MILLHOUSE INTEGRATIVE MEDICAL CENTRE
PARTNERING IN HEALTH AND HEALING

From our NEWSLETTER AUGUST 2025

FACT SHEET 32 - FRUCTOSE AND OBESITY PART TWO

SURVIVAL SWITCH

In the October 2024 newsletter I addressed the sharp increase in obesity, diabetes, and hypertension compared with stats from a century ago; this parallels the increased consumption of sugar and high fructose corn sugar, especially present in processed foods and beverages. Referencing Professor Richard Johnson's 2022 book *"Nature Wants Us to Be Fat,"* I explained the "survival switch," a biological process that prompts fat storage during abundance. This mechanism was once protective against famine but is now problematic in an era of constant high-fructose consumption.

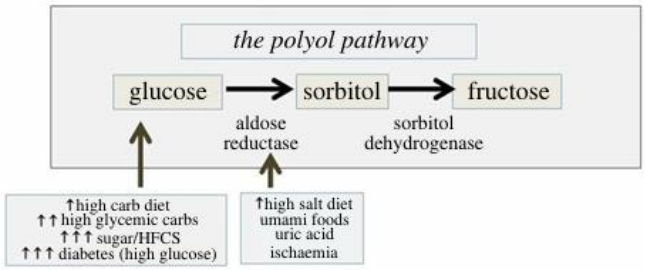
FRUCTOSE FLIPS A "FAT SWITCH"

Unlike glucose, which our bodies use directly for energy, fructose takes a different path. Mostly processed in the liver, fructose is more likely to be converted into fat rather than being burned for immediate fuel. This metabolic shortcut can set off a cascade of effects: increased hunger, greater fat storage, and, in animal studies, more foraging and food-seeking behaviours. These patterns may also appear in humans. Excess fructose blunts the body's natural signals of fullness, making it easier to overeat and gain weight. It also raises uric acid levels, which are linked to higher blood pressure and key features of metabolic syndrome, including obesity and fatty liver.

Research suggests that these processes might overstimulate the drive to seek food, potentially influencing impulsive or hyperactive behaviours, though this link is not yet firmly established in humans. In short: consuming too much fructose can "flip the fat switch," increasing appetite, promoting fat storage, and contributing to both metabolic and, perhaps, behavioural risks.

SWEET, SALTY, AND SAVOURY: FOOD, FRUCTOSE, AND THE "SURVIVAL SWITCH"

Professor Richard Johnson became convinced that one reason low-carb diets were so effective for weight control is that they're low in fructose. Yet, this didn't explain why some animals—like camels eating desert plants or whales on marine diets—still become obese, despite consuming little or no fructose. This puzzle led researchers to revisit a long-overlooked metabolic route: the polyol pathway.



Since the 1950s, it's been known that the body can convert glucose into sorbitol (a sugar alcohol or "polyol" linked to diabetic complications like cataracts and perhaps diabetic neuropathy) and then into fructose. While the polyol pathway was originally thought to be minimally active, more recent work from Johnson's group reveals it ramps up under stress. High glucose (as in poorly controlled diabetes), overconsumption of refined carbs, dehydration, low blood pressure, low oxygen (such as in heart attacks or high altitude), high uric acid, and even large amounts of dietary fructose all boost the production of endogenous (internally generated) fructose, especially in the liver. This, in turn, can accelerate weight gain and features of metabolic syndrome. Intriguing evidence emerged in the 1970s, when New Zealand cattle rapidly gained weight after being given salt licks. Salt-induced dehydration and excess sodium intake both appear to trigger the body's "survival switch." In fact, people with obesity are 10 times more likely to be dehydrated than those of normal weight. Fructose also stimulates vasopressin, a hormone that helps us retain water—further linking sugar, salt, and hydration to weight regulation.

Even umami-rich savoury foods (like soy and fish extracts, yeast, dried tomatoes, organ meats, beer, or MSG, all high in glutamate) are potent endogenous fructose triggers for overeating—possibly even more powerful, gram for gram, than salt or sugar.

THE SWITCH DIET SOLUTION

In summary, the "survival switch" highlights how fructose—whether ingested or produced in the body—powerfully stimulates cravings, impulsivity, and hunger, while overriding normal satiety signals through inducing leptin resistance. Leptin, a hormone released by fat cells, normally communicates to the brain that energy stores are sufficient, reducing appetite and promoting energy expenditure. However, when fructose increases leptin resistance, the brain fails to receive these "fullness" signals effectively, causing persistent hunger and promoting fat storage rather than energy use. The Switch Diet Solution offers a clear set of practical interventions: avoid fructose, limit high-glycemic carbohydrates, stay hydrated with water, restrict salt and alcohol, moderate umami-rich foods, and manage uric acid levels under medical guidance. By following these steps, the diet aims to turn off the survival switch, prevent unnecessary fat accumulation, and promote optimal metabolic health—a science-based approach to addressing the modern epidemic of obesity and its related diseases.

General reference: 'Nature Wants Us to be Fat' by Dr Richard Johnson (2022).

THE SWITCH DIET

SUGARS
- Eliminate all sugar beverages
- Eliminate all fruit juices, dried fruit, fruit syrups & concentrates.
- Avoid all sugar added to foods.

CARBOHYDRATES
- Avoid high Glycaemic Index (GI) carbs
- Prefer whole grains, high fibre low GI vegetables
- Limit fruit 3-4 servings daily & prefer low GI.

PROTEIN
- Emphasize fish, poultry, dairy & vegetable proteins.

LIMIT HIGH UMAMI FOODS
- red & organ meats, shellfish, rich savoury cheeses

SALT
- reduce to 5gm daily
- limit processed food containing high salt & sugar

ALCOHOL - eliminate or reduce

WATER
- drink 6-8 glasses (250ml) daily

URIC ACID lower is better
Women less than 0.36mmol/l
Men less than 0.41mmol/l
Additional Vitamin C lowers uric acid