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Advance statement to the Associate Parliamentary Food and Health Forum on its investigation into the links between food and mental health.

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Sustain: the alliance for better food and farming
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Sustain: the alliance for better food and farming is grateful to the Food and Health Forum for dedicating a series of meetings to the issue of the links between food and mental health. This statement is in advance of the presentation by Courtney Van de Weyer, Food and Mental Health Project Officer, to the Forum on 25 April 2007.

About Sustain

Sustain advocates food and agriculture policies and practices that enhance the health and welfare of people and animals, improve the working and living environment, enrich society and culture and promote equity. We represent around 100 national public interest organisations working at international, national, regional and local level. The alliance is a registered charity (no. 1018643) and company limited by guarantee (no. 02673194).

We operate in collaboration with our membership to:

- Facilitate the exchange of information to strengthen the work of the membership, and help promote their activities to the media and to policy makers.
- Develop networks of members and allied organisations to devise and implement policies on particular issues of common concern.
- Advise and negotiate with governments and other regulatory agencies to ensure that legislation and policies on food and agriculture are publicly accountable and socially and environmentally responsible.
- Encourage businesses to produce, process and market foods which are good for health and the environment, and to devise, invest in and maintain policies and practices that make sustainable food choices the easy choice.

The Food and Mental Health Project

Sustain has carried out work specifically on the issue of food and mental health for over three years through its Food and Mental Health Project. This project has worked not only to highlight the growing evidence of a physical connection between nutrients and the brain, but to also draw attention to the relevant food policy issues that affect the public's mental health and wellbeing.

The project's activities include, amongst others, producing briefing papers and reports; presenting evidence to government ministers and other relevant bodies; administering a network of disparate professionals working on the different aspects of the issue; responding to government and NICE consultations and advising other projects within Sustain (such as its work on public procurement).

Sustain's general view on food and mental health

As an overarching principle, Sustain is clear in the understanding that there is a real and physical connection between what we eat and the way we feel and behave.

It is simply not rational to accept – as it is widely – that the body is affected by nutrition, yet separate out the brain from this equation. The brain is a physical organ in the body, just as the heart or liver, and anything that affects the working of other organs will also affect the workings of the brain.

Because the manifestation of the brain's working is through feelings and, ultimately, behaviour, we see it as self-evident that nutrition affects mental health.

Sustain's view on the present state of research into food and mental health

Apart from this logical connection between nutrients and the brain, Sustain believes that there is already a good amount of published research supporting the connection. We have detailed some of this evidence in our 2006 report, *Changing Diets, Changing Minds: how food affects mental health and behaviour*.

In that report, we concluded that there was enough research to support policy changes to help improve mental health through dietary means. We reasoned that, even if there was no connection – which is highly doubtful – that there would be no disadvantage as the only 'side effect' would be improved physical health.

Moreover, considering that poor physical health is rife amongst those with mental health problems, we consider it negligent not to support dietary changes as part of mental health treatment.

More research needed

However, we do agree that there is still a great deal of research to be done. Although there is a good deal of convincing epidemiological and observational research, there are too few positive randomised controlled trials. Without a convincing number of these, it will continue to be difficult to convince mental health professionals, and policy makers, of the benefits of a better diet to mental health. (What, exactly, will be the "magic number" of trials is unclear – research into the link between heart disease and diet is still funded, yet what doctor does not recommend dietary changes to patients with heart disease?)

Funding research

Unfortunately, funding for this type of research is sorely lacking. Independent funding is becoming increasingly rare. Much of the research into treatments for mental health is now being left to the pharmaceutical industry, which unsurprisingly has little interest in funding non-patentable diet-related research. And, as far as we can tell, there has been no interest from the food industry in funding research. This is also not too surprising – the larger food companies with money to spare tend to produce the very types of food products implicated in encouraging diet-related ill health.

Of course, some funding has been granted by the food supplement industry (makers of vitamin pills and other dietary supplements). However, there is apparently not as much funding as they might claim in marketing material, and this is usually in the form of providing, for example, fish oil supplements for a trial, rather than grants. Moreover, this is not testing the effects of 'food' – it is testing the effects of a specific nutrient.

Food versus nutrients

All this leads to the problem with research into food and mental health. It must be kept in mind that performing randomised controlled trials on dietary factors is difficult and potentially misleading. In order to achieve double-blind conditions (where neither the researcher nor the subject know which treatment is being provided), it is usually necessary to use supplements, and not actual food. This means that dietary research is reduced to testing the effect of specific nutrients, not entire foods or combinations of foods. Although this is the only way to meet the rigours of respectable scientific research, it must be remembered that people do not eat nutrients – they eat food.

The principle of nutrient interaction states that even though every nutrient has a specific function, no nutrient works alone – *anything that it does, it does with the assistance of a series of other processes, only made possible by the presence of other nutrients.* Moreover, research into the science of food continues to develop – although we know much about macro- and micronutrients, there is still much that is unknown about their effects on the body. There is even less known about the other chemical compounds that exist in food that might be vital to proper digestion and use by the body.

As such, distilling nutrition down to one nutrient, performing on its own, is problematic.

Omega-3

Of all the research surrounding food and mental health, the one receiving the most attention has been omega-3 fatty acids. Although one of the reasons for this has been the success of some research trials (which have been covered thoroughly by other presenters to this inquiry, so will not be detailed here), there are a number of other reasons for the attention that need highlighting. These reasons include:

- Aggressive marketing by fish-oil supplement companies;
- Innovations in food technology (e.g., 'encapsulation') which has meant that fish oils can be palatably added to a wider range of value-added 'functional' foods, leading to an explosion in their availability;
- Nostalgia for the cod liver oil provided by the government after the Second World War, leading to a familiarity with linking fish oils to health; and
- The increasing medicalisation of health, which supports treatment through easy-to-take pills rather than through the difficult and complex process of changing the supply of and demand for food.

Although Sustain recognises that there is interesting and potentially promising research being carried out on omega-3, it has been frustrating that so much attention is focused on it. As discussed above, it is deceptive to consider nutrients as independent entities. Whatever benefit omega-3 provides, it must be considered in the context of the entire diet. Certain minerals are necessary for the successful incorporation of omega-3 into the body and the presence of other fatty acids may interfere – research or supplementation

programmes that ignore this key factor risk providing inaccurate perceptions of the effect of omega-3 rich foods on the body.

The marketing of omega-3

The research into omega-3 for mood disorders, particularly children's behaviour, has been a boon for industry. Clever marketing campaigns by supplement companies and food manufacturers have been all too eager to prey upon parents' anxieties about their children's behaviour and academic attainment (often to the dismay of the original researchers).

This is in spite of the fact that there is no published research evidence showing that omega-3 can help to improve a normal child's behaviour or school performance. As shown already to this inquiry, the research done so far has been with children who have specific learning and behavioural difficulties.

However, this has not prevented the supplement companies from benefiting massively from association with the research – the company that boasts specifically of having been used in the Durham trials neglects to mention the 'special needs' focus of the research in its marketing material. Moreover, a spot-check Sustain investigation into a range of supplements commonly found in the UK market found a massive difference in dose, sources and ratios of the different omega-3 fatty acids.

Parents can also now choose from fish-oil supplemented milk ("Clever Milk" that – although it uses the omega-3 research as a marketing hook – neglects to note that a child would need to drink two and a half litres of it to get the same dose as used in trials), omega-3 enriched yogurts, omega-3 eggs, omega-3 orange juice and omega-3 margarine. All of these products are more expensive than their un-enriched counterparts. Whether they provide any real benefit is seriously questionable.

Fish sustainability

Apart from issues about actual effectiveness and misleading marketing, the focus on omega-3 fatty acids, principally from fish oils, has worrying consequences for the sustainability of fish stocks. It is generally agreed that the most bio-available source of the most important form of omega-3 comes from fish, as the human body is inefficient in converting the 'parent' fatty acids found in plants.

However, the UN's Food and Agricultural Organisation (FAO) has estimated that 75% of the world's fisheries are fully exploited, over-exploited or significantly depleted. Some organisations working on the issue have commented that this is likely to be a *conservative* estimate. The oceans are not an inexhaustible source of fish – despite growing fishing fleets and improvements to technology, global fish catches have been decreasing since 1988. Moreover, the fish now being caught are smaller and younger than those caught fifty years ago – meaning fewer and fewer live long enough to reproduce and replenish the population.

It is not overly dramatic to say that the consequences of overfishing are potentially catastrophic, going far beyond the loss of our favourite recipes. In the words of one prominent researcher, "*(fish stock) depletion not only threatens the future of these fish*

*and the fishers that depend on them, it could also bring about a complete reorganisation of ocean ecosystems, with unknown global consequences”.*¹

It should be kept in mind that this is the situation where the population does not even eat the recommended amount of fish, currently at 140 grams of oily fish per week. On average, seafood contributes only about one percent of the nation’s daily calories – and much of that will be from white fish, not commonly rich in omega-3. Exhorting the population to eat more fish to improve their mental health will only worsen the situation.

Authoritative and trustworthy organisations such as the Food Standards Agency (FSA) continue to advise the public that they should be eating two portions of fish per week, yet only one of those portions should come from omega-3 rich oily fish. Why? If it is accepted that oily fish provide superior health benefits (if not yet in mental health, it is for heart health), what is the purpose in recommending white fish, the type of fish most often under threat? What benefit does it provide over and above other sources of protein? Fortunately, the FSA has recently started to review its position on such advice in line with concerns about sustainability.²

It should be noted, however, that the seafood industry has picked up enthusiastically on the ‘two portions a week’ message.³ The industry promotes this message to the public and through schools – with little mention of concerns about fish stocks (or if mentioned, dismissed outright) , and with little distinction between omega-3 rich (oily fish) or low omega-3 fish (white fish, often most at risk).

Those who do not, for whatever reason, eat fish often turn to supplements. However, it can be easily forgotten that popping fish oil pills or eating omega-3 enriched yogurt raises the same environmental problems as eating oily fish. It may seem obvious, but it needs stating – fish oil comes from fish.⁴

The answer? A balanced, healthy diet

Sustain believes the best, food-related, way to help improve the nation’s overall mental health will NOT be through leaving the fish oil and functional food companies to claim their products will ward off everything from poor grades to dementia.

Rather, it will be through policies that help and encourage every individual to eat a balanced, healthy diet, incorporating **all** of the necessary nutrients for brain – and thus mental – health.

What this requires, however, is a recognition from Government that what we eat has an effect on how we feel. We believe that there is plenty of evidence – from published research to anecdotal to simply common sense – to support this position.

¹ Ransom A Myers and Boris Worm, “Rapid worldwide depletion of predatory fish communities”, *Nature* 423, 280–283 (2003)

² The Food Standards Agency stated in 2007: “We are currently collecting information to support a sustainability assessment on our advice that consumers should eat more fish. In doing so, the Agency will draw on advice from the Department for Environment, Food and Rural Affairs on the sustainability of fish stocks.” www.eatwell.gov.uk/healthydiet/nutritionessentials/fishandshellfish/

³ See, for example, the website of Seafish, the voice of the seafood industries: www.seafish.org/indexns.asp

⁴ Although many of the species that provide the oil for supplements are not necessarily in trouble themselves (supplements tend to use pelagic fish, which are quick at reproducing), they are ecologically necessary, for example providing food for other species or acting as natural ocean filters.

However, more independent research into the connection between food and mental health must be funded. Not only will this tease out more of the mechanisms about food's effect on the brain, it may also elucidate more information about any possible new treatments for individuals with existing conditions.

For example...

Much has been written and said about the policies needed to improve the nation's dietary health – from banning junk food advertisements, to improving the nutritional quality of processed foods, to ensuring children know how to cook. These improvements should start to be viewed as helping to tackle not only poor physical health and all of its associated costs, but also poor mental health and its associated costs.

As such, they should be accorded even more urgency. It has been estimated that the cost of mental ill health is £77 billion per year, *in England alone*. Even a small percentage reduction in that cost would make the necessary changes to the nation's food supply worthwhile. It is also worth noting that involvement in food projects and learning food skills can also be a very positive, rewarding and worthwhile activity for people with mental health problems who often live in isolation and on low incomes. This can bring its own social inclusion and personal benefits, in addition to improved nutrition.

Apart from the broader improvements to the nation's diet, which may help prevent future mental health problems, there are also specific policy changes that would directly benefit those individuals currently experiencing mental health problems. These include:

Improving the food served in mental health wards.

If the public was shocked at the food served in schools, it should get a glimpse of the food being served to some of the most vulnerable members of society residing in mental health hospitals. Food in hospitals is notoriously bad. However, suffering a few days of bad food while in hospital for an operation is one thing – being served unappealing and non-nutritious food day in and day out over weeks, months and even years is another. Even if one were not to accept that there is a physical connection between good food and good mental health, the social and emotional consequences of poor quality food is not any help to treatment. Sustain's report *Changing Diets, Changing Minds: how food affects mental health and behaviour* also showed that there is evidence to suggest that good diet can significantly improve the efficacy of mental health drug treatment and reduce the unpleasant side effects of some drugs, e.g. for schizophrenia.

Providing GPs with necessary support and information.

The first port of call for many individuals experiencing poor mental health is their GP. Following greater awareness of the therapeutic effects of exercise, GPs have been provided with information about exercise referral schemes. The same should be done with diet – but not limited to omega-3.. GPs should be instructed to inquire about the entire diet of patients reporting symptoms of depression and anxiety and, if necessary, refer a patient to a dietician. Of course, dieticians should also be provided with the requisite support.

Providing information to the public and patients.

A healthy diet is not an "alternative" therapy – it is vital to the entire body's wellbeing. Those who work with mental health patients using dietary approaches

report excellent compliance. It has been suggested that this is because using diet to help improve mental health provides an element of control over treatment that is lacking in drug or talking therapies. However, due to the virtual silence from bodies such as the Department of Health and the Food Standards Agency, information on the connection is patchy and often only available through expensive clinics, women's magazines or on the side of fish-oil supplement bottles.

Government should be providing good and clear information on the benefits of a generally healthy diet to mental well-being and behaviour. A good place to start would be the otherwise excellent FSA website, www.eatwell.gov.uk

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