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Book Review

# Ultra-processed people: Why we can't stop eating food that isn't food
# By Chris van Tulleken
# Knopf Canada, 2023. 384 pages

Reviewed by Jennifer Sumner*

I first heard about Chris van Tulleken's book through a newspaper article he wrote, in which he noted that poor diet is responsible for more deaths globally than any other cause, including the previous number one risk—tobacco. This reported finding from a medical journal caught my interest and made me want to read his book.

With a medical degree from Oxford and a PhD in molecular virology, van Tulleken is an associate professor at University College London, a practicing infectious diseases physician and a BBC broadcaster. His book is meticulously footnoted and moves easily between personal anecdotes, interviews with experts, and the most recent research.

He begins by explaining that traditional food is made up of three broad categories of molecules that give it taste, texture, and calories: fats, proteins, and carbohydrates. Although humans have evolved systems that control their nutritional intake, over the past 150 years, he argues, "food has become…not food" (p. 4). We have started eating substances constructed from novel molecules and using processes that we have never encountered in our evolutionary history. These substances now make up "as much as 60 percent of the average diet in the U.K. and the U.S." (p. 5) and they override our systems of control that were developed over millennia.

van Tulleken refers to these substances as ultra-processed food (UPF), a term associated with the NOVA Classification System, which doesn't look at nutrients, but focusses on the level of food processing. Developed by Carlos Monteiro, NOVA classifies food into four groups:

> Group 1: Unprocessed or minimally processed food—foods found in nature such as meat, fruit,

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> and vegetables, as well as things like flour and pasta.
>
> Group 2: Processed culinary ingredients—traditional foods that make Group 1 taste delicious, such as oils, lard, butter, sugar, salt, vinegar, and honey.
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> Group 3: Processed food—ready-made mixtures of Groups 1 and 2, which are mainly processed for preservation, such as tinned beans, salted nuts, smoked meat, canned fish, chunks of fruit in syrup and proper freshly made bread.
>
> Group 4: Ultra-processed food—formulations of ingredients, mostly of exclusive industrial use, made by a series of industrial processes, many requiring sophisticated equipment and technology.

The processes to make UPF include the fractioning of whole foods into substances and the chemical modification of these substances. These food fractions are then combined with additives and assembled through industrial techniques such as molding, extrusion, and pressure changes. He notes that there is a big difference between "the salty fatty foods that mum cooked [made from Groups 1, 2 and 3] and their industrial equivalents [made from Group 4]" (p. 44). The reason for this difference is clear: "Processes and ingredients used to manufacture ultra-processed foods are designed to create highly profitable (low-cost ingredients, long shelf life, emphatic branding), convenient (ready-to-consume) hyperpalatable products liable to displace freshly prepared dishes and meals made from all other NOVA food groups" (p. 33).

van Tulleken warns that if something comes wrapped in plastic and contains at least one ingredient you wouldn't find in a standard kitchen, then it's UPF. In addition, almost every food that is accompanied by a health claim is UPF. Although he maintains that UPF damages the body, human societies, and the planet, he is most worried about its contribution to obesity. He quotes Monteiro, who theorized that: "The main reason for the rapid increase in overweight and obesity throughout the world, especially since the 1980s, is the correspondingly rapid increase in production and consumption of ultra-processed food and drink products" (p. 32).

van Tulleken explains that obesity is growing at a staggering rate, with an increase of more than 700 percent among children leaving primary school in the U.K. Carefully noting that obesity has deeper causes than UPF—genetic vulnerability, poverty, injustice, inequality, trauma, fatigue, and stress—he sees UPF as a collection of substances through which these deeper societal problems harm the body. He understands obesity as a disease: people have obesity like they have cancer. This diet-related disease results from the collision of ancient genes with a new food ecosystem that is engineered to drive excess consumption—an ecosystem "that we currently seem unable, or perhaps unwilling, to improve" (p. 8). It is also a commerciogenic disease, caused by the marketing and consumption of addictive substances. In other words, obesity is not caused by sugar, by lack of exercise or by lack of willpower, it is caused by eating UPF.

van Tulleken has struggled with weight issues all his life, so he decided to conduct an experiment. Partnering with the University College London Hospital, his study involved quitting UPF for one month, then being weighed and measured, followed by eating UPF for one month, then being re-weighed and re-measured.

During the month he quit UPF, van Tulleken kept a journal and discovered that his normal diet was about 30 percent UPF. He found quitting UPF to be hard, and was craving microwave meals, snack bars, and takeaways. However, he learned to read labels and lost some weight. At the end of one month, he was found to be in average shape for his age—and he was looking forward to the UPF diet.

For the next month, he ate a diet where 80 percent of his calories came from UPF (the same diet as one in five people in the U.K. and the U.S.). He ate what he felt like and didn't force himself. During the third week, he was struggling to eat UPF without thinking about what the experts were telling him. The more UPF he ate, the more disgusted he became. He still wanted UPF, but no longer enjoyed it. By the fourth week, he was experiencing noticeable physical effects: loosening his belt two notches, experiencing anxiety dreams, being constipated, and feeling like he'd aged ten years. Medical testing showed he had gained six kilograms, his appetite hormones were "totally deranged," (p. 160) and his MRI scan showed increased connectivity between some brain areas involved in the hormonal control of food vs desire and reward. At the end of the month, he stopped eating UPF completely.

van Tulleken argues that it is the ultra-processing, not the nutrient content, of UPF that is the problem. Its addictive properties are leading to a nutrition transformation that is becoming a global phenomenon. In his words, we are all participants in an experiment we did not volunteer for, with new substances "being tested on all of us all the time to see which of them are best at extracting money" (p. 10).

Given the ubiquity of UPF, this book fills a vital gap in our knowledge. Thankfully, it is easy to read, combining research and interviews with personal anecdotes and amusing glimpses of van Tulleken family life. For those of us involved in food studies, the book adds an extra layer of urgency: van Tulleken proposes that UPF destroys the meaning of food—it becomes a technical substance without cultural or historical meaning. To avoid this outcome, let alone the millions of early deaths caused by poor diets that are increasingly made up of UPF, we need to better understand ultra-processed food and work to change the food system that allows these substances to flourish.

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