

# Estrogen & Breast Cancer:

## What your doctor isn't telling you

with Mina Yun

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CANADIAN CANCER SURVIVOR NETWORK



# The Foundation of Healthcare

- Our medical system is designed to treat disease - not prevent it
- “Healthy” is measured against what is normal...
- ... NOT what is optimal



# The Foundation of Healthcare

- Oncologists invest an average of 20,000 hours into their medical education
- Roughly 20 of those are allocated to nutrition.

# What We'll Cover



- Estrogen 101
- Forgotten Factors That Impact Hormonal Health
- Estrogen Food & Home Guide
- Q & A



# The Million Dollar Question:

- If estrogen is such a major driver in the development and growth of breast cancer,
- why is the majority of women diagnosed with estrogen-positive breast cancer over the age of 50...
- ...the demographic of women with the LEAST amount of estrogen?

# Estrogen 101

Three main types of estrogen:

Estrone (E1)

- Predominant estrogen before puberty and after menopause
- Weaker estrogen
- Can convert to a stronger estrogen.



# Estrogen 101

Estradiol (E2)

- The most potent estrogen
- Predominant during a woman's reproductive years
- Strongest effect on the growth of breast cancer cells.



# Estrogen 101

Estriol (E3)

- Predominant during pregnancy
- Weaker estrogen
- Believed to have a protective effect.



# Estrogen Metabolites

- After estrogen sends its signal, the body converts it into estrogen metabolites
- These metabolites help fine-tune hormone activity
- Then they are neutralized for excretion
- The pathway determines the kind of metabolite that is created.



# Estrogen Metabolites

There are 3 main pathways:

2-Hydroxy (2-OH)

- Generally protective
- Weaker estrogenic activity.



# Estrogen Metabolites

4-Hydroxy (4-OH)

- Highly reactive
- Can cause DNA damage
- Strongly linked to cancer risk.



# Estrogen Metabolites

16-Hydroxy (16-OH)

- Strong estrogenic activity
- Does not meaningfully cause DNA damage, but
- Can promote the growth of existing breast cancer cells.





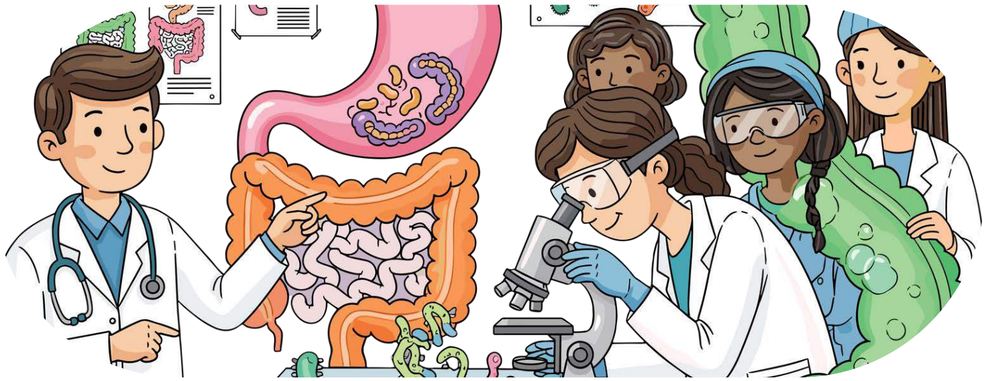
# Estrogen Pathways

- Which pathway does your body prefer to use?
- Whether your body preferentially converts to 2-OH, 4-OH, or 16-OH is highly dependent on:
  - Nutrition and metabolic health.



# THE FORGOTTEN FACTORS

- Digestion & The Microbiome
- Blood Sugar Balance



# Digestion & The Microbiome

- Estrogen metabolites leave your body via the digestive system, primarily via feces, and via urine
- An inflamed digestive system can raise inflammatory signals within the body that may encourage the production of estrogen within breast tissue
- The health of your digestion and microbiome can determine whether estrogen is safely excreted from the body, or recycled and put back into circulation.

# Blood Sugar Regulation



- Roughly half of all Americans have diabetes or pre-diabetes
- Many more have early signs of metabolic dysfunction and insulin resistance.

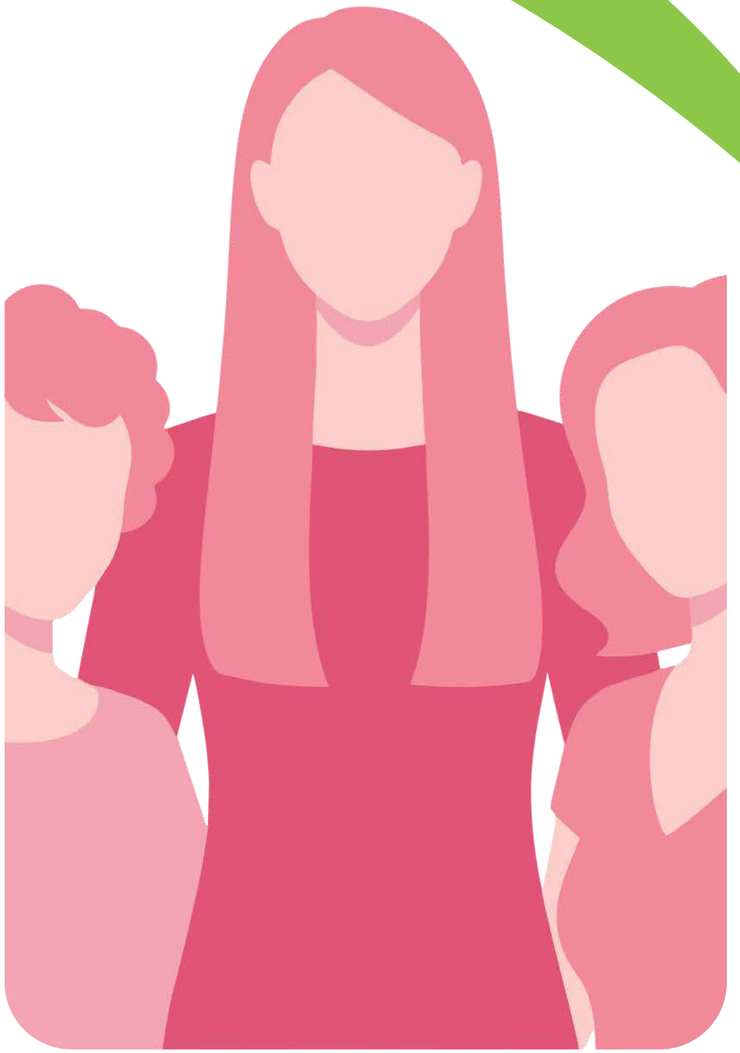
# Blood Sugar Regulation



- Insulin is a hormone that helps move glucose from the blood stream into the cells where glucose is needed
- Insulin resistance is a state in which cells don't respond well to insulin, so the body has to produce more insulin to keep blood sugar in a normal range.

# The Impact of Insulin Resistance

- Promotes metabolic inflammation that can drive the production of estrogen within breast tissue
- Allows more estrogen to circulate in the body
- Can make breast cells more sensitive to estrogen’s growth signals.





# Estrogen Food Guide

- Consume a diet high in vegetables and lower in refined carbohydrates
- Eat a wide variety of vegetables, herbs and spices
- Include high-quality protein with every meal
- Drink 8 glasses of filtered water daily.



# Estrogen Food Guide

- Include a wide variety of cruciferous vegetables:
  - Broccoli
  - Cauliflower
  - Brussels sprouts
  - Cabbage
  - Kale
  - Collard greens
  - Bok choy
  - Swiss chard
  - Turnips
  - Kohlrabi
  - Mustard greens
  - Watercress



# Estrogen Food Guide

What about soy and ground flax seed?

- Soy and flax contain plant-compounds that mimic estrogen
- They are much weaker than human estrogens
- They tend to compete for the same receptor sites as human estrogens, which may have a protective effect against breast cancer



# Estrogen Food Guide

CAUTION:

- Avoid processed soy foods such as:
  - Soy milk
  - Soy protein powders
  - Soy-based meat replacement foods
- Only consume GMO-free and organic
- Not all women tolerate or digest soy.



# Estrogen Food Guide

Reduce / Eliminate Alcohol

# Estrogen Household Detox



Plastics

- Food containers
- Water bottles
- Coffee pods
- Paper coffee cups and coffee lids
- Plastic cutting boards.

One

step

at

a

time.

# Estrogen Household Detox



Fragrances

- Perfumes
- Strongly scented beauty and cleaning products
- Air fresheners and fragrances

One

step

at

a

time.

# Estrogen Household Detox



Parabens

- Read your labels
- Comes in many forms:
  - any word that ends in -paraben

One

step

at

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# Final Words

- Estrogen is not the sole culprit
- There is an entire system involved that supports hormonal health
- Your foundational and metabolic health play a critical role in how you use and detox estrogens.

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# Stay In Touch With Me!

Join me on Instagram:
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