructose + glucose)

---

Fructose

---

Glucose



## THE NATURALLY INVIGORATING MANGO

# UNDERSTANDING NATURAL SUGARS IN MANGO

### Sweetness at different ripeness stages

---

**Unripe mango:** Starch is the primary carbohydrate

---

**As mango ripens:** Starch is converted into glucose, fructose and sucrose

---

**Fully ripe mango:** Sucrose becomes the predominant sugar, creating mango's characteristic sweet flavor

### Sugar composition of ripe mango

---

The flesh of ripe mango contains approximately **15% total sugars**

---

Fructose is the major monosaccharide present before full ripeness (preclimacteric phase)

---

Total carbohydrate and sugar content may vary slightly based on mango variety, growing conditions, and region of origin





**UNDERSTANDING CONSUMER PERSPECTIVES**

# **THE SWEETNESS TENSION**



## THE SWEETNESS TENSION

# Americans prefer sweet taste, yet are increasingly concerned about health impacts

### TOP SWEET CHOICES:

**Chocolate (55%)**

**Ice cream (53%)**

**Fruit (46%)**

**78%**

say reducing overall  
sweetness in their diet  
is important

### TOP DRIVERS:

Health  
Blood Sugar/Diabetes  
Weight Management

---

**Yet 59% believe sweet foods can fit in a healthy diet**



## THE SWEETNESS TENSION

# SWEETNESS IS MORE THAN PREFERENCE – IT'S BIOLOGY

Carbohydrates are the body's preferred source of energy

---

The brain relies heavily on glucose as fuel

---

Humans are naturally wired to seek sweet tastes

---

Sweet foods can satisfy both physical and emotional needs

### WHY THIS MATTERS

Consumers often feel caught between:

---

A natural preference for sweetness

---

A desire to limit sweetness for health

**RESULT:** Confusion about where naturally sweet foods like fruit fit in a healthy diet

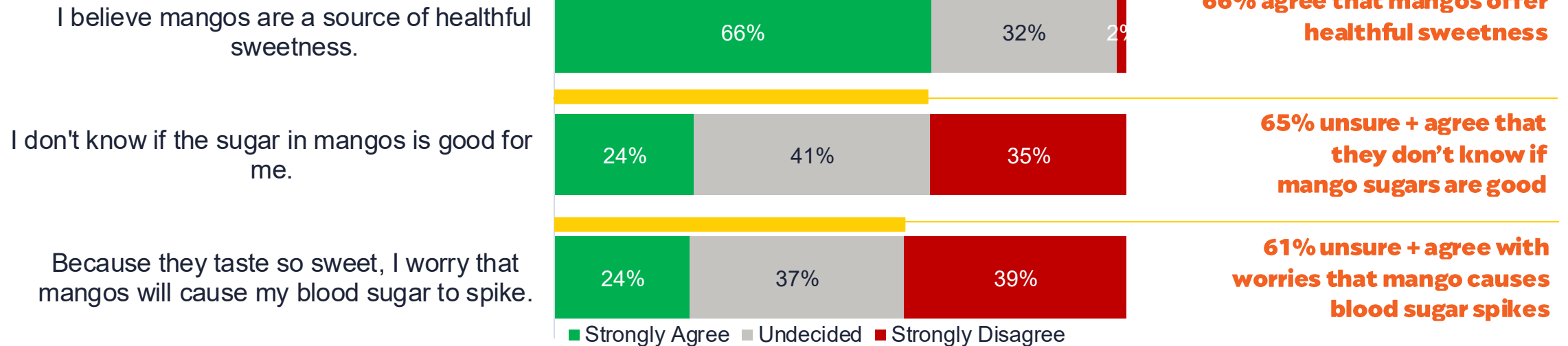


## THE SWEETNESS TENSION

# CONSUMER CONFUSION IS A BARRIER

**Particularly myths around sugar and its impact on health**

AGREEMENT WITH STATEMENTS ABOUT MANGOS  
(8/9/10 ON 10PT SCALE)



## THE SWEETNESS TENSION

### People are:

Trying to *manage* the desire for sweetness,  
potentially through reducing their sugar intake

---

Confused about natural vs. added sugar

---

Over-restricting fruit

---

Potentially lowering overall diet quality

### RD Opportunity to Reframe

---

The goal is not eliminating sweetness –  
it's shifting the source and context of  
sweetness

---

Mango becomes a useful example of a  
preferred sweet food that can align  
with health goals





**So, what does the science say about  
mango's role in blood sugar and  
metabolic health?**



**INSULIN SENSITIVITY, GLUCOSE CONTROL & WEIGHT OUTCOMES**

# **SCIENCE OF MANGO & METABOLIC HEALTH**



## SCIENCE OF MANGO & METABOLIC HEALTH

# STATE OF THE EVIDENCE

### Across human studies, mango intake has been shown to:

Improve insulin sensitivity compared to an isocaloric control

---

Lower fasting & postprandial glucose compared to an isocaloric control

---

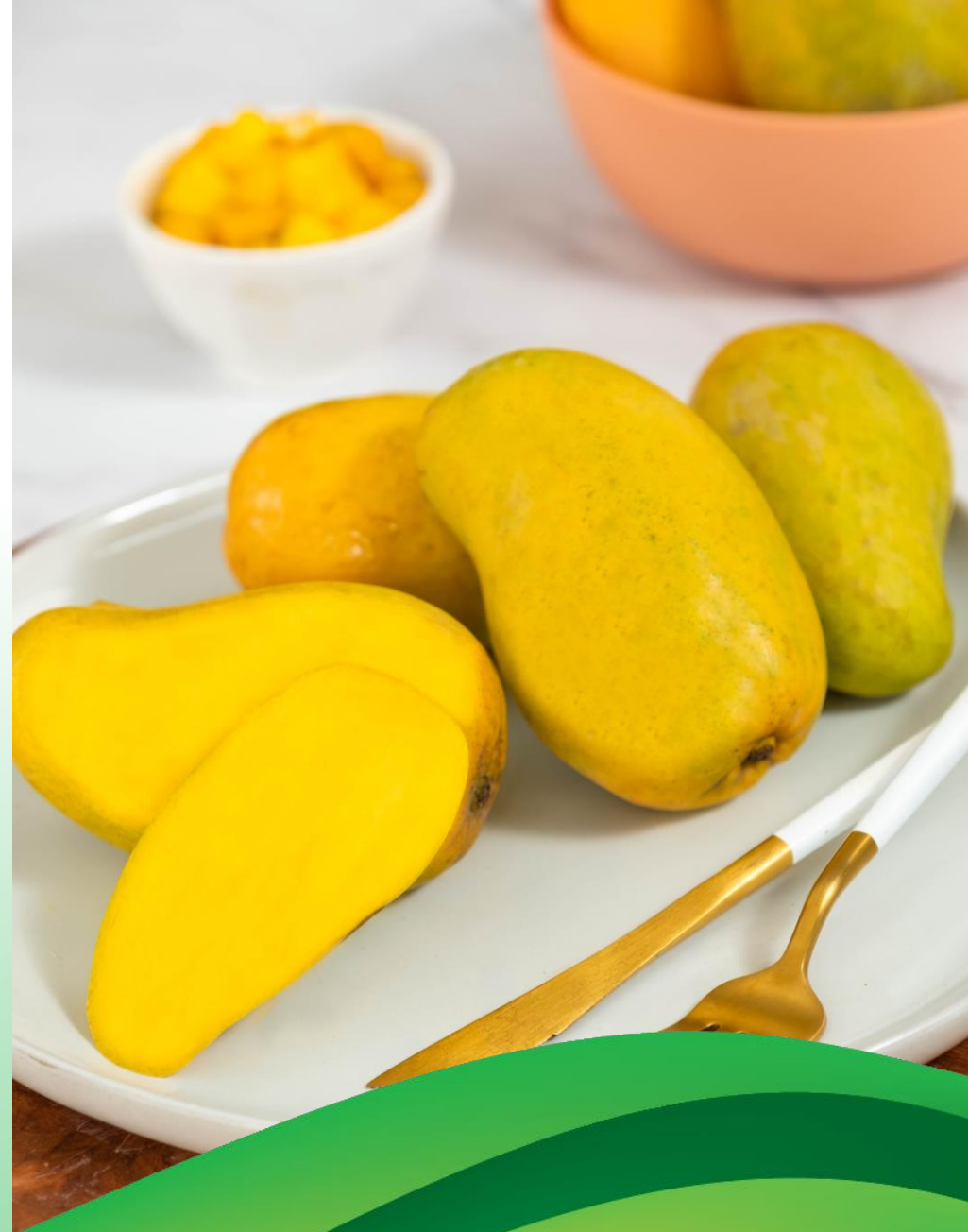
Support weight maintenance despite regular intake

---

Provide greater satiety vs. calorie-matched snacks

---

Support higher overall diet quality among mango consumers



*References: Health benefits of the mango fruit—recent review of literature, Mangifera indica L., By-Products, and Mangiferin on Cardio-Metabolic and Other Health Conditions: A Systematic Review*

# MANGO & GLYCEMIC RESPONSE FINDINGS

## CLINICAL RESEARCH SHOWS:

Lower post-meal glucose and insulin vs. refined carbs

---

Improved short-term glycemic response

---

Effects within 30–45 minutes post-consumption

*\*Study was on adults with prediabetes, some w/ overweight/obese*

## KEY MESSAGES:

---

Mango produces a more favorable glycemic response than refined carbs

---

Whole fruit ≠ added sugar

*References: Mangos and their bioactive components: adding variety to the fruit plate for health, Daily Mango Intake Improves Glycemic and Body Composition Outcomes in Adults with Prediabetes: A Randomized Controlled Study*

## SCIENCE OF MANGO & METABOLIC HEALTH

# MANGO & INSULIN SENSITIVITY AND METABOLIC FUNCTION

### CLINICAL RESEARCH SHOWS:

Improved insulin sensitivity

---

Support for beta-cell function

---

No increase in body weight

*\*Studies were on healthy adults, some w/ overweight/obese*

### ADDITIONAL FINDINGS:

Mango intake associated with increased adiponectin

---

Polyphenol-rich foods show potential roles in metabolic regulation

*References: Mango Consumption Is Associated with Increased Insulin Sensitivity in Participants with Overweight/Obesity and Chronic Low-Grade Inflammation, Mangifera indica L., By-Products, and Mangiferin on Cardio-Metabolic and Other Health Conditions: A Systematic Review*

### KEY MESSAGES:

---

Mango may support how the body processes glucose

---

Mechanisms are promising but still emerging

# MANGO & SATIETY AND WEIGHT OUTCOMES

## CLINICAL RESEARCH SHOWS:

Increased satiety vs. isocaloric snacks

---

### Over time:

- 100 kcal mango snack → weight maintenance
- 100 kcal cookie control → weight gain

*\*Studies were on healthy adults, some w/ overweight/obese*

## KEY MESSAGES:

---

Satisfaction supports adherence

# MANGO & DIET QUALITY AND NUTRIENT INTAKE

**During an eating occasion, people who ate mango had:**

Higher fiber intake

---

Higher potassium intake

---

Higher vitamin C intake

---

Lower added sugar intake

---

Better overall diet quality

## KEY MESSAGES:

Mango aligns with higher-quality dietary patterns

---

Supports intake of under-consumed nutrients



**Despite evidence,  
many still hesitate to include  
fruit like mango**

**Largely because of how we talk  
about sugar**



**EVIDENCE BASED NUTRITION**

# **MANGO MYTHBUSTING**

## MANGO MYTHBUSTING

# WHY THE SUGAR MYTH PERSISTS

Oversimplified messaging around sugar reduction

---

Patients equate all sugar as equal

---

Fruit grouped with other sweet foods, like desserts

---

Misunderstanding drives unnecessary restriction



# MANGO MYTH #1

**“SWEET FOODS LIKE MANGO  
CAUSE ENERGY SPIKES  
& CRASHES”**



## REFRAME

Focus on **sustained energy**,  
not sweetness alone

## KEY MESSAGES:

- ✓ Mango provides carbohydrates plus fiber, vitamins, minerals and water
- ✓ Mango supports steady energy and satiety



# MANGO MYTH #2

## “PEOPLE MANAGING BLOOD SUGAR SHOULD AVOID MANGO”

*65% are unsure whether mango sugars are “good”*



### REFRAME

Focus on **metabolic response** and the overall nutritional package, not sugar content alone

### KEY MESSAGES:

- ✓ Mango provides natural sugars plus fiber and bioactive compounds
- ✓ Emerging research suggests fresh mango may support insulin sensitivity
- ✓ Mango can fit into blood sugar-friendly eating patterns, especially when paired with other whole foods like avocado

# MANGO MYTH #3

**“MANGO AND OTHER FRUIT HAVE TOO MUCH SUGAR TO SUPPORT WEIGHT MANAGEMENT”**



## REFRAME

Focus on **nutrients that accompany natural sugars** and their role in supporting satiety and sustained energy

## KEY MESSAGES:

- ✓ Whole fruit may support satiety
- ✓ Emerging research suggests benefits for weight maintenance
- ✓ Enjoyment may promote long-term adherence

## MANGO MYTHBUSTING

# GLYCEMIC RESPONSE KEY TAKEAWAYS

Whole Fruit Works Differently

---

Fiber + Polyphenols Matter

---

Fits Blood Sugar-Friendly Diets

---

Supports Satiety & Weight Management

---

Supports Sustained Energy





**Mango alone has great benefits.  
What happens when you add mango  
to other foods?**



**BENEFITS BEYOND SINGLE FOODS**

# **THE POWER OF NUTRIENT PAIRING AND DIETARY PATTERNS**



## NUTRIENT PAIRING & DIETARY PATTERNS

# LOOKING BEYOND SINGLE FOODS



### **Nutrient Pairing Can Shape Health Outcomes**

Pairing foods can support meeting nutrient needs, satisfaction and balance



### **Dietary Patterns: People eat meals, not nutrients**

Food combinations may provide added benefits together

## NUTRIENT PAIRING & DIETARY PATTERNS

# NUTRIENT PAIRING: MANGO & AVOCADO

### Key Study: RCT in Adults with Prediabetes

**Study Design:** 8-week randomized controlled trial

**Daily intake:** 1 cup mango + 1 avocado

**Compared to:** Isocaloric carbohydrate-based control

#### KEY OUTCOMES

Improved flow-mediated dilation (FMD)

*Gold-standard measure of vascular function*

Lower diastolic blood pressure (in some participants)

No increase in body weight or calorie intake

**JAHA**

Journal of the American Heart Association

CURRENT ISSUE | ARCHIVE

RESEARCH ARTICLE | Originally Published 16 February 2026 |    

 Check for updates

### Effects of Increasing Total Fruit Intake With Avocado and Mango on Endothelial Function and Cardiometabolic Risk Factors in Adults With Prediabetes

References: *Effects of Increasing Total Fruit Intake With Avocado and Mango on Endothelial Function and Cardiometabolic Risk Factors in Adults With Prediabetes*, *Fruit-Rich Dietary Pattern Improves Endothelial Function: Implications for Food Is Medicine*



## NUTRIENT PAIRING & DIETARY PATTERNS

# NUTRIENT PAIRING: MANGO & AVOCADO

### Clinical Interpretation

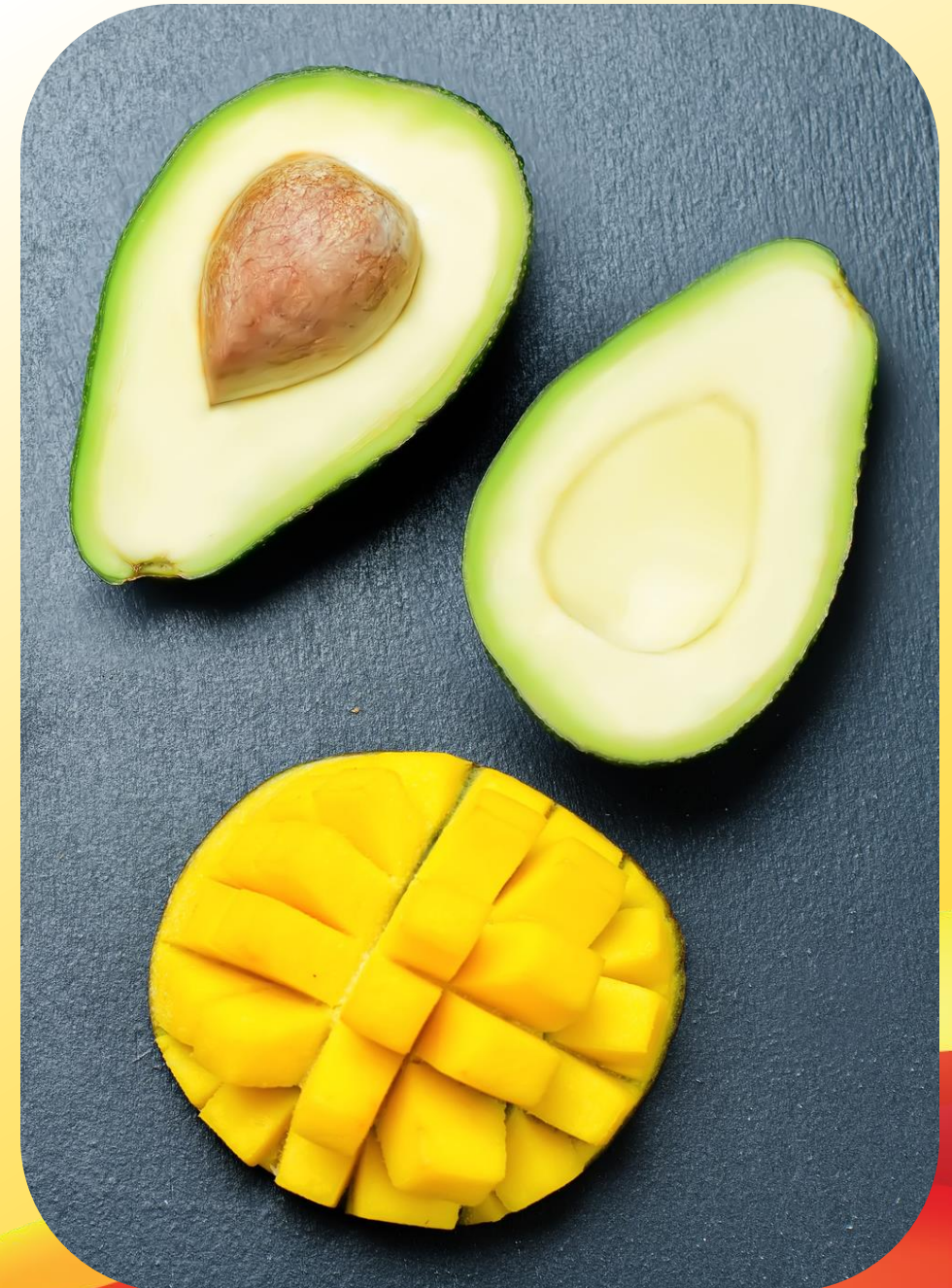
May indicate improved vascular health

---

May suggest reduced cardiovascular risk

---

Highly relevant for prediabetes and  
cardiometabolic risk populations



*References: Effects of Increasing Total Fruit Intake With Avocado and Mango on Endothelial Function and Cardiometabolic Risk Factors in Adults With Prediabetes, Fruit-Rich Dietary Pattern Improves Endothelial Function: Implications for Food Is Medicine*

# **NUTRIENT PAIRING: MANGO & AVOCADO**

## **Why the Pairing Works: Nutrient Synergy**



### **MANGO PROVIDES:**

Fiber  
Vitamin C  
Mangiferin & Gallotannins



### **AVOCADO PROVIDES:**

Fiber  
Healthy fats  
Potassium  
Avocatin B

### **TOGETHER MAY SUPPORT:**

- ✓ Glycemic control
- ✓ Satiety
- ✓ Cardiovascular health



## NUTRIENT PAIRING & DIETARY PATTERNS

# DIETARY PATTERNS

### The Role of Mango

Does not negatively impact weight

May improve glycemic control

Supports satiety and diet quality

### IMPORTANT NUANCE:

Evidence is still evolving

#### KEY MESSAGES:

Whole fruit ≠ added sugar

Mango can support  
metabolic health

Context, pairing, and  
patterns matter

References: *Effects of Increasing Total Fruit Intake With Avocado and Mango on Endothelial Function and Cardiometabolic Risk Factors in Adults With Prediabetes*, *Fruit-Rich Dietary Pattern Improves Endothelial Function: Implications for Food Is Medicine*

# NUTRIENT PAIRING & DIETARY PATTERNS

## DIETARY PATTERNS



### Cultural Foodways: Mango is a Global Staple

#### SOUTH ASIA

Mango Lassi  
Mango Chutney  
Mango Kulfi  
Mango Pickle  
Raw Mango Dal



#### LATIN AMERICA

Mango con Chile y Limón  
Agua Fresca  
Mango Ceviche  
Mango Aguachile  
Mango Salsa



#### MIDDLE EASTERN

Ambaz  
Mango & Halloumi Salad  
Mango Muhallabia



#### SOUTHEAST ASIA

Mango Sticky Rice  
Thai Green Mango Salad  
Mango Shrimp Spring Rolls  
Mango Sambal  
Green Mango with Bagoong



#### CARIBBEAN

Mango Chow  
Mango Kuchela  
Mango Pepper Sauce  
Mango Jerk Marinade  
Mango Rum Cake





# **CULINARY DEMONSTRATION**

# **HOW TO ENJOY A MANGO**

## HOW TO ENJOY A MANGO

# DIETARY PATTERNS

### MANGO MINDSET: Everyday Enjoyment and Real-World Shopping Patterns

Mango consumers eat them frequently and plan out their purchase, meaning inspiration can start before they get to the store and reinforced as they shop.



**TWO-THIRDS**  
(66%) BUY 3 OR MORE  
MANGOS AT A TIME



**NEARLY  
HALF**  
PURCHASE MANGO  
YEAR-ROUND



**NEARLY HALF**

(48%) OF MANGO  
CONSUMERS BUY  
MANGOS ONCE A  
WEEK OR MORE



#### TOP 3 FAVORITE WAYS TO ENJOY FRESH MANGO

1

**A SNACK ON  
THEIR OWN**

2

**IN A SMOOTHIE  
OR BLENDED  
DRINK**

3

**AS A SNACK  
WITH OTHER  
FOODS**



**MANGOS ARE MOST  
OFTEN EATEN IN  
THE MORNING OR  
IN THE AFTERNOON  
BETWEEN MEALS**

HOW TO ENJOY A MANGO

# MANGOS IN MANY FORMS



**Tommy Atkins**



**Honey/ Ataulfo**



**Kent**



**Keitt**



**Francis**



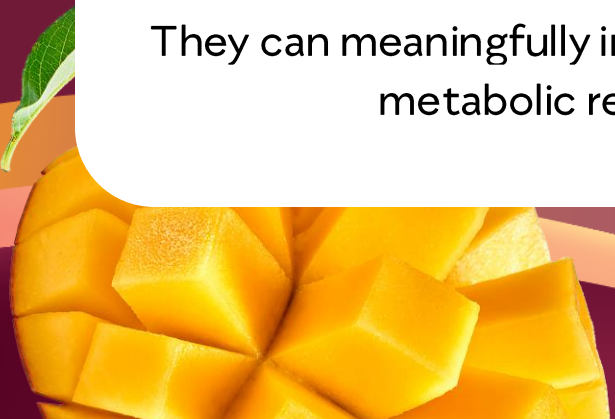
**Haden**

The background is a vibrant yellow with a subtle gradient. In the top right corner, there is a green leaf and a portion of a red mango. In the bottom left corner, there is a whole yellow mango with a green leaf. The bottom right corner features a decorative wavy border in shades of yellow and red.

**CULINARY DEMONSTRATION**

# **CHOOSING & CUTTING A MANGO**

# FINAL TAKEAWAYS



## **Mango offers more.**

Mango is nutrient-dense, naturally sweet and naturally invigorating.

## **Sugar alone is not a reliable measure of health.**

Nutrients and physiological response matter more.

## **Whole fruit behaves differently than added sugar.**

Natural sugars + nutrients have a different metabolic effect.

## **Dietary patterns and pairings matter.**

They can meaningfully influence satiety and metabolic response.

## **Realistic change over sugar restriction.**

Small shifts with dietary context support sustainable behavior change.



**THANK YOU FOR JOINING US TODAY!**

# Q&A

**Please submit your questions through the  
Zoom Q&A feature.**



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