

It's not
you.

It's the
food.

Dr Chris van Tulleken
University College London

The F Word

A war on obesity is a war on people.

DAILY EXPRESS
WE'RE BACKING **NHS** AND **CARE** HEROES express.co.uk THURSDAY, MAY 21, 2020 **70p**

82F...HOTTEST DAY OF YEAR
Just what lockdown Britons needed!
SEE PAGES 2-5



Hancock's pledge after third of virus deaths linked to diabetes

WE MUST WIN OBESITY WAR FOR SAKE OF THE NHS

EXCLUSIVE
By Giles Sheldrick
Chief Reporter

MATT Hancock is promising a new war on obesity after shocking figures showed a link to Covid-19 deaths. A third of all people who have died from coronavirus in UK hospitals have been diabetic, with most having Type 2 – which is usually fuelled by fat. The findings have prompted the Health Secretary to launch a new war on obesity.

...and PM leads by example



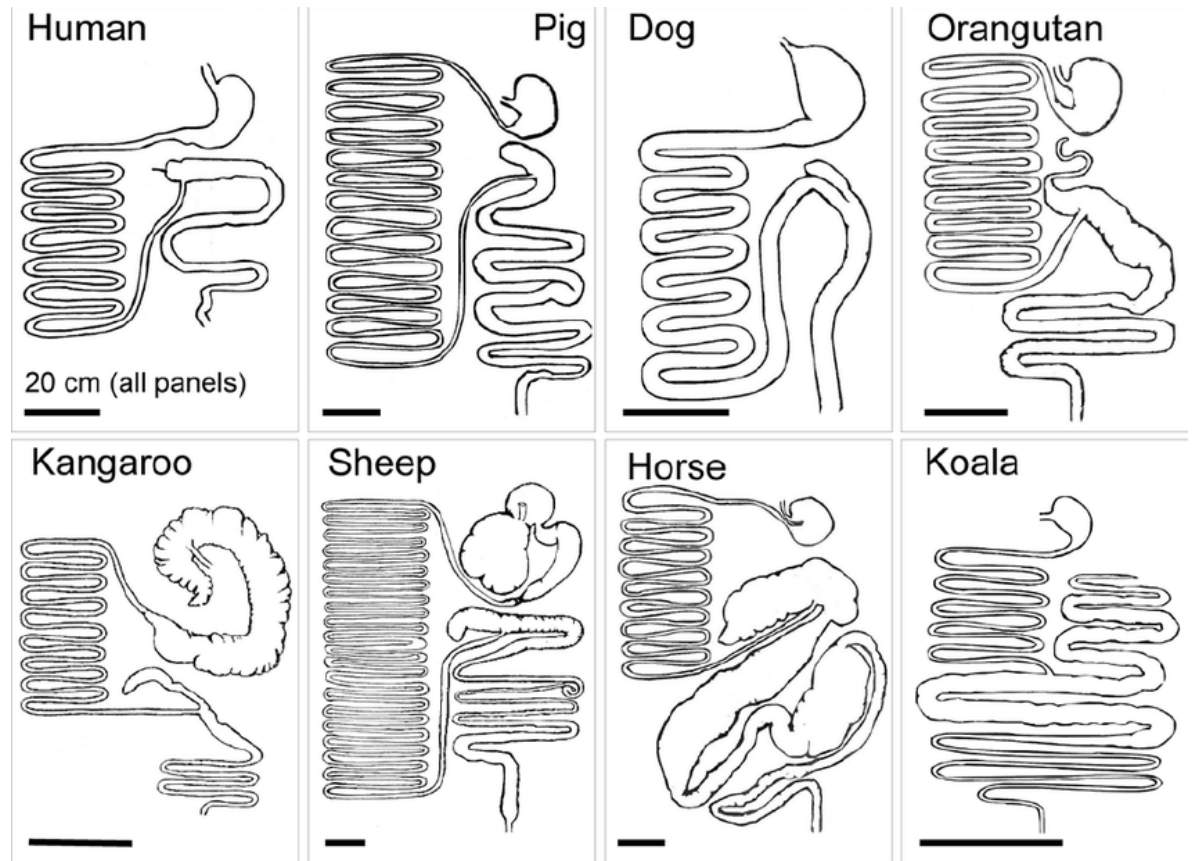
TURN TO PAGE 4



Poor diet has
overtaken tobacco as
the leading cause of
early death globally

Health effects of dietary risks in 195
countries, 1990-2017 Lancet. 2019

Poor Diet = Ultra-Processed Diet



Processing is ancient and has shaped our physiology

Ultra
Processing is
very different





Food and Agriculture
Organization of the
United Nations

TLDR “Wrapped in plastic with at least one ingredient that you wouldn’t usually find in a standard home kitchen”

Ultra-processed foods, diet quality, and health using the NOVA classification system

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[GROUP 4] Ultra-processed foods

Ultra-processed foods are formulations of ingredients, mostly of exclusive industrial use, typically created by series of industrial techniques and processes (hence ‘ultra-processed’).

Some common ultra-processed products are carbonated soft drinks; sweet, fatty or salty packaged snacks; candies (confectionery); mass produced packaged breads and buns, cookies (biscuits), pastries, cakes and cake mixes; margarine and other spreads; sweetened breakfast ‘cereals’ and fruit yoghurt and ‘energy’ drinks; pre-prepared meat, cheese, pasta and pizza dishes; poultry and fish ‘nuggets’ and ‘sticks’; sausages, burgers, hot dogs and other reconstituted meat products; powdered and packaged ‘instant’ soups, noodles and desserts; baby formula; and many other types of product. See table 1, below.

Processes enabling the manufacture of ultra-processed foods involve several steps and different industries. It starts with the fractioning of whole foods into substances including sugars, oils and fats, proteins, starches and fibre. These substances are often obtained from a few high-yield plant foods (such as corn, wheat, soya, cane or beet) and from puréeing or grinding animal carcasses, usually from intensive livestock farming.

Some of these substances are then submitted to hydrolysis, or hydrogenation, or other chemical modifications. Subsequent processes involve the assembly of unmodified and modified food substances with little if any whole food using industrial techniques such as extrusion, moulding and pre-frying. Colours, flavours, emulsifiers and other additives are frequently added to make the final product palatable or hyper-palatable. Sophisticated and attractive packaging is used, usually made of synthetic materials.

Sugar, oils and fats, and salt, used to make processed foods, are often ingredients of ultra-processed foods, commonly in combination. Additives that prolong product duration, protect original properties, and prevent proliferation of micro-organisms may be used in both processed and ultra-processed foods, as well as in processed culinary ingredients, and, infrequently, in minimally processed foods.

Ingredients characteristic of ultra-processed foods are either food substances of no or rare culinary use, or else classes of additives whose function is to make the final product sellable, palatable and often hyper-palatable.

Food substances of no or rare culinary use, employed in the manufacture of ultra-processed foods, include varieties of sugars (fructose, high-fructose corn syrup, ‘fruit juice concentrates’, invert sugar, maltodextrin, dextrose, lactose), modified oils (hydrogenated or interesterified oils) and sources of protein (hydrolysed proteins, soya protein isolate, gluten, casein, whey protein, and ‘mechanically separated meat’).

Classes of additives used only in the manufacture of ultra-processed foods, are flavours, flavour enhancers, colours, emulsifiers, emulsifying salts, artificial sweeteners, thickeners, and foaming, anti-foaming, bulking, carbonating, gelling and glazing agents. All of them, most notably flavours and colours, either disguise unpleasant sensory properties created by ingredients, processes or packaging used in the manufacture of ultra-processed foods, or give the final product intense sensory properties especially attractive to see, taste, smell and/or touch, or both.

Processes and ingredients used for the manufacture of ultra-processed foods are designed to create highly profitable products (low-cost ingredients, long shelf-life, powerfully branded). Their convenience (imperishable, ready-to-consume), hyper-palatability, and ownership by transnational corporations using pervasive advertising and promotion, give ultra-processed foods enormous market advantages. They are therefore liable to displace all other NOVA food groups, and to replace freshly made regular meals and dishes, with snacking any time, anywhere.

Not all ultra-processed foods are recent or new. The first such products created and, enabled by mass industrialisation, some commonly consumed for generations, include packaged cookies (biscuits), preserves (jams), sauces, meat, yeast and other extracts, ice-cream, chocolates, packaged candies (confectionery), margarines, and infant formulas.

Some of what are now ultra-processed foods were originally manufactured only with group 1 foods and salt or sugar or other substances from group 2, and thus would be classed in NOVA group 3 as processed foods. But as now formulated most of them are ultra-processed. Examples are commercially wrapped breads, packaged cakes and pies, and pre-prepared animal products such as hot dogs and burgers. Packaged ready-to-heat products consumed at home or at fast food outlets such as meat, cheese, pizza and pasta dishes, and French fries (chips) may look much the same as home-cooked food, but their formulations and the ingredients used in their pre-preparation render them ultra-processed.



I have never seen a thin person drinking Diet Coke.

— Donald J. Trump (@realDonaldTrump) [October 14, 2012](#)



The more Diet Coke, Diet Pepsi, etc you drink, the more weight you gain?

— Donald J. Trump (@realDonaldTrump) [October 15, 2012](#)



Diet Coke tweet had a monster response--dammit, I wish the stuff worked.

— Donald J. Trump (@realDonaldTrump) [October 16, 2012](#)



The Coca Cola company is not happy with me--that's okay, I'll still keep drinking that garbage.

— Donald J. Trump (@realDonaldTrump) [October 16, 2012](#)



*People are going crazy with my comments on Diet Coke (soda).
Let's face it--this stuff just doesn't work. It makes you hungry.*

— Donald J. Trump (@realDonaldTrump) [October 22, 2012](#)



Diet Coke

Sparkling Low Calorie Soft Drink with Vegetable Extracts with Sweeteners

INGREDIENTS

Carbonated Water, Colour (Caramel E150d), Sweeteners (Aspartame, Acesulfame K), Natural Flavourings Including Caffeine, Phosphoric Acid, Citric Acid.

WARNING STATEMENT

Contains a Source of Phenylalanine.



Diet Coke **CAFFEINE FREE**

NUTRITION INFORMATION TYPICAL VALUES

Per:	100ml	330ml	(%*)
Energy:	1.6kJ/ 0.4kcal	5kJ/ 1kcal	(0%)
Fat:	0g	0g	(0%)
of which saturates:	0g	0g	(0%)
Carbohydrate:	0g	0g	(0%)
of which sugars:	0g	0g	(0%)
Protein:	0g	0g	(0%)
Salt:	0g	0g	(0%)

* Reference intake of an average adult (8400kJ/2000kcal)

330ml 

Energy 5kJ 1kcal	Fat 0g	Saturates 0g	Sugars 0g	Salt 0g
0%*	0%*	0%*	0%*	0%*

100ml: 1.6kJ/0.4kcal

UPF is made from the cheapest possible ingredients (often waste)

- **Commodity Crops**
 - Refined Bleached Deodorized Fat/Oil **plus**
 - Modified Starches **plus**
 - Protein Isolates **then**
- **Additives**
 - Emulsify
 - Stabilise
 - Preserve
 - Flavour
 - Colour
 - Enhance taste



Some UPF is obvious junk...

- **Ingredients**

- Reconstituted skimmed milk concentrate
- Partially Reconstituted Whey Powder
- Glucose Syrup,
- Sugar
- Dextrose
- Palm Stearin
- Palm Oil
- Palm Kernel Oil
- Emulsifier (Mono- and Di-Glycerides of Fatty Acids)
- Stabilisers
 - Guar Gum
 - Sodium Alginate)
- Flavouring
- Colours (Carotenes)





Some is sold as healthy...

- **Ingredients**

- Palm Kernel Oil
- Milk Whey
- Sugar
- Dried Yoghurt
- Emulsifier: Sunflower Lecithin

- **Bar**

- Dried Apricots 17%,
- Shredded Coconut 14%,
- Glucose Syrup,
- Crisped Rice (Rice, Sugar),
- Almonds 10%,
- Honey 5%





Strawberry Filling (45%)

- Apple Puree
- Glucose Syrup
- Humectant {Glycerol}
- Strawberry Puree {5%}
- Acidity Regulator {Citric Acid}
- Black Carrot Concentrate
- Grape Concentrates
- Natural Flavouring

Bar

- Cereal Flours (32%) Wholewheat, Oat, Wheat
- Sugar,
- Vegetable Oils (Palm, Sunflower),
- Invert Sugar Syrup,
- Dextrose,
- Skimmed Milk Powder,
- Fructose,
- Salt,
- Stabiliser (Methylcellulose),
- Emulsifier (Soy Lecithin),
- Raising Agent (Potassium Hydrogen Carbonate),
- Vitamins & Minerals: Calcium Carbonate, Niacin, Iron, Vitamin B6, Riboflavin, Thiamin, Folic Acid, Vitamin B12



Smoky Carrot & Falafel

Sweet potato falafel with smoky carrot ribbons, gherkins, pickled cabbage & carrot and a layer of sriracha sauce. Finished with a handful of rocket.





Smoky Carrot & Falafel

Sweet potato falafel with smoky carrot ribbons, gherkins, pickled cabbage & carrot and a layer of sriracha sauce. Finished with a handful of rocket.



Malted Wholegrain Bread (Wheat Flour (Wheat Flour (Wheat)), Calcium Carbonate, Iron, Niacin, Thiamin), Water, Malted Wheat (Wheat), Wheat Bran (Wheat), Yeast, Wheat Gluten (Wheat), Barley Malt Flour (Barley), Salt, emulsifiers (**Mono- and Diacetyl Tartaric Acid Esters of Mono- and Diglycerides of Fatty Acids, Mono- and Diglycerides of Fatty Acids**), Rapeseed Oil, **flour treatment agent (Ascorbic Acid)**), Sweet Potato Falafel (22%) (Sweet Potato, Cooked Chickpeas (Chickpeas, Water), Onion, Dried Potato, Coriander Leaf, Red Pepper, Salt, Cumin Powder, Concentrated Lemon Juice, Rapeseed Oil, Paprika, Water, Smoked Paprika, Black Pepper, Dried Garlic, Coriander Powder, Chilli Flakes), Gherkins (14%) (Gherkin, Sugar, Vinegar, Salt, **Flavouring**, Mustard Seeds (Mustard), **colour (Riboflavin)**), Carrot (11%), Vegan Mayonnaise (Rapeseed Oil, Water, Spirit Vinegar, Sugar, **Modified Starch**, Salt, Lemon Juice, stabiliser (**Xanthan Gum**), White Pepper, Flavouring), Rocket, Red Cabbage (4.0%), Sugar, Spirit Vinegar, Sriracha Sauce (1.0%) (Chilli, Garlic, Sugar, Salt, Distilled Vinegar, stabiliser (**Xanthan Gum**), preservative (**Potassium Sorbate**)), Salt, **Smoked Water**, Rice Vinegar.



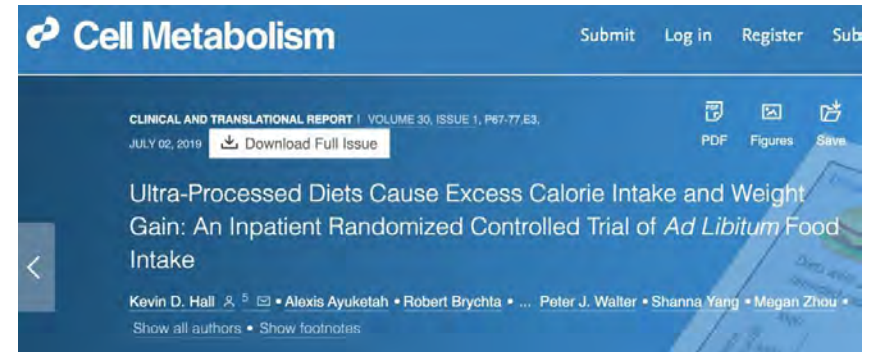
UPF is most of what we eat

- 60% of our calories on average.
- 80% is typical for teens.

Association Between Childhood Consumption of Ultraprocessed Food and Adiposity Trajectories in the Avon Longitudinal Study of Parents and Children Birth Cohort. JAMA Pediatr. 2021

Plus many others.

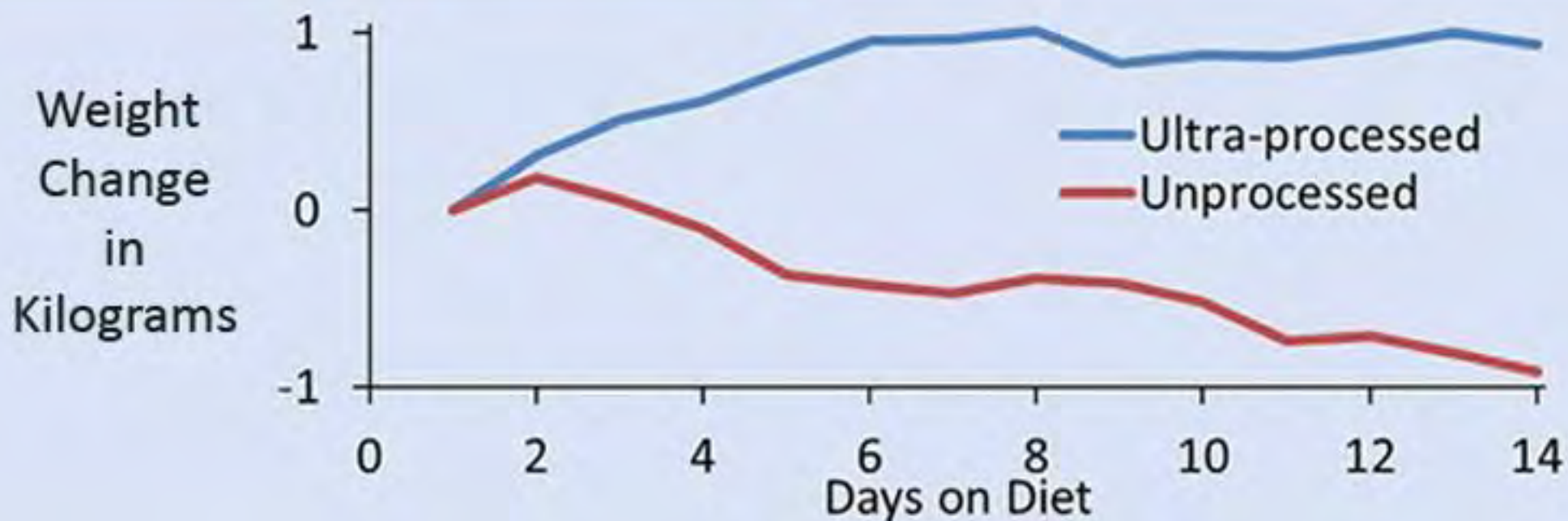
UPF causes weight gain



Ultra-processed



Unprocessed



UPF does not just cause obesity...

- Cardiovascular disease (strokes and heart attacks)
- Cancers (all cancers, as well as breast, prostate and colon specifically)
- Metabolic disease (type two diabetes)
- Obesity (as measured by BMI and fat mass)
- High blood pressure
- Gestational diabetes (in pregnancy)
- Fatty liver disease
- Inflammatory bowel disease: ulcerative colitis and Crohn's disease
- Anxiety/depression
- Frailty (as measured by grip strength)
- Irritable bowel syndrome and dyspepsia (indigestion).
- Dementia
- An increased risk of death – so called all-cause mortality.



...and it's not just the salt,
fat and sugar...

What about
exercise?

Exercise
is Medicine®

AMERICAN COLLEGE
of SPORTS MEDICINE

MENU ▾



EXERCISE IS MEDICINE®

ACSM's Rx for Health



May 5, 2009

THE *Coca-Cola* COMPANY

Exercise is the Best Medicine

Governor Perdue Declares May As Exercise is Medicine Month in Georgia

[Public Health Nutr.](#) 2018 Jun; 21(9): 1594–1607.

PMCID: PMC5962884

Published online 2018 Mar 21. doi: [10.1017/S136898001700307X](https://doi.org/10.1017/S136898001700307X)

PMID: [29560842](https://pubmed.ncbi.nlm.nih.gov/29560842/)

Coca-Cola – a model of transparency in research partnerships? A network analysis of Coca-Cola’s research funding (2008–2016)

[Paulo M Serôdio](#),¹ [Martin McKee](#),² and [David Stuckler](#)³



What about willpower, stress, poverty, genes?

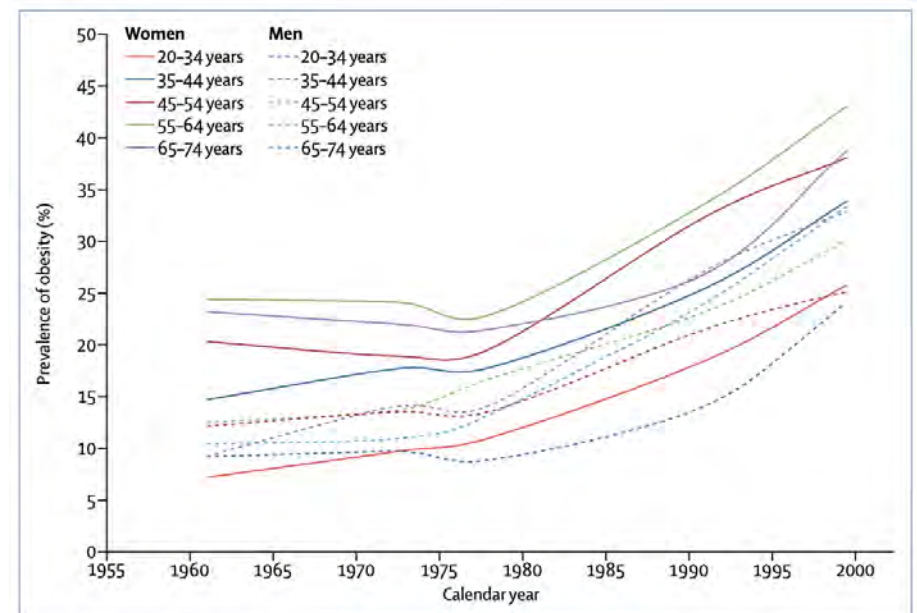


Figure: Prevalence of obesity, by age and sex
Data from US Centers for Disease Control and Prevention, National Health and Examination Surveys (1960–2000).⁴

How does it harm us? UPF is soft





UPF tells us lies

sweetness without sugar
smoothness without fat
savoury without protein

UPF is flavoured



UPF affects the microbiome



We pay for UPF many times over



Creating a World Without Waste

The interconnected global challenges of packaging waste and climate change have made this a focus for our business and we are taking a hard look at the packaging we use and how we can drive change.

EXPLORE OUR WORLD WITHOUT WASTE GOALS AND PROGRESS [👉](#)

Scroll



UPF is Addictive

Addiction: use of the substance is continued despite knowledge of having a persistent or recurrent physical or psychological problem that is likely to have been caused or exacerbated by the substance.



The purpose of Ultra Processing is growth

“These companies are not in control of their business model”

Blackrock analyst



Solutions

- Structural not individual
- Learn the lessons of tobacco control: Industry money is dirty money.



Solutions

- National dietary guidance
- Marketing restrictions
- Increase freedoms – make real food cheap and available
- Warning labels
- Progressive taxes (with caution!)
- Institutional food
- Not for profit food



Thanks for listening!

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