HOUSE OF COMMONS

Science and Technology Committee

Oral evidence: Energy drinks, HC 821

Tuesday 10 July 2018

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Watch the meeting

Members present: Norman Lamb (Chair); Bill Grant; Darren Jones; Neil O'Brien; Graham Stringer.

Questions 130 - 272

Witnesses

I: Andrew Taylor, Regulatory Policy Executive, Committees of Advertising Practice; Dr John Thompson, Committee on Toxicity of Chemicals in Food, Consumer Products and the Environment; Dr Kevin Hargin, Head of Food Hygiene and Animal Health Policy Unit, Food Standards Agency; Dr Ashley Roberts, Senior Vice-President, Food and Nutrition Group, Intertek, and independent toxicologist and adviser to Monster Energy; and Sam Pontrelli, Senior Vice-President, Marketing, Monster Energy.

II: Steve Brine MP, Parliamentary Under-Secretary of State for Public Health and Primary Care, Department of Health and Social Care; and Jenny Oldroyd, Deputy Director, Obesity, Food and Nutrition, Department of Health and Social Care.

Written evidence from witnesses:

– Advertising Standards Authority

– Monster Energy Company

– Monster Energy Company

– Department of Health and Social Care

Examination of witnesses

Witnesses: Andrew Taylor, Dr Thompson, Dr Hargin, Dr Roberts and Sam Pontrelli.

Q130 **Chair:** Welcome, all of you. Thank you very much for attending this morning. Can we start by having you all introduce yourselves?

Dr Roberts: Good morning, everybody. My name is Ashley Roberts. I am senior vice-president of a company called Intertek. I am a toxicologist with extensive training in food ingredient safety. I am here today representing the Monster Energy Company. That is because its senior scientific officer, Dr Davis, cannot attend, due to serious family issues.

Andrew Taylor: Good morning. My name is Andy Taylor. I am from the Committees of Advertising Practice. We are the bodies that write the UK advertising codes enforced by the Advertising Standards Authority. I am a food advertising policy specialist. I conducted and led CAP's work to introduce rules in the non-broadcast media, including online spaces, which were introduced last year.

Dr Hargin: Good morning. I am Kevin Hargin. I am head of the food hygiene and animal feed policy unit in the Food Standards Agency. I am standing in for a colleague this morning.

Dr Thompson: Good morning. I am Dr John Thompson. I am here as a member of the Committee on Toxicity of Chemicals in Food, Consumer Products and the Environment. The COT is an independent scientific committee that advises the Food Standards Agency on aspects of risk assessment of chemicals. I am a senior lecturer in clinical pharmacology at Cardiff University.

Q131 **Chair:** Thank you very much. There are four of you on the panel. We have quite a lot to get through, so try to keep your answers succinct. If you feel that others have answered sufficiently, don't feel that you have to answer every question.

The EFSA recommends 3 mg per kilogram as a standard for the safe level of caffeine consumption for children. Do you think that recommending caffeine limits based on children's body weight is the right approach? How useful is that to parents?

Dr Thompson: The COT recognised that there was not an enormous database on effects in children and adolescents. We had to draw conclusions based on recommendations for adult intakes. There was a feeling that, for an adult, a single, acute dose of 200 mg, which is about 3 mg per kilogram, was a safe dose. A daily dose, for the longer term, of 400 mg was considered safe for an adult.

If anything, children metabolise caffeine more quickly than adults. Other things being equal, we could perhaps have taken the 400 mg per day dose and scaled it down to children. There is a degree of uncertainty

about whether children may behave differently if they are given a concentrated dose. Therefore, it was scaled down further in children, from the equivalent of the 400 mg dose to the 200 mg dose, to give a bigger safety margin. I think we accept that a lower dose—say, 100 mg for an adult—could give some effects in terms of shortened sleep, particularly if taken late at night.

Q132 **Chair:** What are your particular health concerns about children?

Dr Thompson: They are the same as for adults. For the single acute dose, we thought that the most significant effects were on the cardiovascular system—blood pressure, pulse and so on—rather than other risks, such as cancer and Alzheimer's. For single doses, it was based on the cardiovascular risk.

To put it in perspective, the limiting features for adult doses would probably be based on pregnant women and exposure of the foetus. We know that caffeine can cross the placenta and get into the foetus. The foetus does not have enzymes to break down the caffeine itself, so it is exposed to what the mother is exposed to. There is evidence, certainly at levels above 200 mg of caffeine a day for pregnant women, that there is a decrease in live birth weight and an increased incidence of foetal growth retardation—of live-born children not attaining the weight that they might otherwise have been expected to attain, based on maternal height, ethnicity and so on.

Q133 **Neil O'Brien:** Could you translate milligrams into something more familiar for us? Roughly how many cups of coffee is that?

Dr Thompson: It varies hugely. I will draw on some information that the COT secretariat kindly put together for me. We discussed a scoping paper at COT last week, but we have not yet reached any firm conclusions. One of the issues about things like drinks is that you can think about the total amount of caffeine or the concentration in a particular drink. Obviously, drinks sizes and concentrations vary. According to the notes I have here, in instant coffee there is 57 mg of caffeine per serving. If you go for a cappuccino, it can be 150 mg. If you go for a large high-street coffee, it can be over 300 mg, certainly over 200 mg.

Q134 **Neil O'Brien:** If you have two of those in a day, that is 400 mg.

Dr Thompson: That 400 mg is the total caffeine intake; not from energy drinks, tea or coffee, but the whole thing put together.

Q135 **Chair:** When you take into account both the lack of evidence overall of health risks and the concerns you have expressed, does it lead you to conclude that children should not take in caffeine, in whatever form it comes, or do you have a more relaxed view?

Dr Thompson: It really leads to the recommended intake of the equivalent of 3 mg per kilogram per day.

Q136 **Chair:** Are there any other contributions?

Dr Roberts: I do not believe that the 3 mg per kilogram limit that was set by EFSA is an upper limit of safety. Even the EFSA opinion shows quite clearly that, on a day-to-day basis, those levels may be exceeded. Even with adults, it showed that up to a third of consumers of caffeine exceed 400 mg per kilogram per day. It was clear from the previous speaker that you have to consume only one or two cups of a high-street coffee to be way over the limits set by EFSA.

Q137 **Chair:** We have heard evidence about children below the age of 10 consuming energy drinks, some to quite considerable volume. Would you feel comfortable about your own child, for example, drinking your product at the age of 10?

Dr Roberts: I am an expert representing the Monster company today, so I am looking at it purely from a safety perspective.

Q138 **Chair:** From that perspective, if you had a 10-year-old child, would you feel comfortable about them consuming that product?

Dr Roberts: Definitely. I see no problems in consuming an energy drink, as opposed to coffee or tea. When I was raised here in the UK, my mother gave me tea from a very early age. If you look at the exposures from various caffeinated products, you will note that children consume four times as much caffeine from tea in the UK as they do from energy drinks.

Q139 **Chair:** Is it possible to compare energy drinks and coffee in terms of how much caffeine children are getting from those drinks? In other words, do we treat all forms of caffeine in exactly the same way in our consideration of health?

Dr Hargin: My understanding is that it is the total amount of caffeine in the diet that is important, not the caffeine from any particular source. As we have heard, there are significant sources of caffeine, such as tea, coffee, colas and chocolate, on the market, in addition to energy drinks. The whole diet, not just one particular source, must be looked at.

Q140 **Chair:** Dr Roberts, Monster's written submission states that there is a lack of evidence, and that other submissions to our inquiry have been "overstating" the physiological effects of energy drinks, such as headaches and dizziness. What specifically do you and others representing the company take issue with?

Dr Roberts: A number of issues were raised from the previous meeting. I will focus on a couple of those. The first was that a lot of the evidence that was provided was based on cross-sectional studies and case study reports. We all know that there are inconsistencies in those types of studies. There are confounders, and there is recall bias. We have based our assessment on peer-reviewed scientific evidence that is in the public domain.

Another point is that I believe that there was some confusion regarding the banning of some energy drinks in other countries. I am led to believe that that is not true.

Chair: How did you feel about the evidence given by industry representatives?

Q141 **Graham Stringer:** What does "led to believe" mean?

Dr Roberts: I am sorry; it is not true.

Q142 **Neil O'Brien:** What are you saying is not true?

Dr Roberts: That Red Bull was banned in three locations. That was untrue.

Q143 **Neil O'Brien:** What is the truth?

Dr Roberts: That it is not banned.

Q144 **Neil O'Brien:** It is not banned anywhere?

Dr Roberts: It is not banned in those three locations.

Q145 **Neil O'Brien:** It is not banned anywhere in the world?

Dr Roberts: Not that I know of.

Neil O'Brien: No Red Bull is banned anywhere in the world.

Q146 **Chair:** Dr Roberts, the industry representatives at our last hearing all expressed, in varying degrees, support for or satisfaction with the idea of a legal ban on the sale of energy drinks. How did you feel about the evidence given by those industry representatives?

Dr Roberts: I am looking at it purely from a safety perspective. I have researched energy drinks and their ingredients over a number of years. I have also been involved with numerous scientists who represent the WHO and the FAO on this topic and I have had numerous conversations with the US FDA on the topic. At this moment in time, it seems that there is no reason for banning, reducing or restricting energy drinks or caffeinated products for children.

Q147 **Chair:** I appreciate that your product comes in low-sugar varieties, but there is a variety that contains sugar. How many teaspoons of sugar is that equivalent to?

Dr Roberts: I do not know exactly how many teaspoons it is equivalent to. I know from a comparative point of view that it is identical to the amount of sugar in other colas and fruit juices, such as orange juice.

Q148 **Chair:** We have heard that, typically, they can contain 10 teaspoons of sugar. Would it be something in that range?

Dr Roberts: From my scientific perspective—not talking about it in terms of teaspoons—I know that, on a gram per 100 ml level, it is the same amount as in colas and fruit juices.

Q149 **Chair:** Am I right in saying that there is another representative of your company present?

Dr Roberts: Correct.

Q150 **Chair:** Are you able to confirm how much sugar is contained in your product?

Sam Pontrelli: I cannot give you that number with accuracy.

Q151 **Chair:** You cannot.

Sam Pontrelli: I can get back to you on that.

Q152 **Chair:** Do come back to us on it.

Can you confirm your name, please?

Sam Pontrelli: I am Sam Pontrelli.

Q153 **Chair:** What is your role?

Sam Pontrelli: I am senior vice-president of marketing.

Q154 **Chair:** Can I ask the rest of the panel about the Government's consultation, which has announced a possible ban on the sale of energy drinks to children? We have heard Dr Roberts's view on that. What is the view of the rest of the panel? Andrew, you may not feel that you want to respond to this.

Dr Hargin: There are legitimate factors beyond safety, such as public acceptance, that may warrant some market restrictions. In that vein, we welcome the DH consultation, which will help to develop that further.

Q155 **Chair:** You talked about market restrictions. The question I asked was about a ban. Do you support the case for a ban?

Dr Hargin: We will wait to see what the consultation produces and what evidence there is.

Q156 **Chair:** Okay. Dr Thompson?

Dr Thompson: That would not be a matter for the COT.

Andrew Taylor: As the advertising regulator, we have no position on the nutrition science. However, it is worth adding that our codes already reflect statutory provisions that limit sales to certain ages; obviously, that is for alcohol and gambling.

I am sure that we will come to this later in the session, but there are already restrictions on the full-sugar versions of these products, as they are high in fat, salt and sugar and are subject to dedicated restrictions. At

the same time, as I understand it, even most of the sugar-free versions of these products are not recommended for children. Under its general rules on responsibility, the ASA has taken decisions that it is inappropriate to target at that audience a product that is stated as not suitable for children. There are already provisions in place, but we will look to mirror any moves at statutory level.

Q157 **Chair:** Dr Roberts, presumably you disagree with the requirement to state on a can, "Not suitable for children," or whatever the wording is.

Dr Roberts: It is interesting to look at where that wording came from. I know that it is an EU measure for labelling standards. I do not understand where the scientific review was, or what the analysis was to arrive at that statement.

Q158 **Bill Grant:** I note Dr Thompson's remarks in relation to pregnancy. Has any research work been done to establish whether consumption of caffeine drinks has any long-lasting or cumulative effects, or is its effect simply short-lived and limited to that moment in time? Is it a short-term thing, or is there a long-term impact?

Dr Thompson: In the two big studies that looked at this, the main outcome was foetal growth retardation. My understanding is that they did not look beyond that. Having said that, foetal growth retardation is associated with increased incidence of other problems, such as metabolic syndrome, with type 2 diabetes later in life. If those children behaved in the same way as other children with foetal growth retardation, you might expect increased problems later, but the studies did not look at that explicitly. That would be extrapolation.

Q159 **Bill Grant:** Would any other panel members care to comment on whether there is a cumulative or long-term effect? Can we be confident that, with the exception that you suggest, the effect of consuming high-caffeine drinks is at the moment in time?

Dr Hargin: The FSA has looked at the evidence that EFSA produced and we are content that a level of no concern at 3 mg per kilogram of body weight is reasonable and appropriate.

Dr Roberts: I have a daughter who has had two children fairly recently here in the UK. From her visits to her GP, I know that GPs acknowledge the potential concerns about caffeine in pregnancy and provide evidence to young mothers to get them to cut back on their caffeine content. They should be aware during pregnancy that they should be watching what caffeine they consume.

Q160 **Bill Grant:** In a wider sense, no other long-term effects have been researched and verified.

Dr Roberts: From a reproductive point of view, there has been long-term analysis conducted specifically in the animal, pre-clinical environment. The EFSA opinion has been a little more conservative than that of other

regulatory authorities around the world. Health Canada set a limit of 300 mg, but the European Food Safety Authority reduced that to 200 mg per day.

Q161 **Bill Grant:** Some quarters have advocated a nationwide school or college campaign to educate students about the health risks of energy drinks. Would that be a sensible way forward? Do you agree that there is a need for such a campaign? If there were such a campaign, do you think it would be effective? Is there a need to educate our students and school pupils about excessive or extraordinary consumption of energy drinks?

Dr Roberts: Overall, there is room in the curriculum for teaching children about diet in general. I believe that caffeine should be made part of that overall agenda. That is really important in today's age, especially as we are talking about obesity and its long-term health implications. Providing some educational background on the workings of caffeine and how it affects the body would be important in that respect.

Q162 **Bill Grant:** You lean towards having a campaign. Is that the general consensus?

Dr Hargin: From our perspective, it is probably more for the Department of Health to answer that particular question.

Andrew Taylor: I will answer from the perspective of the ad regulator. Obviously, it is outside our remit. However, when we extended the rules to cover non-broadcast media for HFSS product advertising, we recognised that there is a public policy imperative to do more, and that advertising can only ever be one part of that. There must be a broader focus on a package of measures. It is universally accepted among public health professionals and policy makers that there needs to be a multifactorial attempt to do something about obesity and poor dietary habits.

Q163 **Bill Grant:** How good is the evidence on the mental and physical impact of energy drinks on children? Have studies been undertaken that covered a long period of time, to be able to give clear, confident results that there is an impact? Has any research been done on that?

Dr Thompson: That was part of our discussions last week. Most of the studies I am aware of tend to be cross-sectional studies, of a snap point in time. You can look at consumption of energy drinks, for example, and other aspects of behaviour. There seems to be an association between consumption and risk-taking activity, including use of alcohol, drunk driving and unsafe sex. I do not think that you can easily attribute cause and effect to those studies. It may just be part of the same pattern of behaviour. Longitudinal studies, following people over time, are lacking at the moment.

Dr Hargin: We accept that. We have asked COT to look at various bits and pieces of evidence and are taking advice from COT.

Dr Roberts: There is some evidence in the public domain regarding peer-reviewed, publicly available data looking at behavioural effects in children. There was a study by Stein, and a placebo-controlled study by Bernstein, looking at signs of anxiety. It included a nine-point measure. The only adverse effect from that study was that the children felt nervous and jittery. That is no different from what would be perceived in adults.

Those were single-dose studies. There are also some longer-term studies, where children were dosed for longer periods to determine how it impacted on their behaviour. In general, there were no effects on their behaviour or motor activity.

Q164 **Chair:** What about the impact on sleep? I thought it was common knowledge that caffeine consumption affects sleep patterns.

Dr Roberts: That is very true, but the same applies to adults. The level recommended in the EFSA opinion was 100 mg—not consuming 100 mg before going to bed. Again, that relates to all types of caffeine, not just from energy drinks. It could be from chocolate, cocoa, coffee or tea. It does not relate to energy drinks per se.

Q165 **Darren Jones:** Do you not recognise that we have a responsibility to go a bit further when it comes to children, as opposed to just saying that the effects are the same as those on adults and, therefore, it is okay?

Dr Roberts: I do, but a lot of it is related to parenting. From my perspective, if there are beverages in the house to be consumed prior to bedtime, I would indicate that children should drink milk or water, rather than energy drinks or coffee, prior to going to bed.

Q166 **Darren Jones:** We should allow cigarettes to be sold to anybody. It is up to parents to decide whether to give them to their children.

Dr Roberts: Cigarettes are totally different.

Q167 **Darren Jones:** It is the principle of the question.

Dr Roberts: The principle is that I believe these materials are safe. Therefore, it is about how they are used.

Q168 **Bill Grant:** Were the two studies you referred to purely on the consumption of energy drinks, rather than energy drinks partnered with alcohol? Was the research confined to energy drinks?

Dr Roberts: Yes. That is correct.

Q169 **Bill Grant:** Energy drinks appear to include a number of other chemicals, in addition to caffeine. What research is the Committee on Toxicity or EFSA planning on other compounds in drinks? Is there a need for that? Is there no need to look at it, or is it already catered for?

Dr Thompson: When we talked about this, one of the initial things that we had to decide was, "What is an energy drink?" The energy from most of those drinks is in the form of sugar, but there are things sold as

energy drinks that are sugar free. Is it the fact that they are energy drinks based on caffeine? You could set a level of concentration of caffeine in the drinks, but normal colas and coffee contain caffeine. The starting point is, "What do you define as an energy drink?"

There are other constituents in some, but not all, of these drinks, such as taurine and glucuronolactone. When we looked at the EFSA review, in particular, and others, we thought, "Is there some interaction between these different substances that might be additive or negative?" There is some suggestion that taurine might even offset some of the effects of caffeine.

Q170 **Bill Grant:** Does it act as a neutralising agent?

Dr Thompson: There was some suggestion in a study that looked at drinks containing caffeine, taurine, and caffeine, taurine and another drug called glucuronolactone. If you compared the caffeine drink to a control drink, blood pressure went up. If you compared the caffeine drink to the taurine drink, it went up, so the caffeine was probably pushing it up. If you compared the caffeine drink to the caffeine, taurine and glucuronolactone drink, there was no change. There is soft evidence.

As regards absolute toxicity, we think that the intake of those other things is below the level of concern. Caffeine is the major constituent and the one we would be thinking about primarily.

Q171 **Bill Grant:** Are there any other comments on that?

Dr Roberts: I have looked at great length at the different ingredients in an energy drink, to determine whether there would be any interaction, synergy or additive effect. We looked at it from scientific first principles, from a pharmacokinetic perspective—how it is absorbed and excreted—and how it reacts, from a pharmacological and toxicological point of view. We determined that there are really no interactions between those compounds. The only potential interaction, as has just been mentioned, is between taurine and caffeine. Taurine tends to ameliorate the reaction of caffeine. It is a non-essential amino acid, so it occurs in the diet. It is also in baby milk. It is not a material that we should consider adverse in any way or form. It is a natural part of the diet.

Q172 **Bill Grant:** That is on the drink itself. Did you do any research or study on what happens if it is partnered with alcohol and on the effects that that reaction might have?

Dr Roberts: The individual ingredients in alcohol?

Q173 **Bill Grant:** We were talking about how the various ingredients partnered; some neutralised and some raised blood pressure. That was looking at it in isolation, as an energy drink. Would there be any impact if the energy drink was partnered with alcohol? Could that cause adverse effects?

Dr Roberts: The research out there at this moment in time indicates that caffeine with an energy drink does not reduce or increase the level of intoxication.

Q174 **Chair:** It would have no impact.

Dr Roberts: That is my understanding. I believe it was a finding reported by the Committee on Toxicology.

Q175 **Bill Grant:** It has no impact whatsoever when used as a mixer with alcohol.

Dr Roberts: That is correct.

Q176 **Chair:** Does your product have any positive health benefits for children?

Dr Roberts: There have been a number of health claims that have gone through the European Union regarding caffeine and its impact on wakefulness and attention.

Q177 **Chair:** Are you advocating caffeine for children?

Dr Roberts: No, I am not advocating caffeine.

Q178 **Chair:** The question was about whether there are any health benefits from your product for children.

Dr Roberts: I misunderstood your question; I am sorry. I was talking about caffeine in general.

Q179 **Chair:** Are there any health benefits for children?

Dr Roberts: Not that I know of.

Q180 **Graham Stringer:** Dr Hargin, you carried out a study on the impact of caffeine on pregnant women. I understand that you found that there was an impact on the growth of the foetus. Could you tell the Committee a little more about that study?

Dr Hargin: I do not think that I am technically qualified to go into that detail, because I am standing in for experts. COT might be more appropriate to answer that question.

Dr Thompson: I think that you are referring to the CARE study. That was based in two large UK maternity units, which recruited a total of 2,635 low-risk women early in their pregnancy and looked at their history of caffeine consumption and other things, including how smoking and alcohol might affect foetal growth. The outcomes were looking for evidence of foetal growth retardation—failing to achieve the weight that you might get. They reported the results having tried to adjust for alcohol intake and smoking behaviour, which are also known to affect foetal growth.

In the results, they compared the likelihood of foetal growth retardation and different caffeine consumptions. For between 100 mg and 199 mg

per day of reported caffeine, there was a risk of 1.2 times the base risk, which was not a significant change. In women reporting caffeine intake of 200 mg to 299 mg per day, there was a risk ratio, an odds ratio, of 1.5, which was significant. They were more likely to have children with foetal growth retardation than women with a small caffeine intake. Similarly, caffeine of over 300 mg per day gave an odds ratio of 1.4, which was again statistically significant. Those women were more likely than people with low caffeine intake to have foetal growth retardation. That is a summary. Higher levels produced statistically significant growth retardation.

Q181 **Graham Stringer:** Did the study go on to look at whether the impact continued in infancy, after the baby had been born?

Dr Thompson: It looked at those defined output measures.

Q182 **Graham Stringer:** It looked just at foetal impact, not at both.

My final question is nothing to do with that. Does anybody have any idea what the benefits would be to children and society in general if energy drinks were banned?

Dr Thompson: That is not one for me.

Andrew Taylor: It is not one for us, either.

Graham Stringer: That is at the core of our inquiry, really.

Q183 **Chair:** Does the Food Standards Agency have any opinions on anything in this?

Dr Hargin: Yes. As I mentioned earlier, we feel that there are legitimate factors beyond the straight safety of the product. We are looking at evidence. We are starting a study of socioenvironmental factors, to try to determine the drivers and motivators that encourage children and adolescents to drink these drinks. That is commissioned. We hope that its results will feed into the public health consultation and add to the evidence base and knowledge. We are quite prepared to look at other evidence and factors.

Dr Roberts: If the issue is related to caffeine, we must have a level playing field for caffeine per se. As I mentioned, caffeine is in a lot of different products. Children in the UK get caffeine from many other sources, mainly tea, colas and coffee.

Graham Stringer: I understand that point, but we are looking at energy drinks. It is not just about where caffeine comes from, but about the fact that energy drinks might be used in substitution, where other drinks might be used at breakfast time. Some of the evidence we have heard suggests that. If we are looking at having extra regulation or a ban, I am very interested in what the benefits would be. I am slightly surprised at the silence.

Q184 **Neil O'Brien:** Can I add one quick question, just to understand the statistic that children are getting more caffeine from other sources? What age of children are we talking about?

Dr Roberts: We are talking about children below the age of 18.

Q185 **Neil O'Brien:** That would include teenagers who might like tea and coffee. If we were to break down the data into the under-10s or 10 to 12-year-olds, who generally do not like tea and coffee, would the balance between energy drinks and coffee reverse?

Dr Roberts: Yes. They get their caffeine from colas and chocolate.

Q186 **Neil O'Brien:** Does that data exist, if we were to look for it?

Dr Roberts: It does. It is in the European Food Safety Authority evidence.

Q187 **Chair:** Remind me of the comparison of caffeine strength in a can of Coca-Cola and a can of Monster.

Dr Roberts: There is about 50 mg in a can of cola, which is a much smaller can, and 160 mg in a 500 ml can of Monster.

Q188 **Chair:** You would have no difficulty at all with a nine-year-old drinking a can of Monster, with that level of caffeine.

Dr Roberts: That level of caffeine is not above a safe level of use. There is no upper limit of caffeine that has been set by anybody, in any regulatory authority.

Q189 **Neil O'Brien:** Roughly how many milligrams are there in a cup of tea, compared with the 50 mg and 160 mg you have just talked about?

Dr Roberts: It is about 100 mg.

Q190 **Neil O'Brien:** There are 100 mg in a cup of tea. That is very helpful.

The most recent version of the Government's childhood obesity strategy considers consulting on further extending the watershed provisions for the advertising of unhealthy food and drink up to 9 pm. That follows a Committees of Advertising Practice consultation in 2016, which looked at the same issue, so Andrew might be best placed to answer this. Since that CAP review in 2016, has any new evidence come to light that is relevant to the issue of whether it would be sensible to extend the watershed provisions?

Andrew Taylor: The 2016 process related only to the non-broadcast media. Our system is set up in two halves. Television and radio are regulated under the Broadcast Committee of Advertising Practice. That is done through contracting out statutory functions held by Ofcom, under the Communications Act. We have dealt with this in two halves, although the policy goals are similar.

In 2016, when we looked at the evidence in relation to non-broadcast media, we found evidence of an effect. Owing to the context that over the past 10 years there have been restrictions in television advertising, we have seen a shift away from that as the primary medium for children in their media lives towards the online space, which is increasingly part of all our lives at the moment. We acknowledged that evidence, and introduced rules to bring the two regulatory regimes more or less into line.

On the television side, we launched a call for evidence in recent months—in May, I think. That closed recently. We are looking at the evidence in order to contribute to the Government's statutory consultation process. Part of that will be to reassess the premises on which the present rules on the television side are based.

Q191 **Neil O'Brien:** There have not been any particularly dramatic new developments since 2016, except that you are now trying to look broadly, in an aligned way, across different types of media.

Andrew Taylor: There is more evidence. We are not yet at the stage where we can talk about what the evidence is saying. From the responses we have received from a whole variety of public health bodies, charities and so on, we can say that there is more evidence. There are more studies.

Q192 **Neil O'Brien:** What sort of more evidence, roughly? What sorts of things are coming through?

Andrew Taylor: There are more detailed and dedicated pieces of work to review previous studies and look again at the effect. The key thing is that the present television restrictions are based on work that Ofcom did between 2004 and 2009. There was a systematic review for Ofcom by Professor Sonia Livingstone. She characterised the impact of HFSS advertising, which is distinct from energy drinks—in a sense, it is a broader category—as having a modest direct effect on immediate food preferences. That is the exam question or hypothesis the present laws are based on.

We need to look at that again. It is appropriate that we do so, because a lot of the past 10 years has been taken up with the fact that television had very tough restrictions, as they are today, but the non-broadcast media did not. In that time, the non-broadcast media have changed considerably. A lot of focus was there, but it is right that we now shift back to the question of television restrictions.

Q193 **Neil O'Brien:** In the 2016 consultation, the committee said that there was not enough evidence to show that advertising has a long-term effect on children's diet behaviour. Has there been any new evidence on that since 2016?

Andrew Taylor: Yes. The problem is partly conceptual, in terms of how a researcher would go about looking at that. The research teams tend to

focus on a snapshot of immediate reactions, so we can talk reasonably confidently about the immediate effect. The further you go down the line on how a decision to purchase becomes a dietary preference, weight gain and so on, the more complex it becomes. There is that hurdle in front of researchers.

Bluntly, I have not yet had a chance to read the studies, but there are several that purport to look at this in more detail. Claims have been made in those studies about the longer-term effect. We are looking at the evidence in the round. There is obviously an effect, and that requires regulatory action, which we have taken. When it comes to the medium and long-term effects, is there something new that would suggest that there is more of an impact? Obviously, the closer it gets to being an impact on obesity, the more likely it is that, potentially, we have a longer-term effect that feeds into the problems that we all know are caused by dietary issues and obesity. We need to assess that to see whether we have the bar set in the right place, in terms of where the regulations are.

Q194 **Neil O'Brien:** That is very helpful. It sounds like the previous "Not enough evidence" conclusion is under active review.

Andrew Taylor: I stress that we did not find that there was not enough evidence. We found that there was definitely a link. There are disagreements. Various people in the public health community want more action. We agree with them that there is an impact; the evidence shows that. The question is about the extent. We are dealing not with a fundamental question of whether to intervene or whether to limit the advertising of HFSS products and energy drinks, but with a question of where the bar should be set on regulation so that we can best meet our objective, which is to reduce and to limit appropriately children's exposure to these ads.

Q195 **Darren Jones:** Andrew, how does the CAP define children?

Andrew Taylor: The definition we use in the codes is under-16—nought to 15 years. Your questions are around energy drinks in particular. You will appreciate that in other policy areas we also have a definition for young people. Children are those up to 15; young people are those aged 16 and 17. Obviously, children and young people will be protected from alcohol and gambling ads. The HFSS restrictions apply just to children.

Q196 **Darren Jones:** How does the Food Standards Agency define children?

Dr Hargin: There are various levels. When we are looking at infants, young children or whatever, we use DH guidelines.

Q197 **Darren Jones:** I will assume that your definition is roughly the same as the CAP's. Dr Thompson, do you have a view on how you define children?

Dr Thompson: Generally, we look at the age range that is used in the different studies. Different investigators choose their own cohorts of people to look at and recruit.

Q198 **Darren Jones:** I already sense that we have a bit of a problem about how we define children. From a Monster perspective, how do you define children?

Dr Roberts: In relation to today's meeting, I based it on a child of less than 16 years of age. I believe that the UK's dietary survey database goes from three to 11 and then from 11 to 18. There is an age gap. Is a child someone aged up to 12, based on intakes? That is confusing.

Q199 **Darren Jones:** How does Monster define children, for the purposes of its product and its marketing of the product?

Dr Roberts: In terms of today's meeting, it is those below 16.

Q200 **Darren Jones:** Why do you say in terms of today's meeting? I am asking a simple question. How does Monster define children? I do not mean just for today; I mean as a business. How does Monster define the age of children?

Dr Roberts: I will have to bring in my colleague.

Q201 **Darren Jones:** Are you happy to answer that question?

Sam Pontrelli: Yes.

Q202 **Chair:** Do you want to come to the table? You may be able to answer some of these questions. Can you confirm your name?

Sam Pontrelli: I am Sam Pontrelli.

Q203 **Darren Jones:** Thank you for joining us, Sam. At the Monster company, how do you define children?

Sam Pontrelli: We define children as those aged 12 and under.

Q204 **Darren Jones:** Those aged 12 and under are children. That is a bit different from some of our colleagues from the regulators in the UK, isn't it?

Sam Pontrelli: Yes.

Q205 **Darren Jones:** With that definition of children, how do you change your business practice in the marketing of your product?

Sam Pontrelli: Monster does not market to children. Our primary demographic is 18 to 34 years old.

Q206 **Chair:** You say that you define children as those aged 12 and under and that you do not market to them. Does that mean you market from 13 upwards?

Sam Pontrelli: No. Our primary target market is 18 to 34 years old. Monster is a lifestyle brand—a motorsports brand, primarily. Most of our marketing dollars are centred around motorsports, such as Formula 1 and MotoGP. The followers of those sports are much older than the 18-year mark. The average MotoGP fan is in their 30s. The information we have is that the target market is much older than the 18 limit that we have for our marketing.

We did not set that 18-year level because we have any product safety concerns. It is really a matter of our target market and what they like. What a 12-year-old likes is very different from what an 18 or 19-year-old likes. If we were to target our marketing at 12 or 13-year-olds, we would completely alienate our target market of 18 to 34, because they do not like the same things. It is not a matter of safety, but a matter of how we market and what our primary target market likes. We want to make sure that we are not going younger, because that would completely destroy the brand image we are trying to create among 18 to 34-year-olds.

Q207 **Darren Jones:** Your target market is 18 up. The Monster Army website, which is where you link all these sports products with your branding as a Monster product, is part of Monster, isn't it? Is that right?

Sam Pontrelli: Yes. Monster Army is part of Monster Energy Company.

Q208 **Darren Jones:** On that website, it says that you target it at 13 to 21-year-olds. How does that align with your strategy of aiming at 18-year-olds?

Sam Pontrelli: That is a very good question. The Monster Army is an athlete development programme. We pick the top amateurs in their sport and financially help them to become professionals. It is not a database of hundreds of thousands of people. We select probably the top 200 within their respective fields. Most members of the Monster Army are in the motocross field. Anybody who has been a motocross parent understands the amount of money it takes to support financially their son or daughter in the motocross field. We help them with their training. They have to buy a motorcycle and travel every weekend to a different town. They have to buy gas, parts and gear. We help them financially.

We have to separate ourselves from those athletes and their influence on other children. They do not have any influence, because they are not being followed. Just imagine that your son or daughter is 12 years old and plays football. The only people going to that football game are the parents going to watch. It is very similar for the athletes in the Monster Army. There are no fans going to watch them play. It is strictly an athlete development programme, to help them to get to the next level.

Q209 **Darren Jones:** With respect, if your company has a website that says that you are targeting it at 13-year-olds, it seems to me that Monster is targeting 13-year-olds. You would not be associating your brand with 13-year-olds unless there was a commercial benefit for you. I understand

your company's position, but I put it to you that it is wholly inaccurate.

From a CAP position, I understand that for high-fat, sugary and salty foods there is a restriction on advertising if the viewing audience is greater than 25%. Is that right?

Andrew Taylor: It is correct in part. We have general targeting restrictions. This is on the non-broadcast side; the broadcast side is slightly different, although the principle is the same. The restrictions hold that, if a product under the DH nutrient profiling model is classified as HFSS—high fat, salt and sugar—it should not be directed at under-16s by the selection of media or the context in which it appears. In practice, that is interpreted in different ways, because you can target ads in different ways.

If you will allow me, I will give a bit of detail. There are three parts of this. First, if it is children's media, which is a website for children—something that the media owner is putting out with the intention of that property being somewhere children will go—ads cannot be placed there. There is no argument about 25% or how things are targeted. For example, the content on a channel on YouTube that has fairy tales on it is inherently for children. It is inherently irresponsible to put an ad for an age-restricted product around that—HFSS, alcohol or gambling.

The second element is where direct targeting is involved. In the traditional media world, there would be a direct mailing list, with name, address and various other bits of detail. If anyone on that list—just one person—is under the age of 16, it is enough to breach the code for an HFSS product. Diligence requires the removal of anyone who should not be targeted.

The 25% threshold comes in for media that are not for children—effectively, ads that are contextually targeted. There is a piece of media; you have paid to put your ad next to that. Anyone seeing the programme, video or magazine sees the ad. Where that is the case, there is a requirement under the code that the marketer takes reasonable steps to understand what the audience is. At best, it means using audience data, or other sources from which they can infer it, to ensure that they are not putting their ads in places where children make up a disproportionate part of the audience.

I have just made an error on direct targeting. As I said, in the traditional media, we have mailing lists. I should have added that in online media—for instance, in social networking and so on—they have the capacity to do much more exciting and impactful versions of targeting, using your account data on a social network to send you things you might be interested in. It gives the advertiser much more control. In the same way as with a mailing list, if they knowingly send an ad to someone who is under 16, it will breach the code.

There is no 25% involved; it is a one-to-one communication. The marketer is selecting a group of ones—individuals, who are individual audiences of themselves—to receive that communication. They should do their diligence to ensure that that does not include people they know to be under 16. At the same time, because of things like intraspace targeting mechanisms in online spaces, they can look at what you like, where you go, who you are friends with and so on. That can give a back-up to a simple statement of date of birth, to ensure that anyone who is known to be under 16, or could reasonably be expected to be under 16, should be excluded from any dedicated targeting of individuals.

Q210 **Chair:** How well is compliance monitored?

Andrew Taylor: The rules in relation to HFSS came in a year ago. We have just launched our 12-month review of those. It will involve dedicated research in the online spaces to find out what children are seeing. At the moment, all we have to go on is the complaints that the ASA has received. I do not know whether you are aware of this, but several adjudications about this type of targeting issue were published in the past two or three weeks. They involved pretty much all the social networks, from Facebook and Twitter through to Snapchat, Instagram and so on.

We are not seeing a massive number of complaints that would suggest significant non-compliance. That is positive. From a regulatory perspective, we can take that, but we cannot rest on our laurels. We need to ensure that we are not missing anything. We recognise that the great British public are very good at detecting things that they do not like or that they think are problematic, such as ads targeted at their children, but that is not a perfect mechanism for monitoring compliance. Later this year, we will carry out dedicated work to do that.

Q211 **Darren Jones:** Presumably, Monster does not target adverts on Instagram, Snapchat and Facebook at under-16s.

Sam Pontrelli: That is correct. All our targeting is 18 and above.

Q212 **Darren Jones:** We have heard that academics have concerns around the health effects of the way sugar and caffeine are packaged into these drinks, which can be consumed quite quickly by young people. In our last session, we heard evidence about how young people may be replacing their breakfast, for example, with an energy drink. The European Food Safety Authority has concluded that two thirds of 10 to 16-year-olds and, remarkably, 18% of three to 10-year-olds are regularly consuming energy drinks. What more do we need to do to give warnings on health effects, not just to children, but—to go to Dr Roberts's point—to parents?

Who would like to answer that question? Nobody?

Dr Hargin: European regulations already insist that products of this nature, of above 150 mg of caffeine per litre, have to contain a warning to the effect that they have a high caffeine content and are not

recommended for children or for pregnant or breastfeeding women. They must give the caffeine content per 100 grams. There are warnings on each product.

Q213 **Darren Jones:** That is the normal grid of what is included, not a health warning. Is that right?

Dr Hargin: It is a health warning.

Q214 **Darren Jones:** It is separate from the normal grid of fats, salts and carbs.

Dr Hargin: It is not in the ingredient list. It is separate from that.

Q215 **Darren Jones:** It is a health warning.

Dr Hargin: Yes.

Q216 **Darren Jones:** You have to look at the grid of all the stuff that is in it and realise that one bit may be bad. There is no separate warning in the advertising that says—

Dr Hargin: I am sorry, but I do not understand what you are saying. I am saying that there is a separate declaration on a pack.

Q217 **Darren Jones:** Andrew, do you look at this?

Andrew Taylor: We do not regulate the content of labelling. That is covered quite extensively by food law, which is beyond our—

Q218 **Darren Jones:** That would be the FSA.

Dr Hargin: It would be the FSA for food safety. For general labelling, it would be DEFRA.

Q219 **Darren Jones:** We have DEFRA, the FSA and CAP.

Dr Hargin: We have DH as well.

Q220 **Darren Jones:** These answers do not fill me with confidence. Carry on, Andrew.

Andrew Taylor: We cover the advertising element. There are a variety of statutory regimes across different forms of products that require certain information to be placed in advertising. There is that route to effect a change on warnings.

We have not looked at the evidence. We have not seen a case presented to us in relation to this issue or, indeed, anything else specific to energy drinks. We are entirely open to that. In terms of the evidence, it will be interesting to see your findings and the outcome of the Government consultation.

Warning labels on ads, or compulsory labelling of advertising, are something we have seen before in other areas. It is complicated. Evidence for their efficacy in other areas is not that strong, as people do

not pay attention to them and do not really do anything. The suggestion is that they have a counterproductive effect, as they may make the product a bit more dangerous and rebellious, which appeals to certain strands of young people. That is something we would have to look at and consider. We ourselves have not put in warning labels before. They tend to come through legislation mandating them. Obviously, we mirror that requirement.

Q221 **Darren Jones:** We have heard evidence about how sometimes there are sponsorship connections between energy drinks and games. The evidence was that you can use the lid to give your character extra strength in the game. Is that something CAP would look at as well, or are games looked at by someone else?

Andrew Taylor: We have to look at it on a case-by-case basis, because the commercial relationships are complicated. If a marketer creates a game or has an agency create one for them—a while ago, they were called advergames, but I am not sure where we are with that now—as far as we are concerned, that is a marketing communication. It is exactly the same as an ad in a magazine, an ad on a poster and so forth. It would be covered by the same code.

Q222 **Darren Jones:** What if it is a distinct game in its own right, where there is a commercial relationship?

Andrew Taylor: If that is the case, it is a bit more complicated. We would have to look at it, because those relationships can change. For example, if someone is placing advertising within a game, effectively, that advertising appears in what we call paid-for space, so it would come under the scope of the code, although the wider game would not. We would have to look at the sponsorship arrangements case by case, to see whether they were within it.

Darren Jones: Do any of you think that there are potential gaps between regulators on these issues? Okay, I will leave it there.

Q223 **Bill Grant:** We have touched on this before. It has emerged that a number of schools seem to be banning energy drinks of their own volition. Do you think that is the right thing to do, based on the available evidence? Could it be expanded to exclude things like coffee and tea in schools? Is it wise to do that?

Dr Hargin: There is probably additional evidence to be generated in this area. We are commissioning studies to look at the drivers and motivators for young children and adolescents to take these drinks. We will assess the evidence on the basis of that work.

Q224 **Bill Grant:** Are you suggesting that the bans may have been implemented based on perception, rather than solid evidence?

Dr Hargin: We would like to get some evidence on what the drivers are for young children consuming these products.

Q225 **Bill Grant:** Are there any other thoughts on a school ban? Is it a perception? Is it based on evidence?

Dr Roberts: Either a voluntary or a mandatory restriction has to be based on a safety-related matter. The levels of caffeine in Monster drinks are no different from those in other caffeinated beverages. If you have coffee being sold in schools, you must have a level playing field as to what the issues are regarding those products. If they are related to caffeine, you are sending a mixed message to a child. In fact, you are saying, "Coffee is okay, but energy drinks aren't, because they contain caffeine."

Q226 **Bill Grant:** Would there be any value in reducing the volume of the cans? Would there be benefits if the product were distributed in smaller portions and measures, instead of a large can?

Dr Thompson: The toxicity is related to dose, rather than concentration. With high concentration and a small volume, you would expect the effects to be similar to those with low concentration and a large volume. That is the way we do the risk assessments. It is the equivalent of comparing an espresso or a double espresso. It is very concentrated, but the same amount would be in a large drink where milk was added to produce a cappuccino or a latte.

Q227 **Bill Grant:** If one were minded to issue national guidance to parents on any risk to children consuming energy drinks, or, indeed, too much coffee, who should lead on that guidance for parents, either for energy drinks or for coffee?

Dr Hargin: It would be diet related. The Department of Health should lead on that.

Bill Grant: You say clearly that it should be the Department of Health. Are there any other thoughts in that regard? We will go for the Department of Health.

Q228 **Neil O'Brien:** This is a question for Kevin. With Brexit, there is an opportunity to look again at the labelling of different products. Some people have suggested that labels indicating simple things like spoonfuls of sugar or cups of coffee equivalents would be useful. How effective do you think those kinds of measures would be?

Dr Hargin: That sort of labelling can be quite helpful to consumers. It can put things into perspective, particularly for comparative purposes. We have things like traffic-light schemes to compare products. Looking at fat or sugar levels could be helpful.

Q229 **Neil O'Brien:** Do you think that they are better than milligrams and things like that, in terms of understandability?

Dr Hargin: The average shopper would probably understand them better than milligrams.

Q230 **Neil O'Brien:** Andrew, we have talked a bit about advergames and things like that. Can you tell us a bit about the extent to which you have ever intervened on games of that kind? Is there any guidance at the moment? Is it a new area you are thinking about but have not taken any action in?

Andrew Taylor: The advergame concept has been around for quite some time. I apologise for the fact that I cannot give specifics, but we have several ASA rulings from some years ago on their use. The difference between then and now is that we have stronger rules in place. Before, we did not have restrictions on the placement or targeting of HFSS ads in the non-broadcast media, which would include online. Those games were legitimate, but the rules limited the types of content they could use. Now, dedicated advergames cannot be targeted at under-16s through the selection of media. If the medium itself was the advergame and it was created in a fun and exciting way, with lots of cartoon characters talking directly to children, that would inherently be a problem.

Q231 **Neil O'Brien:** Are you confident that we have the balance right? In another inquiry, we have heard how poor age verification is in a number of domains online. Do you think that there is a case for stricter controls on advergames, compared with what we have now?

Andrew Taylor: It is much broader than advergames. Online presents a whole variety of challenges. Targeting age verification is one of those. Our system uses a very basic principle to deal with that: there is a reverse burden of proof. If an advertiser receives a complaint, it is not for the ASA to prove that it has breached the code; it is for the advertiser to prove that it has not. Without being glib, it is not our problem. The advertiser has to have done its diligence and has to be able to demonstrate that to the ASA, to show that it has complied with the rule about targeting.

Q232 **Neil O'Brien:** Do you expect advergames, social media and so on to be included in the Government consultation?

Andrew Taylor: In my understanding, there is a provision about online in the Government consultation, which references CAP. We are very keen to work with Government on that, and have indeed been working with them.

Q233 **Neil O'Brien:** Do you expect them to cover advergames, as well as online generally?

Andrew Taylor: The consultation has that within scope. We will be contributing to it and, hopefully, helping Government in their objectives.

Chair: Thank all you very much. We appreciate your time this morning.

Examination of witnesses

Witnesses: Steve Brine and Jenny Oldroyd.

Q234 **Chair:** Welcome. Thank you, Steve, for attending this morning. Jenny, would you introduce yourself?

Jenny Oldroyd: I am Jenny Oldroyd, the deputy director for obesity, food and nutrition at the Department of Health and Social Care.

Q235 **Chair:** The recently announced consultation includes a possible ban on the sale of energy drinks to children. Could you set out the scientific evidence to support the case for such a ban? Could you explain why you have brought energy drinks within the remit of the obesity strategy? Is it because of the sugar content or because of the caffeine? What is the relationship between caffeine and obesity?

Steve Brine: Thanks for doing this Committee inquiry; it is very helpful. I am still here. It is all the rage to move, but I thought I would break the habit and stay.

We are hearing strong calls from parents, health professionals, teachers, retailers and certainly from MPs across the political spectrum for action on high-caffeine energy drinks. That is really the starting point. Parents, and I count myself among them, and those who work with children, such as teachers—I know you heard from one of the big teaching unions as part of your evidence—are concerned about the effects of energy drink consumption on children's health and behaviour. We see consumption levels way above the European average. We are aware that the evidence base for the effects of energy drinks on children is very complex, and I would be the first to say that more research is needed fully to understand their impact on children.

Q236 **Chair:** What do you know of the evidence base potentially to justify a ban?

Steve Brine: Studies have linked energy drink consumption by children to increased likelihood of headaches and emotional difficulties, tiredness and sleeping problems. Some of the evidence you have been given is some interesting research that has been done in the United States, looking into hypertension and possible heart challenges. The NASUWT's big question survey found that, when presented with a choice of 23 potential causes of pupil indiscipline in the classroom, more than one in 10 teachers—13%—and school leaders identified energy drinks as the main contributor to the poor behaviour they witnessed.

Q237 **Chair:** Could you address my supplementary question about why you would bring energy drinks within the obesity strategy, just to help us to understand that?

Steve Brine: Energy drinks can contain very high levels of sugar.

Q238 **Chair:** But there are a lot of other drinks that children drink that contain high levels of sugar that are not proposed for a ban.

Steve Brine: But they are proposed for the sugary drinks industry levy, colloquially known as the sugar tax. Of course, high-energy drinks that

are high in sugar would fall within that. A standard can of Monster contains 48 grams of sugar. I am aware of that fact. That is one reason why we thought that we would put it in the childhood obesity plan.

Q239 **Chair:** You were able to answer that question, but two representatives of the company were not. I do not know whether there is disagreement.

Steve Brine: I am a Minister and a parent. I do not allow my children to drink high-energy drinks. As you know, Chair, the childhood obesity plan was a big moment, when we knew that there would be significant interest. At a busy parliamentary political time, it seemed like a good place to put it. There was some debate about whether it should go into the childhood obesity plan, but that plan is not just about obesity; it is about children's health and wellbeing, so it seemed a logical place to put it.

Q240 **Chair:** I want to understand a little more clearly whether the proposed ban is primarily because of caffeine or because of sugar. Plenty of other products have high levels of sugar.

Steve Brine: It is primarily because of caffeine.

Q241 **Chair:** In a sense, that particular justification is not relevant to obesity; you are just putting it there because that is what you are dealing with at the moment.

Steve Brine: And, as I said, the 48 grams of sugar in a standard can is definitely relevant to obesity. What we said in the plan was that we will consult "before the end of 2018 on our intention to introduce legislation to end the sale of energy drinks to children by all retailers." That has been very well welcomed.

Jenny Oldroyd: The plan as a whole looks at diet and the food intake and drink intake of children, so it feels like the relevant place to mention energy drinks. We recognise that a regular energy drink, on average, would have about 65% more sugar than a regular soft drink, to compensate for the bitter taste of the caffeine. Randomised controlled trials—RCTs—show that you consume more when you consume sugar with a caffeine drink when they are together; you tend to consume more of the drink.

There are some interesting figures in the evidence. In this country, our 10 to 14-year-olds are more likely than our 15 to 18-year-olds to be chronic consumers, drinking four to five cans a week. That concerns us. Around a quarter of adolescents consume more than three energy drinks in one sitting. Those high levels of consumption particularly concern us. We are aware that some studies show that you are more likely to consume energy drinks if you are a child in receipt of free school meals. We recognise that there are links to deprivation.

Steve Brine: I think you heard in this inquiry from Professor Amelia Lake, who is in public health at Teesside University and co-authored a

study for which a number of schoolchildren were interviewed. That study reviewed the academic literature on energy drinks from Europe and from the US, and found associations, although they are not necessarily causal, between headaches, stomach aches, hyperactivity, insomnia, fatigue and irritation. There were also higher instances among energy drink fans of injuries, driving violations and road accidents.

In the US, there was a big study by the National Poison Data System, which received 4,854 calls about energy drink cases, and almost half involved children under six years old. But it was among older children that the graver effects I referred to, such as cardiac rhythm disturbances and hypertension, were reported. There is enough of a platform for us to decide that we want to find out more and to consult. No decisions have been taken, but we are very clear that we want to find out more.

Q242 **Chair:** You talked about sugar content, but there are energy drinks that are sugar free. You are saying that the justification is purely on the caffeine and, although that is not relevant to obesity, the strategy is looking at wider issues. Is my understanding of your logic basically correct?

Jenny Oldroyd: That is correct. We recognise a link, but we are not at all confused about what we are trying to achieve with caffeine and sugar.

Steve Brine: There may be less caffeine in a standard 250 millilitre can of energy drink than in a cup of coffee, which is a comparison that is sometimes made, but we know that in many cases energy drinks are being sold in much bigger cans, of 500 millilitres, for example, and can contain as much as 160 milligrams of caffeine. I do not pretend to be a clinician and I am certainly not a scientist, but you have heard from them; they have spoken for themselves and are on the record. Children take in much more caffeine at a time than if they were drinking coffee, for instance. When there are four-for-£1 offers, children club together and buy those cans so they can share them out. That is worth investigating further, hence the consultation that we will launch later this summer.

Q243 **Chair:** People from Monster, which you mentioned, say in their evidence that there is no causal link between their product and adverse health consequences for children. They also state that the research mentioned in the rationale for the consultation that you have launched for the ban on energy drinks for children is, "a partial interpretation of the data that fails adequately to reflect the science or evidence that is widely available." Can you respond to that assertion?

Jenny Oldroyd: I have the text of our document here. We say that they are linked to adverse health outcomes, listing the ones Steve mentioned. We make no assertion that the link is causal; we would not do so, as the evidence is not there to suggest that it is causal. But we see quite strong links from the evidence.

Q244 **Chair:** Is there a case, therefore, for adopting a cautionary approach in this area, and taking action now rather than awaiting the outcome of your consultations, or do you feel that it is best to get full responses before you make a final decision?

Steve Brine: We could just act out of hand, but I do not think that is a sensible way for a modern Government to proceed. We have lots of evidence from headteachers. I have read the NASUWT evidence, and I saw what Darren Northcott from the union said to you in his oral evidence about the behavioural impacts in schools.

There is the question of a voluntary versus a legal ban. I am more than happy to put on the record credit to Waitrose, which led the way. All the other big supermarkets followed and have already banned the sale of energy drinks to under-16s. To be clear, in the childhood obesity plan we mention this; we talk about banning the sale of energy drinks to children, and we will consult on where that level should be pitched, at 18, 17 or 16. Many of our major supermarkets have already taken voluntary action to do that, and I applaud them for it. Many small retailers, such as newsagents, have done the same—you heard from the Association of Convenience Stores—but many still sell them to children. Many small retailers would welcome a legal ban, as they struggle to take assertive action and police it on their own.

The voluntary approach, as with the sugary drinks levy before it came in, when it was a carrot and before it became a stick, has achieved quite a lot but seems to be going no further. A legal ban, if we decided to go there, following consultation, would introduce consistency across business and a level playing field, which we have heard from parents and teachers that they would welcome.

Q245 **Chair:** On the issue of the level playing field, part of Monster's case to us is to ask why we should pick on energy drinks. Children and adults get their caffeine from a whole range of sources—tea, coffee, chocolate and Coca-Cola. Why are you proposing a ban on one form of consumption of caffeine when all the others remain available and are hardly commented on? How do you respond to that?

Jenny Oldroyd: In the consultation, we absolutely invite any evidence of other forms of over-consumption, but the concern we are picking up, and which we can see in the evidence, is around real over-consumption of energy drinks among a particular group of the population. We have not had anyone come to us to suggest that there are the same kinds of issues with coffee and tea being consumed at the kinds of levels that teachers and parents and others who work with children are concerned about for energy drinks.

Steve Brine: While the caffeine content, at 300 milligrams per litre, is less than for filter coffee, which is about 400 milligrams per litre, the drinks we are talking about are much more quaffable—it is a great word—for children. The EFSA, which has advised us, says that just one can of

some brands can exceed the recommended daily dose. Coffee is very different. It is hot, it is not necessarily full of sugar, and you cannot gulp it down. You cannot have three or four after another, as you can with these drinks, buying four for a pound and sharing them out. They have highly attractive flavours, which are marketed that way, such as tropical fruits and blueberry. It has been said before, but they are to coffee what alcopops are to vodka.

Jenny Oldroyd: There is evidence that taste is the main factor that drives these decisions for adolescents.

Q246 **Neil O'Brien:** Jenny, you mentioned that there is a difference in consumption between FSM children and others, and that there is more consumption. Can you quantify that for us?

Jenny Oldroyd: I do not have the figures here, but I would be happy to look at the evidence and see what it says.

Q247 **Bill Grant:** The revised childhood obesity plan notes a need for clearer labelling for menus and food. Do you think that energy drinks are clearly labelled at the moment? Would you be open to the idea of graphics indicating sugar content by way of teaspoons and, say, caffeine by way of coffee cups? Would it help?

Steve Brine: I am open to everything, Bill. Energy drinks are already required by EU law to bear labels saying that they are not recommended for children, and they must provide information on the level of caffeine in them. Labelling laws are governed by the European Union and, as long as we are a member state of the European Union, we are a rule-taker in that sense. Stop laughing, Norman.

If the consultation responses and other research suggest that making labelling clearer or more prominent would be beneficial, we will obviously look at the opportunities that taking back control would present for us to make labelling more effective.

Q248 **Chair:** Would that include depictions of teaspoons and coffee cups?

Steve Brine: We are looking at everything across the board in terms of labelling, not just on these drinks. When we talk to the Health and Social Care Committee about the child obesity plan, we are looking at the opportunities that no longer being a member state will provide us with on labelling. We will consult on introducing this ban, which we think is an appropriate measure that will send a clear message that energy drinks are not suitable for consumption by children. If we need to make it clearer on the labels, subsequent to any ban, if that was where we decided to go, then, yes, we are not frightened to do that in the slightest.

Jenny Oldroyd: Our commitment around labelling is in chapter 2, if you want to look at that in future.

Q249 **Bill Grant:** Minister, you mentioned that the large supermarkets have a

voluntary ban on selling energy drinks to younger persons, and you indicated that that was a success.

Steve Brine: Partially.

Q250 **Bill Grant:** I accept that. Contrary to that, the Association of Convenience Stores suggests differently, saying that such a ban would achieve very little except to disadvantage the store that follows the ban. Do you think that the voluntary ban should continue and that it is sufficient, or would you take it a stage further? Is there any advantage in a mandatory ban? What are your thoughts on that?

Steve Brine: I think the Association of Convenience Stores said that it would welcome a legal ban. There is no evidence from its members to suggest that they would not, and credit to them for taking action thus far. But it is voluntary action. It is quite organic. Heads often approach local stores, concerned about what they are seeing in the classroom, and then they have a conversation with the store owner or manager. There are all sorts of different shades. They might not sell to children wearing a school uniform. They might not sell to children in the morning. That is interesting, and I am interested in listening to the evidence around that.

I am not an Education Minister, but I would question whether it is the job of headteachers to start talking to local stores about what they sell and when. I would think that teachers have quite enough on their plate, teaching our constituents' children, without going out and policing drinks that are sold in stores around their schools. The voluntary ban has had some success; I think you heard in your evidence that 53% of independent retailers are following some sort of policy on that. On top of that, as I mentioned, big retailers led by Waitrose have already introduced a voluntary ban.

Q251 **Darren Jones:** I was visiting a school in my constituency the other week that is subject to a particularly restrictive PFI contract, one of the earlier ones, which requires them to use an approved supplier for catering and for their vending machines. The teachers had a real battle in trying to get them not to sell and provide energy drinks in the school. Will there be any measures to help headteachers in that position?

Steve Brine: I do not think that is directly part of it, is it? There is the school food standards issue.

Jenny Oldroyd: If we restrict sales to children, if that is where we go following the consultation, it would help quite significantly in that situation.

Steve Brine: Because they are being sold, they are not being given away.

Q252 **Darren Jones:** Generally, it would just flow through.

Jenny Oldroyd: Yes.

Q253 **Bill Grant:** In the event of any action in relation to energy drinks vis-à-vis children, what would the defining age be for children? Would it be 16 or 18?

Steve Brine: We have not said. In the childhood obesity plan, we just say, "We will, therefore, consult before the end of 2018 on our intention to introduce legislation to end the sale of energy drinks to children by all retailers."

Jenny Oldroyd: That is one of the elements we will consult on.

Steve Brine: It is about where we pitch it.

Jenny Oldroyd: In relation to some of the conversations you had earlier, Latvia and Lithuania already have bans relating to the age of 18. Equally, there are substances in this country for which we have an age 16 cut-off. There is a conversation to be had to open up a cut-off point.

Bill Grant: Before you arrive at a decision.

Steve Brine: It is not just us. My opposite number in the Dutch Health Ministry is looking at exactly the same thing: a potential sales ban to younger people. They describe them as younger people; they do not define the age. They are wrestling with that too. They will discuss that later this year when they bring out a new national plan in October, which will probably be similar to our childhood obesity chapter 2.

Q254 **Bill Grant:** This is the reverse question. Can you see any benefits at all of not banning the sale of energy drinks to children?

Jenny Oldroyd: That is definitely a reverse question. We will be open in the consultation to any alternatives. I can see that we might need to do some work to inform parents and other people about why we would go down this route, if it is the route that we go down post consultation. I do not think that alone it will resolve everything. We will look at that kind of additional information, but the consultation will give us the opportunity to see whether there are any other proposals.

Steve Brine: It is the same, Bill, with all the stuff we are doing. I am very clear, as I have said in the House on a number of occasions, that this is a partnership approach of three. There is the Government, who can do things, ban things and make tax changes, and there is definitely a role for that. There is business, which I think can, should and does show a form of social responsibility. And then there are parents. My son likes Fortnite, but I do not let him use it, because I do not think that it is particularly healthy for him. Parents have a big responsibility as to what we allow our children to do. Nobody is suggesting that Government have all the answers, or that they should; parents need to step up.

Q255 **Chair:** Am I right in understanding that your case for a potential ban is based on your concern about children who over-consume? You are not saying that any consumption of caffeine is bad for children, because they

get it in all sorts of ways, from a cup of tea to a can of coke, and so forth. Is it concern about particular groups of children drinking large volumes of energy drinks, and the attraction of that, which makes you decide that there is a potential case for banning them across the board? Is that a fair characterisation?

Steve Brine: As I said, the way these products are sold and marketed in bulk, and the size of the cans, is such that it can potentially encourage over-consumption of them, which can lead to some of the health outcomes I mentioned and some of the behavioural traits that we are hearing about from teachers, which you have heard about in evidence.

Q256 **Chair:** You have introduced a sugar tax. Have you given any consideration to a caffeine tax?

Steve Brine: That would be a matter for the Treasury, but no, I have not.

Q257 **Graham Stringer:** Do you know of any other countries around the world that have banned the sale of these drinks?

Steve Brine: I have given you the example of Holland, which is very much considering it, as we are.

Graham Stringer: They are consulting.

Steve Brine: They are currently where we are, which is discussing and consulting.

Jenny Oldroyd: They are banned for under 18-year-olds in Latvia and Lithuania. In Lithuania, they were banned for sale to children in 2014 and in Latvia in 2016. In Sweden, some types of energy drinks are restricted to sale in pharmacies and are not for sale to under-15s, so there is a partial restriction.

Q258 **Graham Stringer:** That is interesting. On the consultation, these were not your words but I understood you to say that, in terms of the impact of these drinks, you were looking at correlation not causation.

Jenny Oldroyd: The studies that we have available show associations; as you say, they do not show causation.

Q259 **Graham Stringer:** Do you think that is a sufficient level of evidence? These are very complicated areas, with lots of interrelated factors.

Jenny Oldroyd: In that space, as you say, there is lots of different and complex evidence, and lots of factors. I can see why there is concern among parents and professionals who work with children, which is a sufficient basis on which to consult on restrictions.

Q260 **Graham Stringer:** It is the concern of professionals, teachers, doctors and so on, rather than the hard scientific evidence, that is motivating this.

Jenny Oldroyd: The reason why we want to consult on it is a combination of those factors across the piece.

Steve Brine: Don't forget that the Committee on Toxicity, which you heard from this morning, has an upcoming report, which we very much welcome. We are also commissioning the EPICentre to conduct a complete literature review of our own—I mentioned one from the other side of the pond—so that we can ensure that we are using all the latest evidence to come up with a decision on the right action to take and the right questions to ask in the consultation.

Jenny Oldroyd: That will look again at the health and behavioural effects.

Q261 **Graham Stringer:** I know, Minister, that you are open-minded and will do the consultation thoroughly and properly, but it seems to me that the direction you are going in is likely to lead to a ban. What would be the benefits of a ban? What measurable benefits would you expect to see?

Steve Brine: We certainly have concerns, which have been raised by all the groups I mentioned, and that is why we decided to go through to consultation. I want to be very clear to the Committee that we have not said what we will do. I am not pre-empting the consultation. You are asking a hypothetical question about what the benefits would be.

Q262 **Graham Stringer:** I understand that, and I know you are a fair-minded person.

Steve Brine: Legally, I have to be clear.

Q263 **Graham Stringer:** Yes, I understand that. But in considering a ban, which is part of the consultation, what assessment have you made of the potential benefits?

Jenny Oldroyd: Any restrictions would be designed to reduce consumption among under-16s. We would look at some of the effects that we see, such as headaches, sleeping problems and tiredness, and the knock-on effects of those in classrooms, for example. With any of our policies, we undertake post-implementation reviews that look at the effects of those policies, and we would undertake that in this space, too.

Steve Brine: I would expect to hear from teachers, and the teaching unions that represent them, that they are seeing a change. I would expect them to see a step change in difference of behaviour, and I would expect it to be referenced as one of the issues that impacts on the behavioural challenge I mentioned at the start.

Q264 **Graham Stringer:** The first part on lower consumption is almost definitive. Apart from talking to teaching professionals, do you have any method of doing a study that would show conclusive evidence that there is a beneficial impact?

Jenny Oldroyd: We have not designed what a post-implementation review would look like yet; we would have to get through the consultation to know how to do that.

Q265 **Graham Stringer:** I know that you are not there yet, but what if you were to do that?

Steve Brine: What gets measured gets done. I would be very keen to make sure that my officials measured the success of any policy that I did, of course. For instance, Public Health England measured my sugar reduction programme, and it is that measurement and the outcome of that programme that led me to take further action through chapter 2, because it did not show enough progress.

Q266 **Graham Stringer:** You said previously, in one of your answers, that you expected drinks companies to show more social responsibility. Can you expand on that?

Steve Brine: That does not just mean the high-energy drinks companies but companies across the board that are marketing to our children, body image challenges and adverts placed during "Love Island", if you are unfortunate enough to watch it.

Graham Stringer: I am not.

Steve Brine: No, I cannot imagine you doing that, Graham. If these products are not marketed at children, I would expect to see a nil return or supportive return to the consultation.

Q267 **Graham Stringer:** There is a ban on advertising when more than 25% of the audience are children. In practice, doesn't that mean that the ban applies only to children's programmes? Do you think you should look at watershed limits on advertising? It is particularly difficult to measure that level of audience, I would have thought.

Steve Brine: Definitely. That is DCMS policy, and that is why we announced last month that we are going to consult on restrictions on TV advertising of HFSS products, as they are called, before the 9 pm watershed. That is controversial. There are plenty who do not want me to do that. I will not lie to the Committee. But we will consult on it, and if we think it is the right thing to do, we will consult business, and if we can do it in a way that does not overtly harm business, we will do it.

As I have said many times, Chair, this is a publicly funded health system. We want a publicly funded health system—there is no argument about that. There are plenty of arguments about how we spend our publicly funded health system money, but no argument that we should not have it. If we want to celebrate its next 70th birthday—

Graham Stringer: You mean its 140th.

Steve Brine: Yes, exactly. I want to be clear that we need to be serious about prevention. That goes across the space, which is why I am

interested in an advertising 9 pm watershed. We are going to consult widely on that, and I do not apologise for doing that, but we will do it with the best evidence and as sensibly and properly as we can.

Q268 **Chair:** On Graham's question about what benefits might accrue from a ban, and going back to Jenny's earlier comments, are you particularly focused on children from more disadvantaged backgrounds, free school meal children, where you appear to see a greater prevalence of consumption? Is there a view that this may impact on sleep and, therefore, the educational attainment of that group of children? Is that part of your consideration?

Jenny Oldroyd: I do not think that anyone has quite put the evidence together to complete the whole chain. From our perspective, if we are concerned about high levels of consumption and there is a group that already faces elements of disadvantage and which we know consumes more, we certainly hope that anything we did to support children in that space had at least as much effect on that group as on others. That is part of what we need to work through in thinking about a more detailed policy post-consultation.

Q269 **Neil O'Brien:** There is some concern about children's exposure to energy drink adverts in advergames and on social media. Should we be thinking about restricting such adverts, or stopping children from accessing such games in the first place?

Jenny Oldroyd: Many of the games mentioned are for the over-18s. Part of the issue we have is with enforcement of those restrictions. We have research coming later in the year from the Obesity Policy Research Unit on how all forms of advertising affect children's food preferences. The additional research that we get this year from the EPICentre, which Steve mentioned, and that research, will help us to understand whether we want to do more in the advertising space, specific to energy drinks, as well as looking at restrictions on sales.

Q270 **Neil O'Brien:** Steve, do you want to add anything?

Steve Brine: They are two sides of the same coin. Yes, there is the advertising space; for instance, a number of sporting events are sponsored by high-energy drinks companies, which is a commercial decision that they take, and I am sure that those sporting events welcome that sponsorship. Just to be clear, we are not proposing to change that, because they are not sporting events aimed at children. But are children then drawn into that? Yes, but sometimes you have to recognise the limits of Government. That is why I do not think we could change that, even if we were proposing to, which we are not. But we can propose changes at the point of sale, which is why we are looking into the advertising space and the point of sale, which is where we can stop them getting hold of it.

Q271 **Neil O'Brien:** You are not interested in banning energy drink sponsorship of sports events.

Steve Brine: No.

Q272 **Neil O'Brien:** To what extent do you think gender-based advertising of these products is a problem? We have heard that some of the zero-calorie versions of these things are marketed at women and the full-calorie versions are advertised to men. Is the consultation looking at that issue?

Jenny Oldroyd: We have further research coming out that will help us to understand how different forms of advertising and the nature of different advertising affect food preferences. We will be really interested, either through that or through the consultation, to receive any feedback on the gender advertising point.

Chair: Thank you. That concludes the evidence. We very much appreciate your coming along this morning. Thank you.