

What Happens When We Don't Count Women: The Hidden Hormonal Toll of the Modern Diet

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ABSTRACT

Ultra-processed foods (UPFs) now make up nearly half of the average Canadian diet. Cheap, convenient, and nutrient-poor, they not only displace whole foods but also deliver additives, preservatives, and packaging chemicals that disrupt hormones, especially in people with ovaries. These endocrine-disrupting compounds are linked to earlier puberty, menstrual irregularities, infertility, worsened menopause symptoms, and heightened risks of hormone-related diseases. Conditions like polycystic ovary syndrome and endometriosis, already affecting millions, may be exacerbated by UPF-driven inflammation and chemical exposures. Yet nutrition policy rarely addresses hormonal health, and research has long excluded women, leaving major knowledge gaps. Canada's limited measures contrast with stronger regulations abroad, while low- and middle-income countries face a double burden of chronic disease and weak protections. The article calls for inclusive research, stronger policies, practical hormone-supportive dietary advice, expanded education, and equitable access to whole foods. Food choices are a feminist health issue, and change is possible.

KEYWORDS: Ultra-processed foods, Endocrine-disrupting chemicals, Women's health, Hormonal health, Nutrition policy

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What Happens When We Don't Count

Women: The Hidden Hormonal Toll of the Modern Diet

We're living through a food revolution, and not the good kind. Ultra-processed foods (UPFs) now make up nearly half of what the average Canadian eats. [1] Think packaged snacks, sugary drinks, and fast food engineered from food extracts and industrial additives, packed with sugar, salt, and fat, but stripped of fiber and essential nutrients. [1] They're cheap, convenient, and everywhere. [2] But they're quietly affecting our hormones, health, and futures, especially if you have ovaries.

To be clear: UPFs aren't great for anyone. Regardless of sex, they've been linked to inflammation, obesity, metabolic disorders, and more. [1] However, when it comes to hormonal health, the stakes can be uniquely high for people with ovaries. Why? Hormones like estrogen and progesterone swing through monthly cycles, surge in pregnancy, and plummet in menopause. Diet, stress, and environmental exposures can throw hormones off balance, triggering irregular cycles, fertility struggles, or other health issues. [3,4]

Food isn't just fuel. It sends signals that can either support or disrupt hormonal balance. In a food landscape dominated by UPFs, those signals can go haywire. [5-8]

The Hidden Ingredients Disrupting Our Hormones

UPFs aren't just low in nutrition; they crowd out the nutrient-dense foods that support our health, like fruits, vegetables, whole grains, and legumes. [9]

But it gets worse. Many UPFs contain additives and preservatives that can interfere with our hormones, called endocrine-disrupting chemicals (EDCs). Propyl paraben, for example, is a preservative found in baked goods and snacks. It has been detected in human urine and acts like estrogen in the body,

linked to menstrual changes, ovulation problems, and reduced fertility. [10,11]

Even the UPF packaging contains EDCs like phthalates and bisphenol A (BPA), which can leach from wrappers and containers into food. They mimic or block hormones and have been tied to earlier puberty, infertility, and more severe menopause symptoms. [12-17] These aren't far-off risks. They're happening in real time, and they're affecting our biology.

In Canada, companies don't have to tell you if their packaging contains EDCs. [18] Most people don't even know these risks exist.

The Real-Life Consequences

We're seeing concerning shifts in hormonal health that likely reflect a combination of factors, including diet, environmental exposures, stress, and more. People are getting their periods earlier, sometimes before age 10. [19] While it might seem harmless, more years of estrogen exposure raise lifetime risks for hormone-related cancers, reproductive challenges, and metabolic disorders. [20-22]

Polycystic ovary syndrome (PCOS) and endometriosis, each affecting about 10% of people with ovaries, are becoming more common. [23,24] PCOS involves irregular periods, excess androgens, and insulin resistance, raising risks for fertility issues and type 2 diabetes. [23] Endometriosis occurs when uterine-like tissue grows outside the uterus, causing chronic pain and sometimes infertility. [24] While causes are complex, growing evidence suggests that UPFs, through inflammation and hormone-disrupting ingredients, may play a contributing role. [25-28]

Then, as estrogen levels drop during menopause, symptoms like hot flashes, bone loss, and mood changes can worsen with poor diet quality, which is linked to inflammation, metabolic risk, and symptom severity. [29] However, nutrition often isn't part of the menopause conversation.

The Bigger Picture Problem

For decades, women were sidelined in research, not only due to gender bias, but because hormonal cycles were seen as ‘too messy’ for clean results. Instead, studies were done on males, and results were generalized to everyone. [30,31]

Even now, most public-facing nutrition discussions continue to focus on outcomes like weight, cholesterol, and blood sugar, and rarely on menstrual cycles, fertility, or menopause, which affect half the population. This leaves massive gaps in our understanding of how diet affects female hormonal health. [32,33] And when guidance does reach the public, it’s often vague (“eat more veggies, cut back on junk”) and fails to explain why hormone balance matters, which is crucial for turning generic tips into actionable health decisions.

The Policy Problem

Even as science uncovers the risks, policy lags behind. Canada recently introduced front-of-package labels for sugar, salt, and saturated fat, a step in the right direction, but there are still no rules about EDCs in food packaging or UPFs, apart from BPA being banned in baby bottles. [34,18,35]

In contrast, countries like Mexico, Chile, South Africa, and the UK have gone further and taxed UPFs like sugar-sweetened beverages to discourage consumption. The European Union has banned BPA in all materials that come into contact with food. [36-39]

This isn’t just a Canadian problem. In many low- and middle-income countries, UPFs are rapidly replacing traditional diets. Without strong public health systems to address the hormonal and metabolic consequences, these countries face a double burden: rising rates of chronic disease alongside limited protections against harmful food systems. [40-44]

So, What Needs to Change?

To build a food system that works for everyone, we need to:

- **Prioritize inclusive, sex-specific research.** Fund studies that include females within areas like PCOS, menopause, fertility, and the hormonal effects of everyday diets.
- **Strengthen food policy and safety protections.** Go beyond nutrition labels to regulate EDCs in food and packaging, and ensure full transparency in production.
- **Translate science into practical, hormone-supportive guidance.** Move away from vague nutrition advice and toward clear, relevant, implementable messaging, while explaining the why behind advice.
- **Expand access to nutrition and hormone education.** Integrate menstrual health, hormone, and nutrition education into schools, provide up-to-date training to healthcare providers, and support community-led, accessible programs.
- **Address systemic and intersecting barriers to healthy eating.** Food access depends on geography, income, culture, and colonial history. Nutrition policy must centre equity and ensure affordable, culturally relevant, nutrient-rich foods for all.

A Tiny To-Do List for You with Big Impact

- Choose fresh or minimally processed foods when possible.
- Learn whole-food recipes you love.
- Store food in glass or stainless steel instead of plastic.
- Ask your doctor or dietitian about hormone-friendly meals, especially for PCOS, menopause, or irregular cycles.
- Stay curious—learn what's in your food and its packaging.

Conclusion: Food is a feminist issue

When women are excluded from nutrition research, their health is left to chance. The hormonal toll of our food system isn't inevitable; it's the cost of being overlooked. We can rewrite the system. It starts by putting women at the center.

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