HOUSE OF LORDS

Food, Diet and Obesity Committee

Corrected oral evidence: Food, diet and obesity

Thursday 9 May 2024

11:20 am

Watch the meeting

Members present: Baroness Walmsley (The Chair); Baroness Boycott; Lord Brooke of Alverthorpe; Baroness Browning; The Earl of Caithness; Lord Colgrain; Baroness Goudie; Baroness Jenkin of Kennington; Lord Krebs; Lord McColl of Dulwich; Baroness Pitkeathley; Baroness Ritchie of Downpatrick; Baroness Suttie.

Evidence Session No. 20 Heard in Public Questions 289 – 305

Witness

I: Professor Robin May, Chief Scientific Adviser, Food Standards Agency.

Examination of witness

Professor Robin May.

Q289 **The Chair:** Good morning and welcome back to this public meeting of the House of Lords Committee on Food, Diet and Obesity. We continue our meeting with the 20th and final evidence session of the committee's inquiry exploring the role of food, such as ultra-processed foods and foods high in fat, salt and sugar, in healthy diet and in tackling obesity.

We are now about to hear from Professor Robin May, chief scientific adviser to the Food Standards Agency. You are very welcome, Professor May, and we very much look forward to your evidence. We thank you very much for the extensive written evidence that your organisation sent us. When I ask you to speak for the first time, perhaps you would briefly introduce yourself.

Today's meeting is being broadcast and a written transcript will be taken for subsequent publication, which will be sent to you to check for accuracy. I refer to the list of Members' interests, including my own, as published on the committee's website, and as set out in the committee's first evidence session on 8 February. I repeat what I said at the beginning of the earlier evidence session. While it would be inconsistent with Lords committee procedure to compel our witnesses to do so, we will, for the sake of transparency, be giving our witnesses the opportunity, voluntarily, to declare any interests that they deem relevant to the work of the inquiry the first time they speak.

Having covered all that, may I mention that one of our committee members, Lord Krebs, has recused himself from asking any initial questions because of his previous involvement with the Food Standards Agency? However, he may ask supplementary questions with those interests made note of.

Professor May, can you set out the remit and responsibilities of the Food Standards Agency, as they relate to food, diet and obesity in England? In what way does the FSA work with the Department of Health and Social Care and the Office for Health Improvement and Disparities on food, diet and obesity? I was a bit alarmed to hear from our last witness that the OHID is being disbanded. I was not aware of that. Maybe you could clarify. Thank you.

Professor Robin May: Good morning and thank you for the opportunity to come and talk to you all today. I am chief scientific adviser at the Food Standards Agency. I hold professorships at the University of Birmingham and Gresham College. Otherwise, I have no conflicts to declare.

The Food Standards Agency's primary remit is around safety and authenticity of food in order to assure consumer confidence in the food they eat and the food they buy. Our primary focus is on that aspect. In England, we have a very limited remit for nutrition and obesity. That is largely DHSC and OHID territory. We have a slightly wider remit in other areas in the United Kingdom, in Wales and Northern Ireland, but I appreciate that the committee's focus is very much on England.

There are probably three additional points that might be relevant to the committee. First, as a relatively small government department, we do an awful lot in collaboration with others. We are involved in projects. You have heard at previous sessions about the school meals pilot, for example, where we worked together with other departments that might be in the lead for that remit, but we have a service to provide.

The second area is that, very much as an evidenced-based organisation, we do a lot of externally facing research with partners. Often that is to address primary questions for us on food safety. Quite often, it roams further into areas that are relevant, such as obesity and nutrition and consumer behaviour. As part of that, we do a lot of consumer surveys—for example, on purchasing behaviours, food preparation behaviours and what people do at home. Those are done primarily to provide data for us about how you best intervene in food safety. Of course, they are valuable to other partners and we share them very widely.

The last thing, which is probably very relevant, is that at the FSA we take very seriously our role in consumer confidence and consumer information. We do a lot of public-facing communication on topics that we know consumers are concerned about. Obviously, obesity, diet and other related factors are part of those. We do quite a lot where the remit is not specifically only on food safety but roams more widely because we know consumers are concerned about it.

On the specific question about OHID, I was not aware of that either. There has obviously been major restructuring within DHSC over the last few years. I meet very regularly with my counterpart in OHID and I am not aware of any major plans to restructure.

The Chair: Thank you very much for that.

Q290 **Lord Brooke of Alverthorpe:** Good morning. I have an interest in healthy alternatives to sugar, so I declare that. Some witnesses to the committee have suggested that the Food Standards Agency could take on a greater role in nutrition policy and in the oversight of the food system—for example, by reporting against targets on food and health. In your view, what could be the advantages or disadvantages of such an approach? Could you see a stronger role for the FSA than at present?

Professor Robin May: Thank you very much. The first thing to say is that I am a scientist and not a politician. My understanding is that the decision of who allocates responsibilities to the department is the Prime Minister's. It is definitely above my pay grade, as a chief scientific adviser.

That notwithstanding, perhaps slightly more helpfully from a science perspective, I would view that question as having two parts. There is a question around policy setting and target setting, as the previous witness described. What do you want to achieve and what are the targets to measure it against? There is a second question, which is about how you

standardise the data to report on those targets, how you measure that data and, ultimately, how you enforce against it.

My personal view would be that the first question is quite rightly for democratically elected politicians to decide on where they want to set the policy. The second question on devising standards, measuring standards and, perhaps, enforcing them feels to me like a question that is more answerable by a regulator. The FSA would be an ideal regulator for that, although there are other models, of course, in there too.

Lord Brooke of Alverthorpe: Thank you very much.

Q291 **Baroness Boycott:** I declare my interests as stated on the register. In March, the FSA's consumer insights tracker found that 77% of people were concerned about UPF, ultra-processed food, and/or the overprocessing of food. In your view, how should the FSA and the Government respond to that?

When Susan Jebb came before this committee, she said what was interesting about UPF was that it had manged to cut through public consciousness in a way that HFSS had not. People were alarmed about it and knew about it and, therefore, it made sense to try to strike while the iron was hot in relation to behaviour change and making people understand food. Where do you fit into that?

The Chair: Before you answer, I remind everybody that Susan Jebb came to us in her personal capacity when she said all that, as an academic rather than—

Baroness Boycott: I am very sorry. She came as an academic.

The Chair: She did say it. I wanted to clarify that she came in a personal capacity.

Professor Robin May: Thank you for that. That is the problem with all of us who are part-time here and part-time somewhere else.

You are quite right, Baroness. We do very regular consumer surveys on what people are worried about around food as well as what they are not worried about. Ultra-processed foods generally have risen considerably in people's concern. It is clear from that polling that it has also risen considerably in public confusion. People are worried about it, but they do not really know much about it. Other witnesses to this committee have said the same thing. The terminology around ultra-processing is very confusing. Much of the food industry is not very visible to the public. Most of the time, we are purchasing things and we do not really know how they are created, so there is a real issue around awareness and information about all kinds of food processing, but ultra-processing in particular. As a scientist, I welcome this very active growth in dialogue. From my perspective, the more people talk about it, the more we can address it.

There are two things that the FSA, in particular, is immediately positioned to do and, indeed, has started doing. The first is the issue of consumer information. This is a topic that is high in the consumer interest. People do not understand very much about it. It is our role to try to set out very clearly what the facts are, what we know and, in particular, what we do not know. We are doing quite a lot of work on that. In fact, I have been publishing work on public-facing platforms in the last few days on what are ultra-processed foods, what are the classification systems they use and why they may not always be very robust, and particularly what we do and do not know about the health impacts of ultra-processed foods. It is with an aim of setting out to people what are the key issues and making very clear what is scientific fact versus what is conjecture. That is one thing.

The Chair: Is that available?

Professor Robin May: It is, yes. Our first set of webpages is available, I hope, this week. They were intended to go live this week. It is written in a very accessible way and intended for broad use.

The Chair: The Earl of Caithness will be asking you about that. Has your committee on social sciences been doing that research? Is that what is being published this month?

Professor Robin May: There are multiple things. The webpages are deliberately targeted and have been created by the FSA itself, rather than one of our committees, as public information pages. We have lots of these webpages, on everything from what to do with your chicken to how to run a food business. One of them will be specifically around ultra-processed foods and should be live now.

The Chair: Can we have it, please?

Professor Robin May: You certainly can. I am very happy to send that afterwards.

The Chair: Thank you. Back to you, Baroness Boycott.

Baroness Boycott: Sorry, Professor, we interrupted you.

Professor Robin May: Not at all. The second area is that we are a very evidence-led organisation. It is very clear that there are big gaps in the evidence base around ultra-processing, in particular. We have been working quite closely with other parts of government, particularly the group convened by the chief medical officer, to look at research gaps in ultra-processed foods. I chaired one of the working groups on the potential mechanisms of impact last year. That work has now been published and it highlights quite big gaps in what we do not know and even the plausible underlying mechanisms.

There is now a very active conversation with the wider research community—UKRI, in particular, the biggest spender on research—about how we can best target the research to fill some of the evidence gaps. I

hope that will take off over the coming years and start to fill it, but of course science is not fast so it will take some time.

The last point is that I am very keen in this conversation that we do not throw the baby out with the bathwater. Previous witnesses have commented that the ultra-processing definition includes a huge range of foods, some of which, everyone would agree, are probably not best overindulged in—chocolate, ice cream, et cetera. Others, such as commercially bought wholemeal bread, have a really important role to play in nutrition. I am very keen that the science makes clear that it is not a single product and everything should go, but that everyone is aware of where the benefits and the potential risks lie.

Q292 **Baroness Boycott:** Can I ask what might sound like a slightly idiotic question? The FSA seems to me to be extremely clear on food safety; in other words, if it is bad eggs or something you have reported, or something that will actively cause you harm immediately, you are allowed to say that we cannot have that and you have full legislation. But foods that kill you slowly, which are basically what this committee has been all about, or, if they are not killing you, will lead to obesity and all sorts of different bad health outcomes, somehow seem to be out of your remit, because the individual components of those foods, regardless of what is done with them and how they are sold, are in themselves inoffensive. Is that rubbish or is it, in fact, a problem that you see? You can stop a poison but you cannot stop a slow lingering death from bad diet over 50 years.

Professor Robin May: That is a very accurate point. It is certainly not unique to FSA. Regulators all around the world struggle with that problem. Largely speaking, all food regulators, including us, have the remit for direct effects, essentially. If a new food comes to us, is it toxic? Does it have a metabolic impact, and so forth? Much harder to deal with are the very long-term impacts, in particular when they are compounded by human behaviours. In and of itself, a chocolate bar is not a dangerous thing. Lots of chocolate bars every day are not so great, so there is a problem there.

There is quite an active conversation internationally between regulators and scientists about how you might start to incorporate the longer-term, wider impacts into risk assessment. It is a bit of a minefield, not least because food is internationally traded. Half the food we eat in the UK comes from somewhere else. You need agreement. It bumps up against things like world trade agreements if you are not careful. To make significant progress on incorporating those kinds of long-term impacts into risk assessment, you would need international agreement. Otherwise, it is very limited.

Baroness Boycott: Does the FSA need many more powers? Does it need another body, or does it just need government courage?

Professor Robin May: I am not sure that I can answer about government courage. We have powers in law, if you can prove a food

does harm, to not allow it on to the market. That is our primary remit. There is a question about defining "harm", particularly in the international setting.

One of the things that is most needed is agreement internationally about how you do that rather than whether you should do it. For example, do you look at the population as a whole, who might be consuming chocolate bars at a certain rate, or do you look at the most vulnerable members of the population—small children? Do you look at the most extreme cases, people who eat very extreme diets, or do you just look at what most people do? There is a question about how you do the risk assessment. Ultimately, there is then a question for Governments about how much they wish to intervene in people's individual diets to improve their health, even if that comes as a restricted choice, for example.

Baroness Jenkin of Kennington: I agree. People always push back on wholemeal bread, for example. Not very long ago, if we bought a loaf of bread at the beginning of the week, it would be mouldy by the end of the week. Of course, we understand about shelf life and additives, including sugar, emulsifiers, stabilisers and so on. Are you absolutely convinced all the new contents are okay in the longer term? I know they are individually.

Professor Robin May: With new products—additives in particular, which are the things that extend shelf life—any product in that class, an additive or a novel food, has to come into the FSA as a regulator. Since European Union exit, that is something we do independently for the United Kingdom. They are extensively addressed for their individual impact. We look at possible DNA damage, liver and kidney impacts. I think I can say, hand on heart, that individual components are very carefully assessed and safe.

What no regulator, and no science base anywhere in the world, as far as I am aware, has achieved yet is the ability to look at them in the full complexity of all the different components in them. That is a problem of scale. In the United Kingdom, we have something in the order of 320 licensed additives. Even if you had only two additives always at the same concentration in the food, you are looking at something like 100,000 combinations that would need testing. The scale is quite overwhelming.

The Chair: Thank you very much. Our clerk, Professor May, has just found the piece of work that you referred to earlier, but the Earl of Caithness wants to ask about something more specific in your written evidence.

Q293 **The Earl of Caithness:** I have a couple of questions for you, Professor. First, your social science committee is doing a report on consumer understanding, knowledge, behaviours and information needs with regard to UPF, reporting in May. Has that reported? Could you lift the lid on it and tell us what it contains, please?

Professor Robin May: I sadly cannot lift the lid because it has not yet reported. Deliberately, quite rightly, chief scientific advisers do not usually attend scientific committees while they are deliberating, in order to have a bit of distance between the two. I can very happily share it. They are due to meet in a couple of weeks' time, I believe, and sign off. I can share the report with the Committee after that, if that is useful.

The Earl of Caithness: In your strategy, you state, "Our fundamental mission is food that you can trust". You go on to say that by that you mean that, "people can trust that the food they buy and eat is safe and what it says it is, and food is healthier and more sustainable". Quite a lot of UPF food does not fit into that category. When you are convinced that some UPF foods are not safe, that the food does not say what it is and it is not healthier and more sustainable for us, what action can you take? Will the Government bother to listen to you?

Professor Robin May: Again, I am not sure that I can predict whether the Government will listen or not. What action can we take? First, there are very tight guidelines on authenticity and safety. Any additive, first, has to be authorised and, secondly, has to appear on the ingredient list. In certain cases, we require particular labelling. For example, for colours, caffeine—high levels of caffeine have to be labelled—and things that are not suitable for pregnant women, we mandate particular labelling requirements. As for the safety and authenticity of those components, that is already set out in law.

On health and sustainability, the strategy reflects the fact that, as an organisation, we all realise that regulators have a key role to play in underpinning the wider government ambition that is led primarily by other departments. At the moment, that is relatively limited in terms of our regulatory impact. Much depends on what policies arise from other parts of government. For instance, I know there is a very active discussion around the use of labelling and data targets on food sustainability. One could imagine the future if that came in as a requirement on food. You might want a regulator to look at that, and the FSA might be a good regulator for that.

Similarly, in this morning's session, we heard about potential changes to nutritional labelling or to calorie labelling on foods. Again, I think there is some merit in having an independent regulator as the person who looks at that and says, "Is this label actually informing people? In particular, how useful is it?" We have done a lot of work on how consumers look at and read food labels. The short answer is that people are incredibly time-stretched, so they do not read 75 lines of things on the back of the pack. You need to think about other tools for that.

Where labelling has a very significant impact is on the industry side, for things such as reformulation and changes of advertising. That, of course, is not necessarily a question for the FSA. Advertising standards sit with the Advertising Standards Authority. There is a question about who enforces these things and the primary policy ownership for them.

Q294 **Lord Krebs:** I want to come back briefly to Baroness Jenkin's question about the cocktail effect. You pointed out, Professor May, that there are 320 licensed additives and it would be inconceivable to set up experiments to study every possible permutation and combination of even subsets of those. However, as I understand it, the committee on toxicity, and its sub-committees on mutagenicity and carcinogenicity, look at plausible biological mechanisms for the cocktail effect. Would it be right to say that, until now, they have not found plausible biological mechanisms to support the idea of a cocktail effect?

Professor Robin May: Yes, that is true; you are quite right. When a product comes to us for authorisation, all our scientific advisory committees, particularly COT, the committee on toxicology, look at potential combinations. The most obvious place for that would be that, if a compound had a very similar chemical structure to something else, you might say that those things could combine. The place where we do that most is with sweeteners. You cannot add sweeteners sequentially. You cannot say, "I'm going to add this one and then another one, another one and another one", because they all have very similar mechanisms. We look at that.

Plausibility is a challenge. When there is a clear evidence base suggesting that two things might have a similar effect, it is relatively easy for us to consider that scientifically. Where the science is not known, that becomes very unclear. The place that is most relevant at the moment is in the revolution about the microbiome. We now know our own gut microbiomes have an enormous impact on the chemistry of food, much of which is still to be discovered. It is possible that completely unrelated chemicals in some combination, together with particular microbes, might do something we do not know, but predicting something where we have no evidence base yet is very difficult.

One last thing to add, on a slightly more optimistic note, is that there is quite a lot of activity around novel analytical methods in toxicology, particularly using artificial intelligence, where you might be able to do some of the things that are currently impossible, such as structural predictions for very complex interactions—in the relatively near future, I would say.

The Chair: Is that one of your priorities for research, looking at the effect on the microbiome, or do you have other priorities for research that you would recommend?

Professor Robin May: There might be two answers to that. The priorities for research, as of today, are defined by our current remit and our current resource allocation, which is relatively small and largely focused on safety. For the wider community, not just FSA, the impacts on microbiome are a key question. On the novel analytical methods in particular, we are already a member of a very large international working group. We are very keen to see progress to the point where some of those methods might be usable in a legal sense.

The Chair: I see. Thank you. Lord Krebs would like to press further.

Lord Krebs: On that very last point, as I understand it, looking at your website, or maybe it is COT's website, you are funding a researcher at Birmingham University looking at what are called the new approach methodologies, which is exactly what you say. Can you understand toxicological risk through artificial intelligence through other novel approaches? Is it correct that you are funding research on that?

Professor Robin May: That is correct. For the sake of conflicts of interest, I should point out that my academic post is at Birmingham, but I was not associated with awarding that fellowship. Yes, we have that. We have other fellows elsewhere doing related questions on developing methods, for example, for data analytics in the food system. We keep quite a close eye on the progress and hopefully it will deliver soon.

Q295 **Baroness Suttie:** Thank you. You have already said quite a lot about additives, which my question was about. Would you be willing to set out in a little more detail how the FSA does its risk assessment and authorisation of food additives? In particular, how do you analyse the dosage and quantities and the potential impact on public health?

Professor Robin May: Yes, absolutely. Any new product that fits any of the classes called regulated products must now come to us for authorisation. That is additives but also includes things like genetically modified foods and a class called novel foods, which is any food that was not widely consumed in the UK prior to 1997. That is required before it goes on to the market.

Very broadly, the way that process works is that the applicant will apply to us with a product and a dossier of scientific information associated with it. It is up to them to make the application and decide what they think is relevant information, although most food companies know what we are looking for. That package of information is first triaged by FSA staff for, "Does it have the right balance of information? Is it written well?", and so on. "Is it actually a food, for example, and not something else?" It is passed to our scientific advisory committees. The combination of those depends on the product, but it would typically involve the committee on toxicity, our Advisory Committee on Novel Foods and Processes and, potentially, others. For example, we have a committee on animal feed; if it is a product that is destined for animals, it will go to that committee.

The committees look in great detail at the evidence base in the dossier. Often, there is to-ing and fro-ing at that stage, when they might pause the application and say, "We need more information about X, Y or Z". Ultimately, when they are content, they write an opinion on the safety of the food application. They take into account in that decision two things in particular. First, they take into account consumption patterns. That is information we have about how those kinds of food products are eaten in the UK. The applicant has to set out the foods they anticipate the product will be used in. For example, if you are applying for a colour that might be used on a sweet, that is different from a colour you might use in a loaf

of bread, because the consumption pattern is different. We take that into account. Then we put in a very large factor of safety to account for people who are extreme eaters of it or people who may be vulnerable because they have liver illnesses, for example. We come up with a recommended daily intake that we believe to be safe and make the recommendation.

The document is then passed to the risk management team in FSA, who look at factors beyond the straightforward toxicology. They might be factors around things like nutritional combination with other factors, how different parts of the UK consume things, or diets in different parts of the UK. Ultimately, they make a recommendation to Ministers about whether the food should be approved or not. It is the Minister who makes the final decision, yes or no, at that stage.

The Chair: Thank you. Does that take account of what happens in the real world where people are eating more and more ultra-processed foods?

Professor Robin May: Yes, it does. By definition, our data is always slightly lagging because we are recording what people have eaten, and often using surveys from a year or two ago, but there is a very wide safety factor built in. Unless people suddenly start eating a thousand times more than they did last year, that would be taken account of. We update those models quite regularly according to different diet patterns. For example, the recent big uptake in plant-based foods will feature as a factor in scientific consideration.

Q296 **Baroness Browning:** Could I ask about novel foods, particularly lab-developed proteins, which we hear quite a bit about? From the publicity associated with them, they are very much geared to something that would be marketed and used in countries other than this one. None the less, at what point in that research programme would you become involved?

Professor Robin May: There are, perhaps, two answers to that. There is the general question about the point when we typically get involved in most foods. The default is that it is up to the industry. Often, we would not necessarily hear about food until a dossier lands at our door. That is not ideal from a scientific perspective, not least because it sometimes means that we do not have the right expertise and we have to pause an application, perhaps for months or years, while we get expertise in place. We much prefer to know about things in advance.

When there is a very new market with a big science question like the cell-cultivated products market, we try very hard to be engaged. In that particular case, we have been very actively engaged. In fact, I was appearing at your sister committee on Tuesday about engineering biology because of that involvement. We have engaged quite closely with the market in the UK and overseas, essentially to get an understanding of the science. That is an area where the science is often completely new. It is important to me that we have the right level of expertise ready to

appraise applications when they start coming to us for market authorisation. That sometimes means recruitment and training, and we have engaged very closely with that.

Perhaps the last thing to say on cell-cultivated products in particular is that they are a bit like ultra-processed foods. They encompass a very, very wide range of things. There are cell-cultivated products that will, in my view, be relatively straightforward to assess, because they are single proteins. Some of the milk substitutes, for example, are single proteins about which we have a wealth of data. At the other end of the extreme are some products that are completely new to the human diet—three-dimensionally sculpted multicellular things that are made to look like fish or beef burgers, where there will be a lot more new science to consider. We are actively working on the expertise in that area ready to assess it.

Baroness Browning: Do you get any feel at the FSA that there is interest from UK manufacturers in this area?

Professor Robin May: We do. Obviously, our remit is agnostic to industry; we are not designed either to encourage or suppress parts of the industry. We have had a lot of approaches from the industry, in this country and overseas. I have been on a number of visits to laboratories doing this kind of work, to try to understand a bit more about it. Like many new areas, it will evolve very fast and it will be very difficult to work out where the winners and losers will be. There is certainly a lot of interesting science happening.

Lord Colgrain: I am curious, if you are able and willing to tell us, how many new products that are brought to you fail your tests. Roughly what percentage is it?

Professor Robin May: Yes. I am certainly willing to tell you, but I do not have very good numbers. The reason for that is that until EU exit this was done at a European level. The FSA was a contributor to EFSA, which was the European decision-making body. All the decisions were made at that level.

The typical time at the moment for a food product to get authorised by us can be in excess of two years. We have very limited numbers so far, since EU exit, to give any real approximation. We will start to get those numbers this year, particularly around one class. There are many applications on cannabidiol foods, a very large new class of products, working their way through the system now. Without wishing to predict the system, there will undoubtedly be failures as well as successes there. Perhaps later in the year—I suspect the committee will have closed by the time we have the numbers—we will certainly publish those numbers when we have them.

Q297 **Baroness Suttie:** How does the FSA react if another international food agency bans a product? Do you immediately respond to that? Does it have an impact on your thinking?

Professor Robin May: Yes. We are in close contact with other regulators, particularly in what I would call like-minded countries—places such as the United States and New Zealand—and with science more broadly. We watch closely the science coming out of other countries. Anything that changes a previous assumption we had would immediately trigger us to look at it. That happens quite regularly. Another country might ban something or permit a product that we are still thinking about, so we factor that into our decisions.

The important point is that the science is country agnostic: we look at the science regardless of where it comes from. If someone has toxicology data, we look at it and assess the quality of the science. It does not matter whether it has come from the UK, France or anywhere else. The risk management decision is of course not just about science. Countries ban things for lots of reasons that are not necessarily about science, so it is important that we factor those things in. But we have active discussions on those kinds of things all the time.

At the moment, we are quite actively trying to move that forward by working with other like-minded regulators on products that no one has authorised yet, such as cell-cultivated products. From my perspective, it is a bit bonkers if we all do exactly the same science every time. We might well want to take different risk-management decisions, but the risk assessment itself should be the same because the science is the same. We are building quite strong international relationships with other regulators to work together on some of those products.

Q298 **Baroness Jenkin of Kennington:** We have heard quite a lot about the epidemiological evidence showing associations between intakes of certain food additives, such as sweeteners, emulsifiers and preservatives, and adverse health outcomes. What is your assessment of the evidence, and how do you respond to calls for a more precautionary approach to additives?

Professor Robin May: We have overwhelming evidence about the negative health impacts of high fat, sugar and salt, so from a health perspective that is an incredibly clear message. We have discussed, both in this session and previously, the fact that it is a moot point how well that has been understood by people, but it is really clear and I would be nervous about anything that detracted from moves to try to do better on HFSS.

There are two points to make about ultra-processed foods and additives more broadly. The first is the point I made earlier that ultra-processed food is such a broad category that I do not think it is scientifically valid to look at ultra-processed foods versus everything else. You need to break it down into the particular combinations and types of ultra-processed foods. The big challenge is that most ultra-processed foods are also high in fat, sugar and salt, so you have to somehow tease those two apart scientifically, which is not straightforward.

That brings me to the second point: there is a large evidence gap in this field, which was highlighted by the Chief Medical Officer's groups that met last year. In particular, the really big gap is carefully controlled human studies. This committee heard from Kevin Hall, for example, who is one of the few people who has done that. We need far more of those analyses, where you put well-matched humans into closed conditions and give them diets that are carefully matched for fat, sugar and salt but only one of which has an additive, and then you monitor the impacts. They are very expensive and complex to do, so that is a real challenge.

Baroness Jenkin of Kennington: Is that not happening at the moment at UCL?

Professor Robin May: We have not funded it because it is well beyond our budget, sadly, but there are certainly groups all around the world doing some studies of it. Usually, even for a large research group, you can do only one decent study, so you have to pick quite carefully what you will measure. As we talked about earlier, there are 300-plus additives, so it would take a long time to rattle through them. There is a big evidence gap and I would be keen to see it addressed in a much more consistent way.

You asked about the precautionary principle. That is a fundamental part of risk assessment; if you are worried about something, it is safer not to do it in the first place. I see no current scientific position to apply that broadly for ultra-processed foods, not least because if you were to take a knee-jerk reaction and say, "We're not quite sure about ultra-processed foods. They should all be withdrawn", you would withdraw half the food market overnight. When you apply the precautionary approach, it needs to be done in balance with the risk associated with it.

If and when any evidence arises on, for example, particular components, we quite often apply it, and in many cases we have either mandated or asked for voluntary withdrawal of products because the evidence base has changed. We are closely watching ultra-processed foods. If someone was to come with compelling evidence for a particular composition or combination or indeed a particular food class, we would be quite outspoken about recommending that the Government act on that, but I do not see a way at the moment to deal with the entire market in ultra-processed foods in that way.

The Chair: Do you think the risk is proportionate to the dietary pattern?

Professor Robin May: Do you mean the pattern of consumption?

The Chair: Yes.

Professor Robin May: If you look at epidemiological evidence in the wider population, you will see that there is an overwhelming signal; for example, if you eat more calories, obesity is high. There is quite good evidence in particular areas, where things such as artificial sweetener and the substitution of sugars can have positive health impacts. It is an

important point that there are some cases where ultra-processed foods have a health benefit. We talked earlier about their benefit, for example, as preservatives to stop the growth of microbes. We do not have really robust epidemiological evidence that particular ultra-processed foods are associated with specific health outcomes. We would need that to apply that principle.

The Chair: Is that because the National Diet and Nutrition Survey does not collect evidence on additives?

Professor Robin May: The National Diet and Nutrition Survey is critical for our evidence base. The next one is about to start shortly. There is a trade-off between how much data you gather at a time versus how widely you can use it. It would perhaps be more useful to have really good-level data on concentrations of things in foods. That is an industry question, not a consumer question. The Food Data Transparency Partnership, which I think has been talked about previously in this committee, is quite an exciting opportunity for that to happen. There are quite big challenges around commercial sensitivity because, understandably, the food industry wants to maintain its competitive advantage. But for us as a regulator, knowing really accurate levels of things is probably more useful at the moment than extending the NDNS in a really broad remit.

The Chair: As you rightly said, there is a lot of potential in that work, but there is some rather disappointing news about it in the *Grocer* today. We will have to wait and see what comes out.

Q299 **Baroness Browning:** Good morning, Professor May; it is very nice to see you here. In what ways does the Food Standards Agency monitor and assess the risks of long-term exposure—not the initial assessment—to individual food additives and combinations of food additives? What is the programme for monitoring that?

Professor Robin May: Thank you. Largely, that is the subject that we have just been talking about. The NDNS—the National Diet and Nutrition Survey—runs regularly. It tells us a lot about what people eat and we factor that into our strategy, thinking about where we should invest more time or effort in particular product classes. Critically, with that risk assessment, by knowing what people eat, you can work out the doses they are getting. I have just mentioned that that does not go to the level of individual concentrations, and in the future, things such as the FDTP—the Food Data Transparency Partnership—will really help.

We do not have a system for food that exists for medicines, for example, where, when something is authorised, it is automatically required to be followed up years later. As far as I am aware, no regulator anywhere in the world does that yet. With a scientific hat on, I would say that it would be great if everyone did that, because the more data we have, the more fantastic, but I recognise that if you were to mandate that it would presumably be a large burden on industry. I would be quite keen to explore ways to do that which are not completely preventive to industry innovation but provide more data over the long term.

At the moment, the FSA and others have legislative powers to mandate that if we anticipate a compelling health impact, but I am not aware of their being used. The only case I can think of in recent history is some of the food spreads aimed at lowering cholesterol. Working with the Department of Health, there was a decision to say, "That can go on to the market, but we want to see over time whether it actually has an impact on cholesterol". The area where food and medicines collide is perhaps where you could do more long-term monitoring, but it would need to be carefully thought through in order to not become a massive data-gathering exercise and an unhelpful burden.

Q300 **Baroness Browning:** In our evidence sessions we have had a lot of discussion, for obvious reasons, about sugar and the contents of sugary drinks, particularly their impact on obesity and on children. We know that there has been some reformulation—perhaps not enough—of sugar content, but it has also been drawn to the committee's attention that there are ingredients other than sugar in carbonated drinks. I do not want to mention the brand, but we have a range of colas, for example, that are very popular with both children and adults in this country. If there is ongoing, regular consumption, those other ingredients—I am not just talking about sugar—can have a longer-term impact on the skeletal frame.

Has the FSA looked at those ongoing longer-term impacts? Usually, when people find a drink popular—I shall not say they are addicted—they drink a lot of it and for a very long time. We have been very vocal about sugar, so should the FSA not be looking at what it is doing to the skeleton? As you age, naturally your skeleton becomes a lot weaker anyway.

Professor Robin May: Yes. Our remit covers health in its broadest sense, so we would look quite carefully at any piece of evidence about a previously unreported health impact of anything in food, whether it concerns obesity, skeletal frame or even behavioural things. An example from the relatively recent past is artificial colourings. Some colourings have an association with behavioural changes in children and are being voluntarily withdrawn from the market because of that. We are very alert to any changes in the science base, and people are welcomed and encouraged to send us that. We get submissions from individual researchers, for example, saying, "I've done a study. Here it is. You should look at it". If the evidence base looks compelling, we absolutely look at those things going forward.

The challenge is that a piece of science that you can publish as an interesting observation is sometimes different from the amount of science you would need to make a regulatory decision on withdrawing a product from the market, for example. Quite often, we get enough of a smoking gun to have a look at something but not enough to act immediately on it. At that point, we would need to make a decision—for example, whether to commission additional research ourselves or work with partners, particularly the DHSC, to commission the research to do a longer-term study.

Of course, the answers are not always immediate. If there is a suggestion of a very long-term impact, one would need to do quite a long-term epidemiological study to follow it up. That was a rather long-winded way of saying that we are absolutely mindful of anything that changes our evidence base on any component and we would look at it.

Baroness Browning: Is it true that if you drop a tooth in a glass of cola and leave it overnight it disappears, or is that a myth?

Professor Robin May: Despite my scientific background, I have never done that experiment, but I will happily try it and let you know.

Q301 **Baroness Jenkin of Kennington:** May I drill down a bit into the NDNS stuff? You said that you know what people are eating. We hear, for example, that 60% of food eaten today is UPF or UPF-based. Does that come through in that? Do you do it through a survey? I do not believe that I have ever been asked by anybody about what I eat. How do you do it? Is it focus groups?

Professor Robin May: There is a real mix. The NDNS is run nationally, hence the name, on a regular basis. The questions are agreed primarily between us and the Department of Health and Social Care. There is a core set of questions that are asked again and again to give you longevity, and then there are some additional questions that you can add. It is a very large survey, which happens as a statutory thing every few years. Then we have specific questions that we ask. We might do a survey on all sorts of things, not just about food safety. For example, recently we have done quite a lot of work on Defra's precision breeding Act to understand what consumers understand to be a precision-bred food.

We do those targeted-type surveys, but perhaps the most useful source of information comes from industry. The major retailers in particular know exactly what they are selling and to whom they are selling it. One of the challenges is that, although we have good relationships with the industry, there is more we could do right across the piece, rather than on a piecemeal, one-by-one interaction, to get a much better understanding of what the UK as a whole is doing and the short-term trends. For example, it would be interesting to know whether the recent dialogue over the past 12 months about ultra-processed foods has had an impact on what people purchase at the tills. Collaboration with the major retailers is the way to get that data. We do some of that already, but there is more we could do.

Baroness Jenkin of Kennington: When you see those trends does it alarm you? Is there anything you could do about it?

Professor Robin May: In this job I am ceaselessly amazed by what people eat, but not by the long-term trends. It is fascinating to look at the data and see how people's diets shift in particular ways and how they go up and down. For example, the move recently to more plant-based foods is a large and significant trend. Only time will tell whether it stays.

If it stays, we will need to factor it into our risk assessment going forward, but it is certainly eye-opening.

The level of detail is very powerful. I think your previous witness talked about making more use of data. With my science hat on, I would say that we absolutely can make more use of data, such as when it tells us about combinations. Retailers know whether a person who buys product X also typically buys product Y, in a way that we at a national survey level do not know. To Lord Krebs's question about combinatorial chemistry, that is a data depository that we could mine much better to understand whether there are particular combinations on which we should focus our attention.

Baroness Suttie: Forgive me if you have already talked about this, but have you done any research into the health impact of so-called diet products?

Professor Robin May: Not that I am directly aware of in the FSA. However, we have worked quite closely with SACN—the Scientific Advisory Commission on Nutrition—and OHID colleagues on some specific nutritional areas, of which diet is one. Another is infant formula, which we have talked about a lot. That is a topic that has shared responsibility, so we work quite closely with others. Whenever we are deciding about where to focus our resource, the question is always one of the magnitude of the effect—which part of the population will be affected by this—and how readily you can answer that question. In terms of prioritisation, my feeling is that infant health is critical, so that is a good place to focus attention at the moment.

Q302 **Baroness Goudie:** The Food Standards Agency and the Department for Education have conducted the first phase of a pilot to see whether local food safety officers can effectively check compliance with school food standards. Can you set out the findings of the pilot and outline what the next steps will be? It will be very important, moving forward.

Professor Robin May: Yes, absolutely. This was a pilot project that we ran with the Department for Education, which is responsible for school meals. It has been conducted in multiple parts. The first part, published in November, was largely a feasibility study. The second and final part will be published next month, so, slightly disappointingly, I am afraid I do not know the answers and I cannot yet share its findings with you, but we will obviously share it with the committee as soon as it is ready, if that would be useful.

In phase 1, published last year, the pilot was designed to ask whether inspectors who are inspecting for food safety could also inspect against school food standards. The short answer from the pilot was, yes, it was feasible. The inspectors highlighted a number of things you would want to build into that system if you were to roll it out more widely, such as how they would report back effectively. It was not aimed at assessing it in schools, but you get that data anyway, and it highlighted the wide variability. Some schools do not worry about it all; others have quite a robust system in place to look at food and meals. It also highlighted,

again as an inadvertent set of data, quite a big shift in schools away from local authority provision of food to private food providers. If you were to think about changing standards, that would be quite important because, obviously, the levers you have around private providers are different from those you might have around local authorities.

Baroness Goudie: Thank you, that is very helpful.

The Chair: Do you think that local food safety officers have enough training to be able to do this work, or would they need more training if it were to be rolled out more widely?

Professor Robin May: At the moment, they would need more training because obviously this is not currently in their remit. I do not think that that would be overwhelmingly challenging. The bigger challenge would be one of resource. As we heard earlier, local authorities across the piece are incredibly stretched, so putting this on inspectors without additional resource would not be successful. You would need to resource it.

Baroness Pitkeathley: How would the standards be set? Who would be responsible for setting the standards, following the pilot?

Professor Robin May: Again, that, happily, is not a question for chief scientific advisers. As it stands, the Department for Education holds the policy on school meals, so it would be a DfE decision. In answer to one of the previous questions, there is then a second question about who might enforce and measure it, which might want to be separate, but at the moment, it is very much the Department for Education.

Q303 **The Earl of Caithness:** I want to change the subject, if I may, and take you back to what the FSA does. When you do research into something, do you use your own scientists or do you bring in outsiders?

Professor Robin May: In terms of laboratory research, the FSA does not own any laboratories or laboratory scientists. We have a lot of scientists working within risk assessment and data analytics, for example, but not bench scientists. All the laboratory science we do is commissioned out, and we use a range of different laboratories. We often use public sector research establishments that are either partly or wholly government owned, such as Fera up in Yorkshire or Cefas—the Centre for Environment Fisheries and Aquaculture Science. Partners such as those often work with us on a project, and we commission quite a lot out to either commercial or academic providers. For example, we talked earlier about the fellowship with Birmingham on method development. We often put a call-out to work with other people to address a particular question.

The Earl of Caithness: Do you think that the UK has a sufficient supply of scientists who do not have a vested interest, having been funded by the big food companies or being from institutions that seem to be reliant on funding from the big food companies?

Professor Robin May: If I may say so, there are two parts to that question. The first part is: do we have enough scientists? I suspect that

most scientists would always say, "Of course not", but one of the areas that concerns me is our supply of scientists in particular areas for risk assessment. The world as a whole, in particular the UK, is short of toxicologists. The answer to the first part of the question is no, we could definitely use more scientists in key areas.

On the vested interest question, I would say quite strongly that there is quite a big difference between an interest and a conflict of interest. We manage very carefully conflicts of interest in our scientific advisory committees, which is where we have the most external scientists. They have to declare an interest and members often recuse themselves from the discussion if it has anything to do with their interests, as, I guess, happens in this committee. Those can be managed quite well. I am quite keen that we do not—to reuse the phrase—throw the baby out with the bathwater. There is a huge wealth of information and expertise in industry, so if we were to take a blanket approach and say, "If you've ever had any money from the food industry, you can't contribute", we would be missing a trick. The key thing is to be clear about what those interests are and how you separate them.

Lastly, even if you have never had any money from industry, that does not mean that you are interest-free. Most of us, as academics, are competing for grants, writing books and doing all sorts of other things that are also an interest, but sometimes not as obvious as industry interests. The key thing is managing those interests in a way that is transparent and clear, rather than black and white banning anyone who has ever had additional money elsewhere.

The Chair: Can you clarify what you mean by the difference between interests and conflicts of interests?

Professor Robin May: For example, I have an interest, in my academic capacity, in securing research grants because I am keen to do research and I need money to do so. I like to think that that is not a conflict of interest, and I would not therefore secretly try to influence government policy to create research grants in my area. I would like to think that, if I felt that there was any danger of that, I would make it clear and recuse myself. That is the difference. Many of us have things in our background that could be perceived as having an influence, but the key question is whether they do or do not.

Q304 **Baroness Browning:** When you are analysing foodstuffs, is there a role or a protocol with which you handle trace elements? The technology in the past 20 years has improved so much that we can identify minute traces of things that 20 years ago we would not have noticed and found. I say that with a heavy heart, having been a Minister who was dragged to the Dispatch Box of the House of Commons regularly because patulin had been found in apple juice—I am sure you know what that means. How do you deal with trace elements? At what point do you say, "No, this contains even the minutest quantity", or do you keep it under special observation as time goes by? What is the protocol for that?

Professor Robin May: It is hugely dependent on what the compound is. For many things that are potentially harmful, we have quite good data on what a harmful level might be. With metals such as lead or cadmium, for example, we know at what level they could be present in something and not do any harm, and at what level they do not. Because a method is now able to detect something at lower levels does not necessarily mean that it would change our decision on a food.

For some compounds, particularly genotoxic compounds, which damage DNA, where there is international agreement that there is no safe level because a single mutation could, in principle, cause cancer later—for those—there is a regulatory challenge, because as methods get better and better, you start to find things that were thought to be free of them are not free of them. As science moves on, we might need to revisit the discussion about whether zero is truly an accurately safe level, and of course information will come on that.

Lastly, increased sensitivity has some significant advantages in other areas. I have been following with interest sensitivity in detecting isotopes—different forms of chemicals. That has a big potential in food authenticity, because it allows you to test, for example, whether a piece of fillet steak comes from a cow that was raised in Devon or Yorkshire. Going forward, that sensitivity will be enormously useful not just in terms of direct safety but in guaranteeing the food system more widely.

Q305 **Lord Brooke of Alverthorpe:** Earlier, you mentioned that you have a relationship with the devolved Governments as well. It almost felt as though you were implying that it was easier in certain areas to handle and work with them than with the English Government. Could you develop that a little further?

Professor Robin May: I certainly did not mean to imply that it was easier or more difficult, one way or the other, with one Administration. The FSA's remit is England, Wales and Northern Ireland, and Food Standards Scotland covers Scotland, although we share with it lots of activities, in particular around risk assessment. We have slightly different remits, with a slightly broader remit in Wales and Northern Ireland, for example, for some aspects of labelling and for part of nutrition policy in Northern Ireland.

Typically, for the vast majority of things we take an approach that is exactly the same across the whole country. If a product is toxic, or whatever, that applies equally whether you are in Wales or Northern Ireland. The place where it can sometimes be slightly different is when it moves towards a risk-management decision, where you may be considering differences, for example, in consumer perception in different parts of the United Kingdom, or there may be a difference related to diet in particular regions. For example, there are small but slight differences in what the average person in Wales eats versus the average person in England.

The Chair: That was the final question. Indeed, it was the final question

of our oral evidence sessions. Thank you very much, Professor May, for your evidence today. I remind you that you will receive the transcript and you can make any necessary corrections.

We have had a busy three months, with 20 evidence sessions, and we are very grateful to all our witnesses, both the oral witnesses and the many people who have sent us pieces of written evidence, which we are currently ploughing through. Over the next few weeks, the committee will reflect on all the evidence that we have received, while we prepare our final report, which we anticipate will be published around the beginning of the Summer Recess.