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**HOUSE OF
REPRESENTATIVES**

STANDING COMMITTEE ON HEALTH AND AGEING

Reference: Obesity in Australia

WEDNESDAY, 3 DECEMBER 2008

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HOUSE OF REPRESENTATIVES
STANDING COMMITTEE ON HEALTH AND AGEING
Wednesday, 3 December 2008

Members: Mr Georganas (*Chair*), Mr Irons (*Deputy Chair*), Mr Bidgood, Mr Briggs, Mr Coulton, Ms Hall, Mrs Irwin, Ms King, Mrs May and Ms Rishworth

Members in attendance: Mr Bidgood, Mr Coulton, Mr Georganas, Ms Hall, Mr Irons, Ms King and Mrs May

Terms of reference for the inquiry:

To inquire into and report on:

The increasing prevalence of obesity in the Australian population, focusing on future implications for Australia's health system.

The Committee will recommend what governments, industry, individuals and the broader community can do to prevent and manage the obesity epidemic in children, youth and adults.

WITNESSES

DALY, Dr Joanne, Group Executive, CSIRO Agribusiness, Commonwealth Scientific and Industrial Research Organisation..... 1

HEAD, Dr Richard, Flagship Director, Preventative Health Flagship, Commonwealth Scientific and Industrial Research Organisation 1

Committee met at 8.37 am

DALY, Dr Joanne, Group Executive, CSIRO Agribusiness, Commonwealth Scientific and Industrial Research Organisation

HEAD, Dr Richard, Flagship Director, Preventative Health Flagship, Commonwealth Scientific and Industrial Research Organisation

CHAIR (Mr Georganas)—Good morning and welcome. Thanks for coming. I will hand over to you to brief us on the different things you have been doing on obesity.

Dr Head—Many thanks for the opportunity to present to you. By way of background, my role in CSIRO is as director of the preventative health program, which is one of the first flagship programs in the organisation. The organisation views health and disease prevention as important and has a long history of involvement in that, particularly in the area of nutrition, going back many years. We have assembled teams right across Australia. We are based in Adelaide but we operate across the whole country, bringing multidisciplinary groups together and interacting with the external world—universities, clinical departments, hospitals and the rest of it—in the whole area of prevention.

So, because one of our programs is on obesity, we welcomed the opportunity that came by to at least be able to share with you some of our views around obesity and where we see the challenges in Australia on this problem. We put together a submission, which I am sure you have, and one of the key reasons for being here today is, if we can, to amplify what we think are some of the key issues. The standout for me is really three words: it is about coordination, collaboration and cooperation. In other words, I think the size of the issue we are dealing with is one that does require critical mass, but it requires more than that. It requires multidisciplinary interactions right across the whole board, not just in science but, I suspect, beyond science.

By way of summary, I would like to thank you again for the opportunity to come here. The intent is very obvious, and that is to amplify some of the key messages in the original submission—and the main one is the issue of coordination going forward—and to offer any help we can to you in this really critical area.

CHAIR—Excellent; thank you. We will start off with some questions and then we will just open it up for discussion. First of all, what we would be really interested in is studies that you have done, and I can see there are some here, that perhaps look at any models that have been successful. Secondly, one aspect of the CSIRO is the CSIRO diet that we have heard about, which is obviously connected to the CSIRO. That is one of the most successful things, or at least that is my personal experience with friends who have lost a lot of weight through the CSIRO diet and have maintained that weight loss. It seems like pretty ordinary eating to me. Is it being monitored? I know that there were studies being done with people being monitored and, if so, are there any results from the monitoring?

Dr Head—Let me step back and answer your questions in the following way, and why don't we take the diet as an example. The diet you are referring to is the total wellbeing diet that Manny Noakes and Peter Clifton put together and published. As you are aware, it has now sold over a million copies. I think there are some great lessons you can take out of that exercise: No.

1, that the book was not just written de novo, straightaway. It was based on years and years of research, and the research in its original context was very much around trying to understand the relationship between what you eat and risk factors, particularly cardiovascular risk factors, which, as you are well aware, track with obesity. When you boil down what you eat, you are talking about carbohydrate, lipid and protein. The book itself was really a combination of experience that those two investigators had over many years, and to me that draws out one of the challenges going forward—and that is the precedence of evidence based programs. So part of attacking this issue must be around these evidence based programs, wherever they are. That is No. 1.

No. 2 is the area of uptake in the community and what that means, which you have touched on. We could have taken that material, as we do, and published it in scientific journals and the rest of it, but at the end of the day what does that do to society? There has to be a translation back into society. So the idea of doing both is critical—in other words, not only doing science that is submitted to journals but also presenting and communicating the material, which is contemporary and evidence based, to society in a way that would be useful. That is really another challenge that we face. The total wellbeing diet is an excellent example of that, I think.

The third thing I think you see from the *CSIRO total wellbeing diet* is something I am sure you have seen with your friends, and that is the fact that there has been a very large take-up of the material. Why is that? I suspect that that is because there is a need out there for that type of information. We know that the book has sold over a million copies. We have done some analysis—I do not have it here—on the amount of weight that has been lost by individuals across the board on that diet. Admittedly, that does not follow up whether or not this weight loss has been maintained for a long period of time, but we actually do have some assessments of that and, if you want, I can give you that information.

If I can, I will just take the liberty of drawing out another issue here which I think you have raised and which is critical. You have seen the facts and figures on the prevalence in Australia of obesity. An area of that complication and of that size is well beyond, in my mind, a single investigator, no matter how much technical support there is to tackle a problem like that. It is about reframing the way that we look at science and its interaction in society. I think the driver must be the national goal and being very crisp about what that national goal is. In other words, the national goal could be a weight reduction by such an amount in the population. From that national goal will come a series of very discreet questions. In other words, that is the goal and the goal is fine and we all want to go for that goal, but what are the key things you want to address? Do we have enough evidence based programs? Do we understand where the critical issues are in terms of people gaining weight over a lifetime and so on? Do we understand the interaction between our genome and lifestyle, and how can we maximise that to get the outcome? They are the key questions.

I think the next question you then ask is a due diligence question, and that is: do we have the skills to tackle those questions? Those skills are not going to come from one institution, in my mind. In a small country like Australia they must come from a broader parish—hence the coordination. Finally, the question is: what types of research do you really require now to help you in that area? Closing that loop are two things. One is: what is the adoption pathway that is going to be used there? In other words, how will you run that out into society? The other is: what is your estimation of impact if you are successful in that process? So it is a lifecycle.

Ms KING—I would like to turn to the overheads that we have in front of us. You have as a dot point that parents rated education for children as their highest concern. Diet, food intake and nutrition rated fifth, and fitness and exercise rated 18th out of 23. Can you elaborate on that a little bit for me. That is really concerning, if it means what I think it does.

Dr Head—In the submission—I think on page 19—there is a summary of that information. As you are aware, we did a survey of 1,202 parents and care givers in which we worked our way through those questions. Really what you see in the dot point is a summary of that data. It is simply saying that, for that cohort, exercise was right down the scale when compared to others, such as education.

Ms KING—Some evidence we have had before this committee—and I have not managed to attend all of the hearings, obviously—is that we have got things a bit arse about. We have been concentrating so much on diet, food and nutrition. If we just got people to move more, that would be a significant improvement on where we are at the moment. That leads me to think there is a lot of work to be done in bringing that whole physical activity side of the equation back up. There is a lot of information out there about food and nutrition.

Dr Head—I will relay some information that might be helpful there. Subsequent to the submission, we released the work that we tendered for and did for the Department of Health and Ageing on children's nutrition and physical activity. Just picking up on your issue there, the survey at the moment of about 4,487 children suggested that 69 per cent of children meet the national physical activity guidelines. You could view that as good, but you still have 30 per cent who are not meeting those national guidelines. The national guideline is at least one hour of moderate to vigorous exercise a day. We are now starting to get some figures.

The other key findings were that 17 per cent of boys and girls were classified as overweight and six per cent obese. Interestingly, five per cent were found to be underweight in that study. What does stand out if you look at nutrition in that most recent study we have done is 22 per cent of four- to eight-year-old children and only five per cent of 14- to 16-year-old children meet the dietary guidelines for vegetable intake. That is not a huge cohort, but I think these things are telling us something that is really important.

Ms HALL—I was interested in what you were saying about coordination. On the back you have a pyramid with the four dot points in it. I was wondering if you could expand on that aspect of your recommendation and include the role you see CSIRO will play in that.

Dr Head—We have learnt over five years that many of the national challenges that countries like Australia face are in reality underpinned by R&D or the solutions or the insights will come from R&D. That is number one. We also recognise that, if we are going to make an impact in these areas, we have to do things differently than we did before. We have certainly experienced that in energy, water and climate, and I cannot see any reason why the same issues do not apply here. What does that really mean? It means that in the example I just gave we really did need good epidemiologists talking to good mathematicians to help us understand data. We need good nutritionists talking to those people to understand nutritional intake. We need good people who understand physical activity to talk to those people. We need people who understand the food industry and the production of food to talk to those people. So, rather than approach things in a

vertical way, which I think historically over 100 years we have done, we now have to start to think laterally to solve these problems.

So to me coordination is the issue of offering the challenge to a diverse series of disciplines, from psychology to nutrition to food production to the genome to whatever. From that, you really start to understand the problem and move forward, in my view. That is the coordination. Bringing it back to practicalities, how would you do that in the setting and where would CSIRO fit? I think that was the second part of your question. The organisation's flagship programs were set up for that purpose; in other words, we were historically orientated one way and the flagship program took us another way, so that I could have a nutritionist talk to mathematicians, clinicians and so on and so forth. So we have learnt a lot from that, and what we would recommend is the equivalent of a flagship program. It does not have to be modelled on ours by any means, but I think that concept would be really terrific in this area. Now, where would CSIRO fit in that?

Ms HALL—I am sorry; I have to go downstairs for a couple of minutes, but I want to push this a little bit further when I get back.

Dr Head—Absolutely.

Ms HALL—Thanks. I am sorry.

CHAIR—I think Mark has a question.

Mr COULTON—I am glad there is an opening here.

Ms HALL—So remember where you were up to, please.

Dr Head—I will.

Mr COULTON—My question is along the lines of what you were talking about. In this inquiry we have had a lot of witnesses. We have had people who do lap banding; we have had the supermarkets and the fast food people. But ultimately—and I can speak from my personal experience—weight loss, control of weight or physical wellbeing comes down to individual will. With lap banders you can still put a Mars Bar in a blender or whatever. You have to have the will for it to all work, and it is the same. I went to a boarding school that was seven miles out of a country town, so there was no fast food, and I saw the boys—I will not say whether it was me or not—pour sugar into the butter container and mix it up because there was nothing else. You could ban all food that could make you fat from supermarkets and shut down all junk food stores; people will still stand at the sugar bowl.

What I am wondering is: with all those people you need to bring in, is there a need for psychiatry or a personal trainer attitude? It seems to me that, with all the things we have seen, unless you can somehow get personal will involved we are going to struggle. The places we have been to where we have seen real success, particularly with kids, are where they have disguised exercise in such a way that kids do not realise that they are going in to exercise; they are having fun. They have disguised nutrition and understanding food by having a kitchen garden and then cooking a delicious meal and having the experience of eating it. Those things

we have seen that have been successful are where the children have had a will to take part. What I am grappling with—and we are going to have to put a report out that is, hopefully, going to make sense of 12 months work on a lot of people's behalf—is: how can we get that into the mix? That is what I am struggling with at the moment.

Dr Daly—I think you have hit one of the key issues on the head here. It does require willpower, but one of the challenges for us as a community is that it may well require a lot more willpower now than it used to, and that is part of the community challenge for us. It is also about trying to address the kinds of choices available to people. It is a lot harder these days to make the right choice than when I was a kid, when there was chop and two veg for dinner and that was it. So I think part of it is that as a community we must accept responsibility for enhancing the choices available to people so that they can choose easily.

CHAIR—I will just add something there. Mark made a really important point about cases we have seen where exercise has been disguised as fun and kids have a lot of fun, whereas if you go back a generation the exercise that we were doing was part of the fun that we would have, whether it was kicking a ball, running out into the street and playing cricket or whatever we used to do when we were kids. That has obviously gone away from our neighbourhoods and parks, and that fun that was there has been replaced with other fun: TVs, computers and all the gadgets that kids have today. It is the lifestyle, obviously, that is doing all this, but how do we turn it back?

Mr COULTON—And how do we translate that nationally?

CHAIR—Yes.

Dr Head—If I pick up on where you are going, and I have a great deal of sympathy for it, the first issue in my mind is that this is not an individual issue, this is a society issue. So that is the first barrier to get through. Just like heart disease, it is a society issue not just an issue of an individual. It is lifestyle impacting on an outcome. The second thing I would argue is that the three dot points I put there are critical. The first one is evidence based programs. In other words, whatever decisions are made have got to be made on solid evidence. So if it is disguising exercising in other ways I am sure there are programs that say, 'This is the extent to which this will work.' In other words, you are dealing with something that is fundamental; that is the key. The other issue is adoption partners. In other words, part of getting to impact requires adoption: scientists could do all they want in terms of science but unless you have some adoption process it is not going to go anywhere. For instance, in the setting you just described, the example in agriculture has always been that an organisation like us does a lot of science in agriculture but it has been the adoption partners that have actually made that work. I think you have to have the same model here.

Mr COULTON—That is a good example. Farming is a classic case: looking over your neighbour's fence and seeing what they are doing.

Dr Head—Yes.

Mr COULTON—The other trend we have seen coming through is that as much as all this extra stuff, the nice food and the restaurant food is available to wealthier people, it is the poorer

people in society who are suffering. There would be a lot of reasons, but I know young professional people probably have gym memberships and things like that. Particularly in my electorate I have large isolated communities and they had the highest in Australia for diabetes and things like that. So even though obesity is supposed to be a condition of affluence it is actually the opposite: it is the poor end of town that is struggling with the choices. It may come back to education or something like that. When we look at a national approach, to tell someone at Walgett that they need to go to the gym or cycle to work is over the top, so do we need a multilevel approach to try and hit a couple of target areas?

Dr Head—I guess that is why we are arguing for a broad based, coordinated approach, where you need those other skills and adoption processes. A fragmented approach will not work here. In other words, I think you do need exactly what you were saying. You need integration across the whole lot. I cannot talk beyond the research environment but I can say that unless we really know the adoption pathway—and that is the one you are talking about—then it seems to me pretty difficult to understand how you will get the impact or how you could actually measure the impact you need.

Mr COULTON—Thank you very much.

Mrs MAY—I cannot speak for my colleagues but I am getting a bit frustrated as we go through this inquiry. I often look at examples and watch people, and yesterday I walked past a colleague of ours who had a meat pie and a can of Coke in front of him—and let me tell you he is not the sort of person who should be eating a meat pie and Coke. With all the education and intervention and what we know about heart disease and what we should be doing, are we trying to hold people's hands too much here and not giving a very strong message that what you put in there is what you are going to wear.

I am particularly interested in your paper about the challenges we face as a nation. We are saying it is a community problem and it is a national problem, but I go back to what Mark said: if people do not have the will to help themselves, how the hell do we as a government—any government—force people to do something about their health? The bottom line for government is the cost, which is enormous. We live in a country where there are many choices about what you can and cannot eat, but how many of us go through the supermarket and see not a can of coke but a carton of coke sitting in a trolley? How do we get this message through? We have tried. It is obviously not working. I think it is a lifestyle change. People have to change their lifestyle and what they are eating. In here you refer to your challenges. When women go to have her breast screening every year, maybe we could follow up with a lifestyle assessment at that stage. Would you like to expand on that and how you see those challenges being met, without me getting too angry?

CHAIR—I suppose what Margaret is touching on is: what do we give them to give them that will.

Mrs MAY—What more can we give the people of Australia to understand what they are doing to themselves?

Dr Daly—One of the interesting things about many people is that they do not understand that they are actually overweight. It is truly interesting.

Mrs MAY—You are kidding!

Dr Daly—When we see images of obese people in the newspaper they are quite often people with BMIs over 40, which is extremely obese.

Mrs MAY—I think ‘BMI’ is too scientific—

Dr Daly—It is.

Mrs MAY—Just get back to the kilos.

Dr Daly—We see gross obese people. I do not think people understand when they are just a bit big, but they are overweight.

Mrs MAY—But we all know we are and we all know the dread of the word ‘diet’. I think we have to drop the word ‘diet,’ because we all start the diet Monday morning, brave it to Tuesday and then start again the following Monday. I am guilty, like everybody else. It is a lifestyle change; it is an eating pattern that we have to change. How are we going to do this?

Ms HALL—When you are answering Margaret’s questions, can you touch on psychosocial issues and how they impact?

Dr Head—I think your question goes right to the nub of the issue. Regarding page 17 of our submission, I think it is a mistake to take just one age group, and say, ‘This is where the problem is.’ The problem is across the whole spectrum. I think that is what you are really saying. When you saw that person eating a meat pie and a soft drink or whatever, you can actually see that across the age spectrum. We are not looking at one part of the demographic; it is across the whole lot. I highlighted one thing on the overheads at the very start, which I think is absolutely critical—and I have used this here previously—imagine you woke up without all of what I have listed there in Australia. In my mind you would have an entirely different country in terms of the consequences of those issues. What does that tell you?

Mr BIDGOOD—Imagine we woke up one day and there were no fast food outlets. I think that would change the culture.

Dr Head—What this tells me is that, historically, Australia has made some very wise decisions that we benefit from. If you look at all of these issues, they are in the prevention area. Some of them are policy issues and some of them are legislated issues—in other words, seatbelts and so on; others are not. Others are based on programs like skin cancer and things like that. I think that gives you the message. I think you are going to need a combination of activities to have an impact here. You are going to have to work across the whole of the demographics and a combination of activities which, in many ways, should also have a very high input of broader education of the consequences of obesity and overweight. I take heart from the fact that we have done it before and it has worked. Invariably, if you look at all of these decisions, they were not just decisions plucked out of the air; I am sure they were, in some way, evidence based programs. I think you have to do the same thing.

You now have to find ways of putting in place programs that get those messages across and, particularly, take what you can from the evidence based science and outcomes that are there. But more particularly you have to tackle the issue that you have from the standpoint of many inputs, from psychology to nutrition to food production, because I think that is the only way you are going to get through that problem.

Mrs MAY—Have you any evidence about why your CSIRO book has been successful? Has it been successful because of the way it has been written or the way it has been delivered? There is always a cost involved in buying a book like that that prevents people from buying it. There are so many different books on the market. Would you say that yours is more successful because of the way it has been written or delivered? Have you got any evidence for that?

Dr Head—I do not know whether we have got any analysis but I can say a couple of things. Joanne, you may want to comment on this. The one thing that the organisation has valued over many years is the power of its brand. As an organisation it carries a lot of clout, and I suspect that that is a way through some of these issues. In other words, you would know that it has had a long history in the agricultural area and its value is there. I think, and I am guessing, that a part of that has come from the brand. It is also in many ways coming from taking complex science, which underpins many of these things, and presenting it in a translated way that people can understand, follow and do something about. So I think it is a combination of those things.

Dr Daly—One thing that Manny found is that people like the recipes. They like the recipe patterns. It suits some people to know that today they can eat this and tomorrow they can eat that, and it has different approaches which cater for different people. The other thing that Manny is finding in some of her other research is that when people go into the supermarket they get confused because diet books generally do not specify brands or products—they are generic. It is very hard for people to translate that generic information into a product in a supermarket, and so we took an unusual step in our third book, which is a healthy-heart book, and we do specify a couple of brands and products around margarine and, I think, a few other things. For us as a public sector organisation it is a bit too far to go right down that route, but we do need people to go into a supermarket and to know which can on the shelf they can buy. They just cannot fill that gap at the present. That is one of the gaps that Manny Noakes has identified.

Mrs MAY—Are we able to get copies of what you have produced? I know I have seen it in a bookstore. Would you be able to provide the committee with a copy?

Dr Head—Yes, we can provide those books.

Mrs MAY—Because often it is the expense. With Jenny Craig you have to buy the food, and people cannot afford that. It has to be the sort of food that you can buy in the supermarket, so if that is what your book is addressing that has to be a lot simpler for people to understand.

CHAIR—Can I say, as someone who has actually followed the diet—I use it as a base occasionally—it is very simple. It is food that you eat everyday anyway.

Mrs MAY—I think that is what we need.

CHAIR—You do not feel hungry on it at all. That was my experience of it, and I go back to it every so often. As I said, I had one particular personal friend who went through the research part of it and he lost a tremendous amount of weight and he has kept it off for three or four years now.

Mrs MAY—Does it combine an exercise program?

Dr Head—Yes.

Mrs MAY—So it is a holistic view?

Dr Daly—It is a lifestyle.

CHAIR—It is very simple to follow. There is not any complicated weighing. It is just sensible eating, mainly.

Dr Daly—It uses protein to satisfy.

Dr Head—It does. The satiating power of protein is key.

CHAIR—One particular day it specified a roll with turkey and I had to buy some. I cannot remember how many grams but I thought it was too much.

Mrs MAY—So you did not feel like you were starving or that you were on a diet?

CHAIR—No. It produces the basis in your mind.

Ms HALL—I was halfway through an answer when I went downstairs. Maybe that is a good way to come back to the coordination, which shows that the research CSIRO undertook showed that protein worked to satisfy cravings for food. That research was then transferred into a book and it was all coordinated through CSIRO. If you would like to finish answering the question, that would be fine.

Dr Head—I think that is where the glimmer of light lies. It is an issue that we talked about before picking up this one. It could never be one organisation like CSIRO. In other words, we can put out a *Total Wellbeing Diet* and we can have some impact but nationally if you are going to have an impact then you need many organisations like CSIRO coming together around a cohesive plan where society hears a constant similar echo and not divergent views, where you have a coordinated space and where, on a regular basis, you can sample society just to see how you are tracking so that you have the right epidemiology, the right mathematics and so on in place. I would strongly argue for that collaborative arrangement and some form of coordination. I am not saying for a minute that CSIRO should be doing that but we would be more than happy to be a player. That is the only way that you are going to get adoption and translation.

Ms HALL—With that coordination it would then be linking all the different aspects together so you would have the research and policy framework and then actual implementation of the research and policy. It would probably be overseen by government and different areas would be given responsibility for different aspects. Is that the way you see it?

Dr Head—It is, with a major focus on whatever you are doing leading to adoption, then you know the paths from adoption to impact. It would not just be bringing people together in a way where there is not that linkage. Driving for a national goal in obesity with the critical mass is the best way to get across to the nation and is the way to go.

Dr Daly—One of the things that we also see as important in this collaboration is to actually involve all the players. At present everybody is pointing the finger at everybody else because nobody wants to be seen to be the problem, the fault or the cause of this epidemic. In CSIRO's case we work not only with nutritionists but also with the food industry because they have to be a part of the solution. We are doing work with them to develop low density food that has the taste, texture and feel in the mouth of something that is quite fatty. We like fat because it feels good in your mouth. We are trying to develop foods that feel nice in your mouth but do not have the calorific value that other food has. There are a lot of different solutions and part of this coordination and cooperation is to see all the players as part of the solution.

Mr BIDGOOD—I have a couple of things to say. The first thing is, in the second paragraph of your executive summary you say a key is prevention. That to me is the key to the lock. I used to run two medical centres for 10 GPs and over nine years we routinely recalled men and women for well-men and well-women health checks. It was double cost to the Medicare rebate set at level C and was very popular. There are a lot of people who say: 'I want to take my body in for a roadworthy. I want to check the pressure. I want to check the sugar.' People are keen for that. My personal opinion is that government should be the key coordinator in regulating, as you said, bringing everybody together to do that. Basically the research is already in, you already have the documentation, everybody knows you have to eat the right food and exercise more.

I understand what Margaret is saying: it does get a bit frustrating, because we all know. There are a couple of things. There are external factors and internal factors. There are external factors such as, for example, the global financial crisis and war, where food becomes in short supply. In the Second World War there were five years of rationing and there was rationing even after the war, and that was possibly the healthiest generation, which will more than likely outlive this generation. So there are external factors. Recession means shortage of money and choices on food. People cannot afford fast food. The fast food phenomenon and all the fast food outlets—without naming the obvious ones—have only arisen in the last 30 or 40 years. This is where the problem is, because it is easy. People degenerate, it seems, to the lowest common denominator of laziness. They do not want to go out walking when they can get in a car. They do not want to cook when they can get it served to them hot right there and cheap. So I agree with your approach in that paragraph: it is the coordination. I see the role of government as key coordinator in bringing in you guys, the food industry, nutrition and everyone and collating the whole thing. That is what I personally want to see. I agree with you about the awareness.

In terms of the internal motivators, there is the personal desire to look good, whether it is a fashion statement or a sexual statement or whatever it is. In society people decide to either conform or not conform. If people find it too hard, it is easier to drop out and say, 'Oh, I can't be bothered going to the gym.' I think a big challenge there is: how do we motivate individuals when there is a big supply of choice, a big supply of unhealthy food? To me, that is a big challenge. Is it really the role of government to motivate individuals? How do we do that? Is it just through education, or is it by having a yearly recall on somebody's birthday, so that you

send out that letter saying, 'Hey, you're another year older; it's time for your yearly roadworthy'? What are your views on that sort of thing?

Dr Head—That is a tough one, but I go back to where we have got it right in the past—around vaccinations, seatbelts and so on and so forth—because the same issues sat there as well. The solutions to your frustration I think lie in those messages.

Mr BIDGOOD—Are you thinking in terms of the antismoking campaign, where it showed the really bad examples of lung disease?

Dr Head—The science can tell you the reality of what is going to happen. I am sure you have had many submissions that have said: 'These are the consequences of a population that is going to be obese. There are going to be cardiovascular consequences and increasingly some of the cancers and so on and so forth, as well as other issues.' For government, obviously, that translates into cost as well.

But, for the individual—and this is somewhat of a personal view—there seem to be two issues. I do not think people realise how efficient an instrument they are at extracting energy out of food. We are amazingly able, in the biological system, to extract energy from food, because historically we have always had to. So that is one. Therefore the amount of food that a person consumes is quite often greater than the amount they need, because there is not an awareness that it is not like filling up your car with petrol, where you know you have to fill the tank to get a certain number of kilometres. I do not think we have that mindset.

No. 2 is that I do not think there is a broad mindset in understanding the serious side of obesity and overweight more broadly—that you do not want to go into diabetes and you do not want to go into cardiovascular disease. I think they are parts of the message that are important.

Mr BIDGOOD—Just in response to what Margaret said a bit earlier about the person eating a pie: I like a pie occasionally, but, on my way to the gym the other morning, I happened to walk by the government nurses' office and I thought, 'I'll just pop in and check my blood pressure.' I am pleased to report that 120/70 is very good. But what they had there, which I thought was a great visual image, was a kilo of fat. Have you seen that? I picked it up and I thought, 'Yes, I suppose that could go there, couldn't it.' Images like that—just having that on the table, 'This is a kilo of fat,' so you could pick it up and move it around. I thought, 'Whoa!' If you have not seen it, pop into the nurses' quarter and have a look at it.

Dr Head—Yes.

Dr Daly—One of the things that we would also suggest is that we actually do not know enough about obesity and appetite, what stops people eating and what gets them eating. Some wonderful work has been done recently by Professor Steve Simpson, at the University of Sydney, who started working on locusts and was interested in what encourages locusts to stop and start eating. He has also more recently applied that more broadly to animals including humans. It appears that there are some interesting mechanisms, in that we keep eating until we get enough protein. Whether or not we have then eaten excessive calories may be part of the problem. Steve's work, I think, shows that there is a huge gap in our knowledge.

Dr Head—There is.

Dr Daly—If you go back to 50 years ago, most of us when we were little, and our previous generations, did not have to think about the portion size or how much we were eating.

Mr BIDGOOD—There was not a choice.

Dr Daly—They just ate and they just got on with life. We are in an era in which we have to consciously educate the whole population to think about: what is the portion that they need to eat, and what is the calorific value of this food? It is a whole new consciousness about our lives. It is new.

Mrs MAY—It was interesting when you mentioned a trigger. As a former smoker, I can remember that I poured the cup of coffee and the cigarette went in, or, if I got on the phone, the cigarette went in. I wonder about when we have our cup of tea in the morning and we have a biscuit or a piece of cake or something. I wonder about triggers. That would be interesting.

Mr Bidgood interjecting—

Ms HALL—That comes back to psychosocial—

Mrs MAY—How do you break that?

Dr Head—We put in the submission a calculation that we did, and whether it is accurate or not I do not know. Our estimate was that the weight gain, if you go back to the National Dietary Survey of Adults, in adults aged, say, 25 to 64 years of age, was something like 51.6 million excess kilos in Australia. I can do a calculation that says that is total tissue, so the lipid content of that, the fat content of that, will be smaller, but it is probably going to be about 30 million kilos. So you saw one kilo—

Mr BIDGOOD—One kilo only of those 30 million.

Dr Head—It may be a bit less than that—in fact, 30 might be too high—but what that is suggesting is that graphically, what you saw was key, but if you run it across the whole country—

Mr BIDGOOD—It is huge, isn't it. And, when those people fly, think of all the added burden to the fuel cost. But there we are; we will not extrapolate!

CHAIR—Thank you very much for your submission. It is very informative.

Dr Head—There is just one minor error in the overheads, but I will send that back to you. It was the last point under 'Obesity in Australia', where it said:

Obesity (not including overweight) is a financial cost to Australia

There was meant to be a dollar figure behind that. It is not saying that overweight is not a financial cost.

CHAIR—Perhaps you could send that through to us. Thank you very much. Keep us informed of any new findings or research, and vice versa with our report. We will send you a copy.

Dr Head—Thanks for the opportunity for us to talk with you. We appreciate it.

CHAIR—Thank you.

Committee adjourned at 9.29 am