



Food, Diet and Obesity Committee

Corrected oral evidence: Food, diet and obesity

Thursday 7 March 2024

10.15 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. 5

Heard in Public

Questions 50 - 65

Witnesses

[I](#): Dr Vicky Sibson, Director, First Steps Nutrition Trust; Kristin Bash, Chair, Food Special Interest Group, Faculty of Public Health; Professor Lucilla Poston CBE, Professor of Maternal & Fetal Health, King's College London.

Examination of witnesses

Dr Vicky Sibson, Kristin Bash and Professor Lucilla Poston.

Q50 **The Chair:** Good morning, everyone. Today, we are holding the fifth evidence session of the committee's inquiry exploring the role of foods such as ultra-processed foods and foods high in fat, salt and sugar in a healthy diet and in tackling obesity. The committee will continue to take oral evidence over the coming weeks and months in order to inform its detailed report, which will be published later this year. We have also published a call for written evidence, which is open until 8 April and can be accessed on the committee's website.

We will hear today from Dr Vicky Sibson, from the First Steps Nutrition Trust, and Professor Lucilla Poston CBE, of King's College London. Both of them are joining us in person. We will also hear from Kristin Bash, from the Food Special Interest Group at the Faculty of Public Health, who is joining us remotely. You are all very welcome and we look forward to your evidence. Please introduce yourselves briefly the first time you speak.

Today's meeting is being broadcast and a written transcript of it will be sent to the witnesses to check for accuracy before subsequent publication. I refer to the list of members' interests, including my own, as published on the committee's website and set out in the committee's first evidence session on 8 February.

Before we hear from our witnesses today, I would like to say something about the interests of those giving evidence to the committee. As with all parliamentary committees, we are seeking to hear from a range of witnesses in order to ensure that we have the fullest understanding of the issues within our remit and that we hear all perspectives and concerns. Inviting certain witnesses or organisations to give evidence does not mean that we agree with or endorse everything that we hear.

Parliamentary committees are frequently tasked with scrutinising contentious public policy issues where there are strong feelings and interests on all sides. However, unlike members of the committee, whose interests have already been stated on the record and are published on the committee's website, witnesses to parliamentary committees are not as a rule required to declare their interests. This is because it is the job of the committee to weigh what we are told in evidence and draw our conclusions. The responsibility for those conclusions is ours alone.

At the same time, I recognise that the issue of stakeholder interests is a subject of legitimate debate in the context of this inquiry. Although it would be inconsistent with Lords committee procedure to compel our witnesses to do so, we will, for the sake of transparency, give all our witnesses an opportunity to voluntarily declare any interests that they deem relevant to the work of this inquiry the first time they speak. We will extend the same opportunity to those who have already given oral evidence to us and those submitting written evidence.

Finally, although the issue of influence on the policy-making process is an

important one, it is not the role of this committee to criticise individuals personally. I invite all witnesses to the committee to bear that in mind.

Having made that statement, I ask our witnesses to give us evidence. I will ask the first question. How prevalent is obesity among infants, children and adolescents, and what is the influence of pre-natal and post-natal nutrition on the risk of subsequent obesity? In answering, could you please give a brief introduction to yourselves, beyond what I gave in my introduction?

Professor Lucilla Poston: Thank you. Good morning, everybody. I am pleased to be here as a witness for this committee. I am a professor of maternal and fetal health at King's College London. I also work at St Thomas', just across the bridge.

In terms of potential conflicts—perhaps I should say interests—I am a member of the Scientific Advisory Committee on Nutrition for the Department of Health. I am also a member of its subgroup, which focuses on maternal and child nutrition. I currently work on the NICE Maternal and Child Nutrition Guideline Committee. I am also the president of the International Society for Developmental Origins of Health and Disease. I must say that what I will say today reflects my own opinion as opposed to that of any of those potential conflicts.

On the question of how prevalent obesity is among infants, children and adolescents, through our comprehensive national child measurement programme—I expect you are all familiar with it—we now know from the 2022-23 data that, when children go to school, nearly one in 10 of them are already obese and that, when they go to reception classes, 9.2% of children are obese. Has that changed much in recent years? It went up during Covid. It has now gone back down again, but it has not gone back to the level we might have hoped, although it seems to be going in the right direction; that is a bit statistically ambivalent.

By the time children get to year 6, at the age of 10 or 11, 22.7% of them are clinically obese. The previous data from this dataset for the last period suggests that there is tracking of obesity from the early reception class through to year 6 and beyond. The evidence in the academic literature suggests that obesity then tracks through to adulthood. So, really, the conclusion is that it begins in early life. If we can do something about it, that is extremely important.

The data for adolescents, which is from a slightly earlier database, suggests that approximately 30% of 11 to 15 year-olds are obese, up from the 22% in year 6. Worryingly—this is a subject of great concern to all of us in the health industry, as it were—deprivation is a major divider. Children who come from the most deprived families and socioeconomically deprived communities have double the rate of obesity when they go to school—12.4%—which goes up to 32% in year 6. That is about twice the average of children from the least deprived areas. It is a period of great concern.

Would you like me to go on to the influence of pre-natal and post-natal

nutrition?

The Chair: Please.

Professor Lucilla Poston: In my own particular area, I work on maternity. Most of my research has been on obesity in pregnant women. That is very relevant to this committee, because there is a straight-line relationship between the BMI of a pregnant woman at the beginning of her pregnancy and obesity in her child. It is something like a 99.9% relationship; it is dramatic.

Whatever the reason for that, it is a modifiable determinant of childhood obesity, so we are incredibly concerned about the fact that, antenatally, more than 20% of women are clinically obese, and that follows the trend in the general population. If we were able to modify that, we would be able to modify childhood obesity, so we should think not just about starting in early post-natal life with breastfeeding, post-natal nutrition and so on—my colleague here will tell you more about that—but about looking at the prevalence of obesity among pregnant women. Most pregnant women who are obese when they go into antenatal care have no idea that they are risking their own health and, more importantly for this committee, risking the health of their children as time goes on. From my point of view, that is an incredibly important and rather neglected area of obesity research.

Again in relation to obesity and pregnancy, pregnant women who go on to breastfeed their children generally stop breastfeeding early. I have just published a paper on that. We do not know why, but they do not breastfeed for as long as people who are not obese. Of course, breastfeeding is a determinant of later obesity in children: there is a 27% relative risk reduction if children are breastfed compared with children who are given formula feed. So breastfeeding is a problem with obese women and should be addressed.

I will stop there, because that is my particular area of experience. I will hand over to Vicky, because she is good at the next area.

The Chair: I have a little supplementary question for you before we move to other witnesses. On the strong connection between maternal obesity and the future obesity of the child, is there any work on understanding whether it is a metabolic, lifestyle or food choices link?

Professor Lucilla Poston: There are three potential mechanisms. One is that the child is born into the same nutritional environment. Another, which I work on, is that the metabolic environment in utero—such as high sugar and high fat—could lead to permanent changes in the fetal brain, which then lead to changes in appetite and blood pressure. From that point of view, there could be a structural consequence to the fetal brain, and there is a lot of evidence for that, particularly from animal studies and now from some work on humans. It is not just the same environment but partly genetic too, so I imagine that it is a combination of all three mechanisms.

Q51 **Lord Krebs:** Is there any evidence of epigenetic effects that could translate through more than one generation?

Professor Lucilla Poston: There is, indeed. Some work that I, and others, have done on gestational diabetes and obesity has suggested that if you look in the cord blood at the epigenetic change in the leukocytes, which we use for epigenetic research, there is modification, and that relates to diabetes. It is also modified backwards for treatments, so we may have some ability to modify it. There is a lot of work on that in animal models, too. Epigenetics is at the top of one of the lists of the genetic elements.

Lord Krebs: Dr Sibson.

Dr Vicky Sibson: Good morning. I am a public health nutritionist. I have 20 years of professional experience, largely focused on infant and young child nutrition and feeding. I am the director of First Steps Nutrition Trust, a UK-based and UK-focused public health nutrition charity supporting eating well from pre-conception to age five. It is independent; we do not take any commercial funding. I sit on the same NICE committee as Lucilla, revising the maternal and child nutrition guidelines.

Q52 **The Chair:** How prevalent is obesity among infants, children and adolescents? What is the influence of prenatal and postnatal nutrition?

Dr Vicky Sibson: I was going to say much of what Lucilla just said, so all of that.

The Chair: Is there anything you wish to add?

Dr Vicky Sibson: Yes. I will reiterate a few things and then add to them. To reiterate, too many children are clearly developing an unhealthy weight very early in life. That high level of overweight and obesity—one in five are either overweight or obese by the time they reach school, of which 9.2% have an obese BMI—indicates that there are factors at play very early in life setting those children off on the unhealthy growth trajectory that Lucilla discussed. That is in pre-pregnancy, pregnancy and the period of infancy and early childhood when they are being fed and cared for largely at home.

To reiterate again, the key thing is that obesity tracks through life. It is so important to recognise the opportunity that the early years create. Once a child has developed obesity, it is so much harder to reverse that than to prevent it in the first instance. That is why we are here today discussing the early years.

On top of everything that Lucilla said, I will reiterate the power of postnatal nutrition and breastfeeding—a key determinant of later weight status is how a baby is fed. I reiterate that there is a wealth of evidence that shows that, at a population level, breastfeeding protects against overweight and obesity, while bottle feeding and formula feeding has been associated with excess weight gain.

Also, to build on what Lucilla said, the important thing to remember when discussing individual pregnant women, children and infant feeding decisions is that we need to create a more enabling environment. This is not about focusing on the individuals and their choices and behaviours; it is about creating a more enabling environment, so that women can start their pregnancies at a healthy weight and then meet their breastfeeding intentions. Most women want to breastfeed and a lot of women start breastfeeding, but their journey and intentions are derailed by the environment in which they are trying to breastfeed. I hope that we will have time to talk about that in due course.

Q53 **Baroness Boycott:** Obviously, for some people, it is very difficult to breastfeed—people go back to work and so on—but why do you tend to get more obesity if you are bottle fed? Is it because you are in an environment where the mum is not taking that kind of care? Is it what is in the bottle—the thing that you buy in the shop, so to speak? What is causing it?

Dr Vicky Sibson: There are several mechanisms at play. In the past, one issue would have been the high protein levels in formula, but that has become less of an issue. Formula largely has a more appropriate nutrition composition these days, although you still see products on the supermarket shelves, such as hungry baby formula, that are not necessary.¹ We still have an issue with the product availability and its marketing.

Baroness Boycott: Are these products only meant to be marketed for babies over six months, but people buy them for younger babies?

Dr Vicky Sibson: There are several issues with the formula, and you have picked up on another. Hungry baby formula is an infant formula—it comes under the infant formula regulations—that is suitable for use from birth. However, “hungry baby” means nothing. They are not evidence based; they have higher levels of casein and should not be used.

I think you were alluding to follow-on formula. On supermarket shelves, we have follow-on formula marketed for six months to 12 months. Historically, that had higher levels of protein, but it does not now. We also have growing-up milks and toddler milks marketed for 12 months plus. We will come on to this, but among the problems with the diets of young children, one issue is the higher mean intakes of protein, so products like those are an issue.

Among the other mechanisms, and perhaps more important than the composition of the formula, because the composition of infant formula is largely okay in that regard, is that of feeding a baby. Breastfeeding is a responsive behaviour for a baby. You cannot force a baby to breastfeed. They can follow their own satiety cues. They will latch on when they want

¹ Note from witness: Hungry baby formula does not contain more protein. Rather, it has a different whey to casein ratio. It is casein-dominant, whereas other infant formulas are whey-dominant, and the NHS recommends the latter.

to feed and will stop when they are satiated. You can bottle feed responsive. It is a very important intervention to support parents, who formula feed or who use a bottle, to bottle feed responsively. However, it is harder, and there is a tendency for parents to want to finish a bottle. That is what some of the evidence shows us. There, the mechanism driving the issue is too much formula being fed. It can be attenuated, but it is problematic.

Those are a couple of the issues at play.

Kristin Bash: I am pleased to be here today. I am a UK professionally registered public health specialist. I am here as the chair of the Food Special Interest Group of the Faculty of Public Health, the professional body for public health specialists in the UK. I am also an honorary lecturer at the University of Sheffield in the School of Medicine and Population Health, where I am also a PhD candidate and a Grantham scholar.

I have no commercial interests to declare. However, for full transparency, I am a trustee on the board of a charity called Eating Better, and I sit on the advisory group for the Food, Farming and Countryside Commission's project known as the food conversation. I do not know whether they are particularly relevant, but I declare them in the interest of full transparency.

As with Vicky, much of the information that I was planning to share on the prevalence of obesity in children has been covered. It is not nice to know how many children are living with overweight and obesity by the time that they are 10 or 11; we are talking about almost two in five children.

Coming from a public health background, I will focus most on the disparities and inequalities. It has been said that twice as many children in the most deprived communities have obesity and overweight than those in the least deprived. When you talk about severe obesity, the number goes up to four times as much. It is disheartening. Black and Asian children have higher levels of obesity than the national average, and children with learning disabilities have higher levels of overweight and obesity than the national average.

There is also a geographical component: we know that there are clusters in the north, in urban centres, around coastal towns and in parts of London, so we know that is true.

The other thing I want to stress about prevalence is that the gaps we are talking about are growing. There is a slight tracking and uptick in the overall prevalence of overweight and obesity, but the majority of it is in areas of higher deprivation, and the gap is growing in the level of education in a household, in the level of income and in ethnicity. There are some real gaps that are widening the inequalities in this area and on which I think it is quite important to focus.

I do not have a specialty in the area of post-natal nutrition, so that wraps up my answer to this first question.

- Q54 **The Earl of Caithness:** I have a supplementary question about pregnant women passing this on to their children. What percentage of that do you think is genetic? If a person does not have this genetically but eats too much processed food and becomes obese, can it then become genetic for the next generation? Are we building up a compounding problem for the future?

Professor Lucilla Poston: Giving figures on that is quite difficult. The genetic contribution is quite small, in my mind. The major contribution is the increase in poor diets among pregnant women and in their obesity per se. There are figures suggesting, with the confidence intervals, that 20% to 40% of obesity in children is attributable to the BMI of the mother.

Lord Krebs mentioned the epigenetic effect. There is increasing evidence for that, and it can go beyond one generation. It has to be said that the evidence is rather academically focused at the moment, as opposed to there being guidelines, but there is a lot of work going on in that area. We increasingly recognise that persistent changes in gene expression can go over into the next generation and into F2, the subsequent generation. So it could be feeding on the vicious cycle; that is important, but we cannot quantify it at the moment.

- Q55 **Lord Krebs:** Mine is a brief, factual question for Vicky. You said that formula can contain more protein than human breast milk. As I understand it, human breast milk is about 1% protein. Is that right? I wondered what the number is for formula.

The Chair: Perhaps you could write to us about that if you do not have the figures.

Dr Vicky Sibson: Absolutely. I think I will have to do that.² The main point to make is that, in the past, infant formulas contained too much protein—they had protein levels higher than those of breast milk—but they have been brought down a great deal, so it is less of a problem than it used to be for the majority of infant formulas on the market. However, there are still some problematic types of formula that are not necessary. I guess what I was suggesting is that diminishing the use of those discretionary formulas (marketed for use from 12 months) would be appropriate, but what is probably more important is responsive bottle feeding for supporting parents.

- Q56 **Lord Brooke of Alverthorpe:** Professor Poston, I am aware of the well-known understanding that, if a woman is pregnant, she should avoid alcohol. There has been a public awareness campaign, which has worked. What you have revealed here is, I think, very much a secret among the public. Why has no public awareness campaigning been done on this? Is

² Note from witness: Mature breastmilk and infant formula milks have the same levels of protein on average – 1.3g/100ml.

it because of shaming?

Professor Lucilla Poston: No. I think that some health professionals find it difficult to talk about obesity with pregnant women. One thing we should reinforce is that, when midwives see a woman for the first time in pregnancy, they have limited time to talk to them, because we do not have enough midwives and enough resource behind them. They should address the woman's BMI—that is in the guidelines—by measuring her height and weight so that they can calculate it. They should discuss that. They should also discuss nutrition, take bloods and write 101 things about her medical history. So part of the problem is the fact that the information does not get transferred when it should.

There is also not enough public awareness, which I have written down for us perhaps to talk about later. We need a public health campaign about the issues of obesity in pregnancy. Some people are a bit afraid to talk about it, but I do not think that is it. I think it is just down to a general lack of awareness. We are allowed to talk about smoking and obesity—clinicians will do that—but there just is not enough public awareness. If you speak to the women who come to our antenatal clinic and say, "You have a BMI of over 30. You may therefore have pre-eclampsia, gestational diabetes, a higher risk of stillbirth and so on", they will say, "I had no idea". Many women are completely unaware. You can say, "On top of that, there's a risk of your child becoming obese", but they are totally unaware of it. A better public health campaign on this is absolutely required. Thank you for raising it.

Q57 **Baroness Ritchie of Downpatrick:** We have already discussed some of this issue, but I would like to concentrate on healthy diets. How prevalent are unhealthy diets among infants, children, adolescents and, prior to birth, pregnant mummies-to-be? What are the reasons for this and what role does the food environment that we live in play?

Dr Vicky Sibson: Unfortunately, the norm is that most families are unable to feed their babies and young children according to the public health recommendations. It is all about the barriers—there are so many barriers in our food environment—and the lack of support, so there are two sides to it.

There are statistics in SACN's report on feeding children aged between one and five years old which paint a picture of the issue. The mean levels of energy intake, free sugar, saturated fat, protein and salt are all too high—they are all higher than they should be—and fibre is too low. We also have problems with insufficient intake of and deficiencies in iron, zinc, vitamin A and vitamin D, particularly among the most disadvantaged. So we have an average diet that does not meet the public health recommendations and is not healthy.

Also, reflecting on the ultra-processed food angle, we know that ultra-processed foods dominate diets from early on in life. One statistic, drawing on the data from the National Diet and Nutrition Survey, is that

61% of the total mean energy intake of two to five year-olds in the UK comes from UPFs.

If it is okay, I just want to bring this to life a bit and, in painting this picture of inadequate diets, talk about what that might look like for a typical mum and baby. Then I want to ask why that is—that is, what is happening in the food environment to create this situation for mums, babies and their families? First, as we have heard from the statistics and what Lucilla had to say, when a woman gets pregnant she is more likely to be living with a weight classified as overweight or obese. Through her pregnancy, she will continue to carry that excess weight; she does not lose it, and she is not advised to lose it at the moment. She is therefore more likely to give birth to a big baby (large for gestational age) who is more likely to go on to be prone to excess weight gain.

She is likely to want to breastfeed. She might initiate breastfeeding successfully—lots of women want to breastfeed; initiation rates are okay, even good in some areas—and that might be enabled by, for example, delivering in a UNICEF baby-friendly accredited maternity facility, with good skilled support for breastfeeding and her being protected from predatory marketing by formula companies. But then, if we look at what is normal a few days or weeks later, it is likely that she will introduce formula milk.

There are different reasons for this, but one of the key ones is probably exposure to formula marketing knocking her confidence to breastfeed. An example might be that she has signed up for a baby club from one of the formula companies. It is a perfectly legal type of marketing, but in those emails there will be messages that make her doubt her self-efficacy to breastfeed. There is also evidence that the introduction of formula hastens the end of breastfeeding, so her breastfeeding journey will be shorter than she would have wanted it to be.

Fast forwarding, at four or maybe five months of age she will probably start weaning. That is important, because it is earlier than the NHS recommends. It is meant to be around six months of age that you introduce solids. Again, there will be different influences there, one of which would be walking down the supermarket aisle and seeing fruit and veg purées marketed for four months plus, which, again, is totally legal. It will also be labelled “no added sugar” and other misleading marketing slogans that suggest that it is a good and appropriate choice for when you start giving your baby foods.

At the same time, she might not have seen a health professional recently. At the moment, the statutory health visiting support does not include a visit at four to five months. It is likely that, when she is told about introducing solids at the six-week or eight-week check or antenatally, she did not pay any attention because she was concentrating on other things.

Also, she might not have seen a health professional, because in her area there is no family hub. There may be no facilities where she can drop in, so she has not been weighing her baby. Those sorts of facilities have

fallen by the wayside as there have been cuts to local public health grants, so there has been a lack of support. On the one side, there is a lot of information, but a lot of it is unhelpful—it is marketing from companies. On the other side, there is a lack of support and advice from trained health professionals.

Then, you probably have the use of shop-bought purées to start solids, and that starts a journey, which is typical for lots of families, that is dominated by products bought from the supermarket baby food aisle. That is despite SACN saying that they are not needed. The NHS does not promote them, but it does not also say that they should be avoided or limited. We have ambiguous public health advice facing parents, which is very unhelpful.

Again, ongoing and legal marketing is totally pervasive and creates a norm. All socioeconomic status families use shop-bought baby foods; it is completely the norm. That even continues in the first, second or third year of life, as there are products marketed for 12 months plus and 24 months plus. In the last year or so, we have seen a proliferation of products marketed for 36 months plus, and they are all snack food; they basically look like crisps but are marketed for young children. Then there is a whole set of products clearly aimed at preschool children, because they have cartoon labels with “Peppa Pig” and “PAW Patrol”.

Then, they move on to family foods, including foods high in fat, salt and sugar and ultra-processed foods, which become a regular part of children’s diets from early on because it is what the rest of the family are eating. There is habit-forming that goes on early in life. You have snacks marketed for babies from a very early age—from infancy—and they look just like crisps. You have the issue of diets from very early in life becoming dominated by commercial products. Although they are marketed for infants and young children, they are not actually subject to marketing regulations on their composition and labelling, et cetera, all the way through.

The last thing that I will discuss is early years settings. Many children from infancy or preschool age will go to a nursery or childminder, and they may well be given foods and snacks that do not meet their nutritional needs. Unlike school food, there are no mandatory standards for the foods and drinks that are served in early years settings—and there are issues with the voluntary standards that do exist being seen as challenging and maybe inappropriate. There are lots of reasons for that, including a lack of awareness and because settings have their own resource and implementation challenges.

Therefore, the home environment can be a problem, as well as the retail environment, a lack of support, and issues with early years settings. You have a lot going on, so it is no wonder that there are so many children already gaining excess weight by the time they have arrived at school.

Baroness Ritchie of Downpatrick: Can Kristin give her assessment of the prevalence of unhealthy diets?

Kristin Bash: Yes. I will pick up where Vicky left off and look to children and adolescents. The short story is that the majority of children and adolescents in the UK do not eat what we would consider to be a healthy diet. For example, a cohort study was conducted that identified nine healthy markers of a healthy diet that we would all recognise and which include sufficient fruit and vegetable consumption, sufficient fibre consumption and low added sugar or sugar that does not occur naturally. A very small percentage of children met those requirements. Twelve per cent of children between the ages of seven and 13 failed to meet any of the nine requirements of a healthy diet. Less than 30% met two requirements, and so more than 70% met fewer than two requirements.

That mirrors what we see in the National Diet and Nutrition Survey, the annual survey that we conduct to see what food people are eating as a national average. We look at what children are not getting enough of, including fibre. The minority of children are not meeting the fibre recommendations. Only 14% of children aged four to 10, and 4% of 11 to 18 year-olds, are getting their required daily amount of fibre. With fruit and vegetables, the vast majority do not meet the recommendations; only 12% of 11 to 18 year-olds do. With free sugars, barely any children—2% of four to 10 year-olds and 7% of 11 to 18 year-olds—limit their free sugar consumption to the limit that we would recommend.

As with obesity, we know that there are inequalities around how diets occur in our population. A lower social class and maternal education attainment—as well as a higher maternal BMI, as has been said—are associated with meeting fewer recommendations for a healthy diet for both children and adolescents. Other research from the NDNS, as referenced in the National Food Strategy, shows that children from the 20% least well-off families are eating fewer fruits and vegetables, less oily fish and less fibre overall in their diets than children from the 20% most well-off families.

We can discuss ultra-processed foods. We know that we are all eating a majority of ultra-processed foods in our diet—more than 50%. Adolescents are eating the most, so they have the highest percentage. There is direct tracking between ultra-processed foods and added sugar. Ultra-processed foods account for 56.8% of total energy and 64.7%—almost 65%—of total free sugar intake. For illustration, if we were to remove ultra-processed foods from our and our children's diets, we could reduce the prevalence of free sugar by 50%. There is direct tracking between the increase in ultra-processed food consumption and unhealthy diets, and they crowd out the healthier patterns. That is the overall picture; it is not a good one.

Q58 **Baroness Jenkin of Kennington:** This feels a bit silly, but in the period when most of us baby boomers were born, there were much larger families, no nutritional understanding or advice given and much less choice, and more children were likely to be underweight than overweight. Is there any study to show the period when it all started to spike? Is there anything to show that we were all healthier then than we are

today?

Professor Lucilla Poston: Yes, there are cohort studies that suggest that. I do not know them in detail, but certainly the Civil Service cohort study that was done over years from about the 1950s suggests that.

On the question of what is causing it, it is very obvious from what Vicky has been saying that it is the abundance of obesogenic foods and the marketing that underpins that problem. There were certainly other health conditions that were not so good, but that is true for obesity.

Q59 **Lord Colgrain:** Vicky, do you think that food standards should be set for preschool childcare organisations?

Dr Vicky Sibson: Yes, absolutely. That is one of the recommendations that I hope to make at the end. They are voluntary and need some work. We know that voluntary codes do not work. We need mandatory food and drink guidelines and support for early years settings to implement, as well as monitoring and enforcement.

The Chair: Unfortunately, we seem to have lost contact with Kristin and our committee member Baroness Goudie. I am sorry, but we must move on to the next question.

Q60 **Lord Krebs:** I declare my interests as recorded in the first public meeting. What are the specific influences on the diets of children and adolescents that contribute to the risk of becoming obese? That has, to some considerable degree, already been answered, although you may like to add a bit of embroidery to what you have already said.

I would like to focus it a bit on two points. First, in the last bit of discussion we heard a lot of emphasis on free sugar. I have always been puzzled by this. Does the body know whether sugar is embedded in a piece of fruit or whether it is added in the form of sucrose? Roughly speaking, Coca-Cola and orange juice contain the same amount of sugar per unit of volume. Does the body feel that Coca-Cola is worse for it than orange juice because the sugar is added?

On the question about ultra-processed food, we have heard quite contradictory evidence from different witnesses about the importance of ultra-processed food. Some have argued that the real problem is high fat, salt and sugar, while others have said, "No, it's not that. It's ultra-processing". There are two issues that I would welcome your views on. The first is the definition. One argument is that UPF is quite hard to characterise—I will give you an example in a moment. Secondly, on the epidemiological evidence, does it satisfactorily tease out UPF and HFSS? I would be interested in your view on that.

Just on the definition, as I was coming up to this meeting I looked at two kinds of food that, if I had a young child, I might want to avoid feeding them. One was a bag of crisps. I noticed that they are not ultra-processed because they just contain potatoes, sunflower or rapeseed oil, and salt, so there is nothing to say that they are UPF. The other was a multivitamin supplement on the shelf of one of our pharmacy chains,

which is ultra-processed because it contains things like xanthan gum and antioxidants that are characteristic of UPF. So would I be advised as a parent to feed my child on crisps and not on vitamin supplements, because the former are not UPF and the latter are?

Dr Vicky Sibson: There are a lot of questions there.³ I will start with the latter point. I think you are basically questioning the utility of the definition. I would first like to reiterate what is been said in earlier panels, which is that the definition was created to examine events happening in Brazil to try to make sense of what was going on from a public health perspective. It was not a definition intended to inform policy, and I do not think anyone is putting it forward as a specific definition to inform policy.

Also, we are sort of missing the point a bit if we are focusing on applying the UPF definition to individual products, as you are. You are basically questioning the utility of the UPF definition and NOVA on top of the concept of HFSS or considering the problem nutrients in children's diets. It is actually an easy case to make relative to others speaking to diets at a population level, because the issue really is: what do we want our children to eat? We want them to eat real food. They need to have the right nutrients to meet their nutritional requirements for adequate growth and development, and we know what they are, but food is not just a vector for nutrients.

In infancy, we have this window of opportunity where we need to help children to learn to eat, both physiologically and socially, in order to develop, for example, their ability to chew, swallow and manipulate food in their mouths, and develop the muscles to do that. That is not going to work if you are eating a diet of fruit and vegetable purées, strawberry melts, rice wafers and pretty much all the products in the baby food aisle. We also need to try to develop taste preferences in that period. Again, do we want them to develop preferences for a largely sweet diet and the taste of these products? They do not even taste like food; they are random concoctions of weird ingredients. It might say "veg hotpot" on the label, but you squeeze it out and it is a brown goo that does not taste anything like veg hotpot.

We just need to turn it on its head and do less of the looking at whether this product is NOVA one, two, three or four and what that means, and having angst over whether it is NOVA four or not. We need to turn it around to consider the fact that we know that our children from the

³ Note from witness: Free sugars are defined by Swan et al 2018: [A definition of free sugars for the UK | Public Health Nutrition | Cambridge Core](#). The body does react differently to free sugars and fructose: see [Free sugars | Proceedings of the Nutrition Society | Cambridge Core](#), which states: "Foods which have a high free sugars content (especially if it is predominantly glucose) or which have a high refined starch content, will be likely to generate a large increase in blood glucose and have a high glycaemic index. By contrast higher fibre foods, as well as foods with a high fructose content, will normally have a lower glycaemic index".

earliest age are not eating enough whole fruits, vegetables and fibre. They are not eating the diets that they need to eat to be able to develop healthy habits and preferences, to go on to eat healthful diets in the future that align with the Eatwell plate—which, after all, shows diets based on unprocessed and minimally processed foods. So I feel like we are somewhat missing the point if we are talking about those cases.

Professor Lucilla Poston: I agree. SACN has written a report on ultra-processed foods. Having listened to the evidence—it is not my area of expertise—it is hugely complicated. The definition is a real problem, and if you are thinking about additives, some of them are good. Salt stops bacteria growing. So the actual definition is really difficult. The additives that are added are numerous, and if some were changed—if government were to indicate that you could not put certain additives in—the food industry would think of more. So it is an incredibly difficult area.

I agree with Vicky that turning it on its head and saying, “We prefer our children to eat a healthy diet that’s composed of fresh fruit and vegetables and fresh food, unprocessed”, is the right, commonsensical approach at the moment, because to unravel all this and to come up with a definition will take years. SACN is recommending that a better definition is required, and of course it is, but at the same time we need to have some public health message, and it is right to say that we need to recommend fresh foods, and so on.

I will reply, if I can, to your comment about free sugars versus non-free sugars. It is a difficult area. By definition a free sugar is one that is added to a food and is not in cells. My understanding of it is not huge, but I understand in relation to diabetes that low-glycaemic foods are foods that are not rapidly absorbed, and they need to be metabolised to release the sugar. The importance of that is that you do not get a massive sugar surge postprandially, so if you have a sugar drink that has added sugar, it will go straight through into the blood and you get a massive glycaemic response. Of course, that influences health, and it influences fetal growth in pregnancy, which is quite important. So I am an advocate of low-glycaemic index diets in pregnancy, because you get slow release of the sugars. That is really the biological difference and the advantage of moving away from free sugars.

Free sugars are a major issue in the overcaloric intake of children up to the age of three and over. Sugar-sweetened beverages are a major determinant of obesity in children and of the free sugar intake. But—this will probably come up on the next question—there are others, other than sugar-sweetened beverages, that we need to be more concerned about now. So maybe we could talk about that as we move on to the next question.

The Chair: Lord Krebs, would you like to repeat the question for the sake of Kristin, with whom we lost contact, unfortunately?

Q61 **Lord Krebs:** Kristin, while you were out of contact I asked a question digging a bit deeper into the specific influences on the diet of infants and

children on the likelihood of becoming obese. We were talking about whether UPF is a useful concept there to characterise individual foods, and I wondered whether in fact we should be working with the Eatwell plate and the HFSS definition from the nutrient profiling model. Do you have any comments on that?

Kristin Bash: Last year, the Faculty of Public Health put out its position statement on ultra-processed foods,⁴ and it mirrors a few of the comments that were made by two previous panellists. It is that, generally, we should be encouraging, exactly, as you say, the Eatwell plate. We know that we should be advocating for a good amount of fresh fruits and vegetables, whole grains, nuts and seeds and healthy proteins in a healthy diet. When more than half of your dietary calories are coming from ultra-processed foods—we know that there is close tracking between ultra-processed foods and foods with added sugar or high in sugar, fat and salt—we know that the healthier foods are being crowded out of the plate, if you will.

The two measures are not in competition with one another. As Henry Dimbleby said very well in a previous evidence session, and as Vicky just pointed out, the NOVA classification was developed initially as a research tool to look at dietary patterns and not at individual foods. In that regard, it has been quite successful in demonstrating that the direction of the food system is travelling in a way that is not supporting good health. As we start consuming a higher proportion of those foods, health outcomes become more negative.

However, when we look at dietary recommendations and policy, we have a very useful tool in the Nutrient Profiling Model. The high fat, salt and sugar formula has been tested in court through the lawsuit from Kellogg's, so we know that it stands up to challenge and is very useful. Throwing the baby out with the bathwater, to use a terrible analogy, is not useful. We should look at ultra-processed foods in relation to the nutritional content and overall composition of a diet. That said, it is a useful discussion to have. It is a nuanced picture rather than the sometimes cut-and-dried picture that is presented for ultra-processed foods.

Q62 **Baroness Browning:** Lucilla, I will go back to the beginning. In your opening remarks, you mentioned the fact that pregnant women appearing for the first time at an antenatal class are shocked to learn not only what their own health looks like if they are obese but what the prospects are for baby. When we make our recommendations as a committee, will you let us have some recommendations on the profile of that pregnant woman? Of course, not all pregnancies are planned in such a way that they suddenly turn up and the parents have had months of preparation in many ways.

Can you think of ways in which women of childbearing age can be

⁴ Note from witness: See <https://www.fph.org.uk/media/4eigrfuz/upf-position-paper-final-16062023-pdf>

influenced, not only to prepare them for childbearing but in their own interest. It seems to me that we are in a very difficult situation. Because of the publicity around girls and anorexia and things like that, it is very difficult to get the wording right to persuade women in particular to understand why this is important, although I am not excluding men's obesity. Do you have any suggestions?

Professor Lucilla Poston: Yes. This is very close to my heart. Thank you for bringing it up. Clearly, we need to inform young people generally about the requirement of being healthy, such as having a healthy BMI, before they become parents. I belong to the UK Preconception Partnership, which is advocating—it recently had an Early Day Motion here in Parliament—for that information to be transferred to young people at school and beyond and at any point of contact in healthcare, including, for example, contraception clinics, pharmacists and schools; it has to be multifactorial. It is an incredibly difficult area, because adolescents generally do not see many health professionals apart from when seeking contraceptive advice. There are a number of things that we are thinking of, including points of contact where we can help them learn.

Mental health is the other issue, as people with mental health issues are often not planning a pregnancy. We are doing a study through which we hope to help inform people with mental health issues when they come for mental health care. It is a very broad spectrum.

You are absolutely right that, by the time they come to their first antenatal appointment, it is a bit too late. People need to be aware, although, as you said, they need to be made aware sensitively. I have done a study on adolescent teenage pregnancy, and there was quite a lot of obesity among that group. Their diet was appalling, but their level of understanding of their own biology and health was lamentable.

As a nation, we are not properly educating our teenagers at school. There is some very good work going on in the University of Southampton, for example. It has a life lab, and the students come in from all the colleges around and have a lesson about their health and preparing for being parents. That is the sort of thing that we could do nationally.

Thank you for bringing this issue up. It is incredibly important. For me, preconception health is more important than advising people in pregnancy.

Q63 **Lord Colgrain:** What is the impact of poor diets and obesity in infancy and childhood on health outcomes, both child and adolescent outcomes and those in later life?

Professor Lucilla Poston: There is some very good recent evidence that BMI tracks through to adulthood, as we have already mentioned. A very good systematic review has been published recently looking at all the studies that have analysed morbidity and life-course BMI. There is something like a 2.5-fold increased risk of hypertension if BMI tracks through from childhood, and a 4.6-fold increased risk of type 2 diabetes in people whose BMI is tracked through from childhood. That is much

higher than if you start off with a normal BMI in childhood and then you become obese. The risk is increased—according to that systematic review, a very large study—if you start off in childhood with a high BMI and you maintain your obesity. That is a huge level of morbidity and a huge cost to the NHS.

That is the sort of evidence that we need. It is quite recent. There has been some debate about it, but there is no question now in my mind, having looked at the level of evidence in that recent work, that there is a very high risk of adulthood disease. Once pregnant women have a high BMI in pregnancy, that tracks through to all sorts of problems in later life, notably type 2 diabetes. Someone who is obese in pregnancy and gets diabetes in pregnancy has a five-fold risk of getting type 2 diabetes in later life. It is unquestionable that a very high morbidity and costs are associated with it.

Dr Vicky Sibson: I agree with Lucilla. I want to reiterate the point I was trying to make before. It is very important to look at health outcomes and the impacts of diets in pregnancy and infancy on health outcomes, but it is also necessary to remember the impact of diets in pregnancy on later dietary preferences and habits.⁵ It is a separate point, but it is very important because of the critical window—in addition to whether we are managing to achieve the cultivation of healthy preferences and habits beyond just sweet tastes and snacking. I said a lot about that before, so I will not repeat myself, but I wanted to bring it up. As well the outcomes, there is the idea of dietary practices and preferences.

Kristin Bash: I agree with all of that. I will bring up the circular nature of this—again, by looking at wider determinants. I believe that I missed the question on causes, but a healthy diet costs more than an unhealthy diet. We know that obesity tracks from childhood into adulthood quite strongly. Some 80% of obese adolescents will still be obese in adulthood, so it is a very strong track. We also know that adults with obesity have a reduced income level, largely due to all the health impacts. The reduced income level in adulthood is also linked to a higher likelihood of unhealthy diet, unhealthy diet is linked to obesity, and so on with obesity. It is a very circular pattern and intergenerational. I want to add that point to everything that has been said already.

Q64 **Baroness Pitkeathley:** You have all already mentioned things that you would like government policy to do, such as public awareness and making guidelines mandatory. Vicky, I will come to you first. How effective are current government policies and approaches in tackling the issues that you have mentioned?

⁵ Note from witness: Diets in pregnancy influence the taste preferences of babies, because evidence shows they recognise flavours in utero and babies who were exposed to certain flavours in utero are more likely to accept these foods when offered them in infancy.

Dr Vicky Sibson: It is evidenced in the unacceptably high levels of overweight and obesity—as well as in dental caries, which we have not discussed—that current government policies are not effective. We have a range of different interventions that are meant to be making diets healthier for infants, children and adolescents, but they are clearly not working. Infants, particularly in the early years, are especially neglected in food policy; babies just get forgotten about. There are lots of examples, one of which is the government food strategy. People always assume that they are covered elsewhere, but they are not covered and fall into a gap.

Let me give you some specific examples. There is some good work going on to enable breastfeeding. The UNICEF baby-friendly initiative which is part of the NHS long-term plan is a really good thing. That needs to keep going. The widening of the NHS plan to include other accredited settings, for example, health visiting and university courses, is needed. The family hubs rollout (in the most deprived areas) is a good thing, but we need universal breastfeeding support. And to enable breastfeeding, we do not just need support; we also need to create an enabling environment. Part of that is about tackling the inappropriate marketing of formula milks, which we have touched on. It is worth noting that we have legislation that is meant to prevent inappropriate marketing but, assessed against the UN's recommendations, it scored only 40 out of 100. So we have weak legislation in this area, and the legislation that does exist is not enforced.

Moving on to the food angle, the commercial baby food offer is poorly regulated at the moment, despite a whole host of problems being identified by Public Health England's evidence review in 2019. So all the issues there were already being exposed five years ago, yet there are no compositional regulations for the products on the baby food aisle and no specific regulations for marketing and labelling. It is literally a Wild West.

I also want to talk about the NPM and HFSS, because they have come up. They are not applicable to products marketed for children under three years of age. The model is not built in an applicable way; it is not appropriate to apply the NPM to these products, which means that they are just not regulated. So there is a gap there. There is a tool that we can use. I will come on to make that recommendation.

I want to bring up the Healthy Start scheme. It is a relevant and important nutrition safety net aimed specifically at the early years from pregnancy to the age of four. I point out that it is meant to enable the purchase of unprocessed and minimally processed foods, which is a good thing—as well as the purchase of infant formula for those who need it—but this scheme is long overdue improvement. It has so many inadequacies. We have a platform and a foundation there, but it is simply not functioning. With levels of food insecurity, poverty, obesity and dental caries skyrocketing, it is high time that this is prioritised.

Lastly, I want to highlight that the health visiting service is key but is under-funded and under-resourced. There are big staffing gaps. Again, I

point out that early years settings do not have mandatory standards. So we have lots that could be done and some things that are being done, but there are huge gaps.

Professor Lucilla Poston: One important thing to add is the soft drinks industry levy. Personally, I am a great advocate of it, it has to be said. It has resulted in a fall in sugar of more than 5 grams per 100 millilitres—a fall from 49% to 15% in the sugar-sweetened beverages on offer in our supermarkets. One study showed that it has resulted in children aged between 10 and 11 being thinner. That was just for girls but there is some evidence there. It has also reduced dental caries.

When I was with Public Health England, we were going to go further. We were going to have the advertising watershed come in on two for the price of one, but those were kicked into the long grass by government. What a shame, because that was another opportunity, but that is going to happen.

One thing that you probably do not realise and which may help is that women who smoke have obese children. This may be an epigenetic effect. The epigenetic effect is well known. The cessation in smoking may have helped with this little upturn in the reduction of children being obese, but we do not know that for sure. That is not a nutritional intervention but a government policy that has worked.

Kristin Bash: I just want to point out some measures that have not been so effective. They include the voluntary measures with industry. The government's sugar reduction programme was meant to encourage food producers to voluntarily take out 20% of the sugar in the products that are mostly commonly consumed by children, but it managed a reduction of only 3.5%. There is a similar poor showing from the calorie reduction programme where, in fact, calories for average portions of most food categories went up.

Lastly, there have been hundreds of proposals since the 1990s, but few of them have been implemented, and the ones that have been implemented have focused largely on individual responsibility. Looking at more of an upstream approach is more effective. Looking at individual responsibility, regardless of how we feel, is not particularly effective, as shown by the growing rates of obesity. As an example, research shows most parents remember the Change4Life 100-calorie snack campaign and feel that they learned about 100-calorie snacks, but they did not change their behaviour around snacks made in the home or purchased.

So focusing on individual behaviour is like saying that we should all have responsibility for driving our cars safely, but ignoring the influence and purpose of traffic regulations and speed limits. I just wanted to make that point as a sort of shift in perspective.

Q65 **The Chair:** Thank you. That is very helpful. This is your opportunity, colleagues. What are likely to be the most effective strategies for improving infant, child and adolescent nutrition and reducing the

associated health inequalities in the future? What evidence supports your proposals? We have only a few minutes so, if you need to add anything, please do write to us after the end of this session.

Professor Lucilla Poston: Perhaps unsurprisingly, I am a scientist and data is all-important. We have mentioned this. Health visitor data is horribly variable across the country—and, for the reasons that Vicky talked about, there is not enough adequate resource—but they are the only people who collect weight and height data for children. It is not a national requirement that the data comes to the ONS or NHS Digital—a report on that has just come out of UCL—but it is critical that it is reinforced and properly recorded. We would then have a reliable estimate of childhood weight. We do not have a reliable estimate of childhood weight nationally. I think it is incredibly important.

Other than that, I have mentioned having a public health campaign on pre-conceptual BMI and support for lactation. My personal feeling is that we should continue with the SDI levy and extend it to other sorts of food. To my mind, the reformulation of food by legislation will work. It has worked in other countries, whereas, as we said before, all our other interventions have generally not worked. We have to take a top-down approach, in my opinion, and increase the legislation to reformulate food so that we have a healthier composition. That will have an enormous effect. We know what makes children obese.

The Chair: Vicky, do you have anything else that you have not already mentioned on top of that?

Dr Vicky Sibson: Yes. I agree with Lucilla's vote for support for breastfeeding. I reiterate the need to control the marketing of formula as a critical part of that: that is, strengthening the legislation in line with the UN's recommendations and enforcing it. Also, this is somewhat different, but reformulation on baby foods on its own is not appropriate and will not work, because we need to feed children food, not packets. It is part of the equation. We need to improve the composition of the commercial baby food offer, but we also need to find ways of ensuring that fewer ultra-processed foods are being fed to our babies.

There is a tool that I would like to recommend and which has been recommended in previous sessions: the WHO Europe Nutrient and Promotion Profile Model. It is basically an NPM for the baby food aisle but, as you can hear from the name, it does not focus on just nutrients. By also focusing on promotions and trying to tackle the marketing, it would do a very effective job of reducing the marketing of nutritionally inappropriate, age-inappropriate and highly processed foods that have no place in our children's diets.

The Chair: Thank you. Can you write to us afterwards if anything further occurs to you because I want finally to go to Kristin?

Dr Vicky Sibson: Will do.

Kristin Bash: I agree with everything that has been said already, but I

want to add one or two things. Looking at healthy advertising, I would definitely recommend implementing the 9 pm watershed HFSS advertising restriction for children. Then I would look at expanding London's outdoor ad restrictions nationally, as evidence supports its impact. Research has demonstrated that restricting HFSS ads throughout Transport for London has reduced the amount of calories of HFSS foods in the weekly shopping basket of a household by 1,000 calories. I can send evidence on that.

I know that school meals will be discussed later, but I want to say something quickly. In the deep evidence dive that we did with the faculty and six other professional public health organisations, we identified clear evidence to support the idea that universally provided school meals reduce obesity and overweight in schools. This has also been supported by recent evidence from the London rollout, where there was a reduction in the rate of obesity of between 5% and 8% among children in year 6 who spend all their years of primary education in a school with universal provision of school meals. It is the "universal" bit that is important. I have evidence on this that I can send. In the interests of time, I will stop there.

The Chair: Thank you. We would be grateful to receive that. I thank all three of our witnesses. We have had a very interesting and useful session this morning. I remind you that the transcript will be sent to you for any corrections that you may need to make.