

# Healthy Living: Schizophrenia and Diet

What we eat is an important part of our lives. It is not only the means by which we gain sustenance but it can also be a source of great pleasure. We now know that for everyone, managing what we eat can be an important part of staying healthy but for people with schizophrenia this is more important than ever because people with schizophrenia tend to suffer more from physical ailments than other people. You can read more about the physical health aspects of schizophrenia in our information sheet. In addition there is now considerable evidence that eating healthily can not only benefit our physical health but can also help to improve our mental health.

One of the first changes that families often observe in a relative when an episode of schizophrenia is beginning is a change in their eating habits, with a distinct preference for junk foods. Since this often starts before treatment with medication has begun it is safe to conclude that it is a feature of the illness rather than a side effect of medication.<sup>8</sup>

Below we consider some of the elements of healthy living and also look at some of the theories around diet and schizophrenia that have cropped up over the years that some have claimed to be life-changing and that others have dismissed as fads.

## **Getting the basics right: a well balanced diet**

In the past we have tended to focus on the psychiatric problems associated with schizophrenia but we are now beginning to become more aware that people living with schizophrenia will also suffer more from physical ailments than the general population and we need to address this aspect as well.

It has long been known that people living with schizophrenia will die younger than people who do not have this diagnosis. In fact overall, mortality rates are around 2-3 times higher in people living with schizophrenia than in the general population. People with schizophrenia tend to die about ten years younger than average.<sup>7</sup> Of course suicide is a large component of this tragedy but there are also higher rates of accidents and physical illnesses amongst schizophrenics as well.<sup>1</sup>

We do not have to look very far for the causes of this. Studies have found that people living with schizophrenia tend to eat less healthily with more fat and less dietary fibre in their diet. They also tend to exercise less and are less likely to go to the doctor when they do suspect a physical ailment.<sup>2</sup> Consequently they tend to have a higher incidence of physical ailments such as obesity, diabetes, high blood pressure, heart problems and respiratory problems.<sup>5</sup> In fact diabetes is five times as common in people with serious mental health conditions and heart disease and respiratory disease is twice as common.<sup>6</sup> Diabetes, in particular, is more common in people with schizophrenia and there are a number of possible reasons for this including poor diet, lack of exercise and smoking.<sup>17</sup>

A good well balanced diet is also important because of the problem with weight gain that many people with schizophrenia experience. Antipsychotic medication is notorious for causing weight gain in people who take it. Of the newer atypical antipsychotics, olanzapine and zotepine cause serious problems with weight gain whereas aripiprazole seems to give less problems in this respect.<sup>3</sup>

Weight gain is a very important problem. In serious cases patients can put on 60 to 100 pounds extra weight in a very short time. How this happens is not yet well understood. It may be linked to hormones or it may simply be that the drugs have an effect on appetite. Carrying excessive weight can lead to

problems such as heart disease and diabetes later in life and the effect of excessive weight gain on a young person's appearance can be psychologically difficult to cope with.<sup>4</sup>

However it has to be said that the association between obesity and schizophrenia had been drawn long before the introduction of the atypical antipsychotics and that the problem is also probably partly a result of the sedentary lifestyles and poor diets that plague this illness.<sup>27</sup>

### **Where to start**



Get to know your local library where they can help with advice on healthy diets and exercise (Image: Monkey Business Images/Shutterstock)

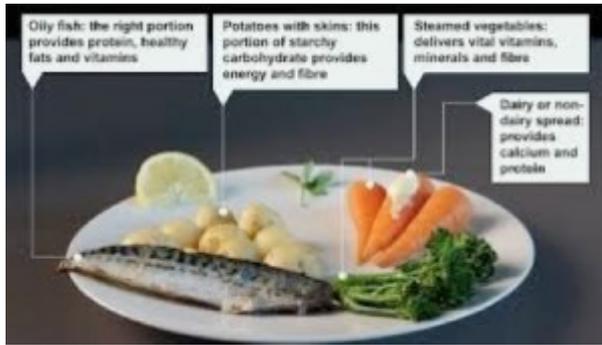
It is important to think about your diet if your recovery is to be completely successful. Some research on the internet would be a good place to start and a visit to the local library who can provide books and leaflets about healthy eating. These days libraries offer a lot more than just books. They have stacks of advice on all sorts of subjects and offer other services such as music, videos and internet access. If you haven't used a library before you can find out more about how to find and use your local library on the .Gov website.

You should spend some time each day or week planning your diet for the week ahead. For this you will need to know how much fibre, calories etc are in the various foods that you will be eating and we recommend that you invest in a good food counter book such as Calorie Counter by Dr Wynnian Chan, published by Hamlyn for £3.99.

Of course getting enough exercise is also important and you can read more about that aspect on our Information Sheet about exercise.

### **Main principles of a healthy diet**

These are the main principles about eating healthily:



Try to eat balanced meals with plenty of vegetables

1. Try to get plenty of fruit and vegetables in your diet. The UK government recommends at least five portions per day but other European governments recommend more than that. One glass of fruit juice can count towards this and so too can dried fruit.
2. Base each meal on starchy foods such as potatoes, pasta or rice and try to go for options that are higher in fibre such as brown rice or potatoes in their skins.
3. Eat more fibre. The UK government recommends at least 18-30 grams of fibre each day. Having more fibre in your diet will help you to feel fuller for longer and so will help with the problem of weight gain. Brown bread, brown rice and pasta and some cereals like muesli and Weetabix contain larger amounts of fibre.
4. Eat more fish and try to eat at least three portions of oily fish each week. Oily fish can include salmon, mackerel, trout, herring, sardines and pilchards.



Start the day with a bowl of high fibre cereal like muesli or porridge with some fruit. Fibre is good for you and will keep you feeling fuller for longer. (Image: Liljam/Shutterstock)

5. Cut down on saturated fats, sugar and salt. The best way of doing this is to cook for yourself more and cut out the ready meals and shop-bought cakes which should be regarded as OK for an occasional treat.
6. Drink enough to keep your body well hydrated. You should aim to drink about 1.2 litres each day but in hot weather or if you are exercising a lot you will need more. Water, milk and fruit juice are the healthiest things to drink. Tea, coffee and energy drinks like Red Bull contain caffeine which is a stimulant and should

be taken in moderation. Alcohol should generally be avoided and kept as an occasional treat.

7. Try to get into the habit of having three regular meals each day. Breakfast is important as having a satisfying breakfast of high fibre cereal will leave you feeling full until lunchtime and will deter you from snacking during the morning.

### **Can special diets help people with schizophrenia?**

Over the years many theories have been put forward that argue that diet can be linked to schizophrenia. It is fair to say that on most of these theories the evidence has been at best inconclusive and the jury is very much still out on these issues.

Nonetheless many people feel that there is sufficient evidence to strongly implicate diet in psychosis and that until we have a complete understanding of the way the brain behaves in this condition the option of modifying diet should not be ruled out and may bring some measure of relief to some sufferers.

However, whilst taking a dietary approach to helping to treat your schizophrenia will not make it any worse, it can never replace treatment with antipsychotic medication and talking therapies which, used well together, give the best assurance of a successful outcome. Below we consider four of the popular theories around diet.

### **Organic food**

Some food additives have been implicated in behavioural problems particularly in hyper-active children<sup>9</sup> but there is little hard research evidence to support the theory. The theory is that some additives will trigger the release of a chemical called histamine into the blood and this will affect brain functioning.<sup>20</sup> There is currently little evidence of a link with schizophrenia.

However, avoiding food additives can be achieved quite simply by choosing organic food alternatives. Organic food tends to be more expensive than its non-organic counterpart but most of the large chain stores now stock quite wide organic ranges. Since the link between food additives and mental health has still yet to be proven this remains a matter of personal choice.

### **Gluten free diets and schizophrenia**

A condition called coeliac disease provides the link between schizophrenia and the various theories about the beneficial effects of a gluten-free diet. Coeliac disease is a chronic condition in which the small intestine becomes hyper-sensitive to gluten which is found in wheat products. If gluten is not completely digested in the gut chemicals called gluteomorphins are created which enter the blood stream and travel to the brain where they influence thinking and behaviour.<sup>19</sup> Gluten can be found in a surprising number of processed foods in addition to the more obvious ones including breaded fish and fish cakes.

Coeliac leads to anaemia, weight loss and psychiatric symptoms but can be treated successfully in almost all cases simply by adopting a gluten-free diet. It is thought that coeliac is a largely inherited condition and it has been observed that coeliac and schizophrenia are often found in the same family.



American physician F C Dohan who looked at links between gluten in the diet and schizophrenia (Photo: HowardJaster on Wikimedia Commons)

The theory that gluten in the diet may be at least in part a cause of schizophrenia was first postulated by Dr Lauretta Bender in the United States in 1953 and was later developed by F.C. Dohan, another American psychiatrist. Dr Dohan carried out a study involving patients on a locked ward in a mental hospital in Pennsylvania, USA and found that symptoms were much improved in 63% of the patients who were placed on a diet from which gluten had been removed.<sup>23</sup> Dohan concluded that the inherited trait that causes coeliac also causes schizophrenia and that one actually contributes to the development of the other.<sup>24</sup> Further studies in both the US and UK seemed to confirm the earlier work.

The theory seemed to be supported by the reports of a lower incidence of schizophrenia in occupied countries during the second world war, where wheat products were scarce<sup>10</sup> and also the slightly lower reported incidence of schizophrenia in countries where maize and millet are the staple grains rather than wheat.<sup>11</sup>

However, attempts to replicate some of the early work done on this have not been successful and so it would be fair to say that although there has been some promising work on the beneficial effect of a gluten-free diet, the modern thinking is that it remains inconclusive.<sup>12</sup>

### **Fish oil and omega 3 fatty acids**



Oily fish like sardines, salmon and mackerel is good for the heart and may also be good brain food (Image:Jacek Chabraszewski/Shutterstock)

Very promising work was carried out in the later part of the 20th century into the benefits of Omega 3 fatty acids in diet for people living with schizophrenia. These fatty acids are found in linseed, oily fish such as sardines, salmon and mackerel, some seeds such as flax, rape and soya bean and hen's eggs. They cannot be made by the body and must be obtained from the diet. Omega 3 fatty acids can also be found in supplements such as cod liver oil and Omacor.

The beneficial component of omega 3 fatty acids is thought to be a chemical called EPA. This compound is vital to some body functions including the functioning of the nervous and immune systems and in children is necessary for good brain development.



Professor David Horrobin who's pioneering work *The Madness of Adam and Eve* identified a link between brain health and Omega 3 and 6 fatty acids

Professor David Horrobin wrote a pioneering work on the subject in 2002<sup>13</sup> in which he described the use of Omega 3 supplements to successfully treat people with schizophrenia who had not previously responded to antipsychotic medication. Further work by others seemed to confirm this.<sup>14</sup>

However, subsequent work on this subject has not shown as much promise. In 2007 researchers in Canada

carried out a review of the previously published material and found that most trials had been based on small numbers of participants and concluded that there was little evidence of any benefit from Omega 3 fatty acid supplements in schizophrenia. However they did find that there may be benefits in mood disorders such as depression.<sup>15</sup>

Again it is fair to say that the early promising work has not been confirmed by more in depth studies and Omega 3 supplements may not impart any benefits in schizophrenia although they may be beneficial to good mental health generally and are certainly good for general physical health particularly heart health.<sup>16</sup>

Because the early work done on the possible benefits of Omega 3 supplements was so promising, for several years the guidelines for doctors in the UK published by the National Institute for Health and Care Excellence (NICE) did indeed recommend prescribing the Omega 3 supplement Omacor for people with schizophrenia. However the NICE guidelines changed in 2016 and consequently Omacor is no longer prescribed for this purpose in the UK. In addition, although the potential health benefits of Omega 3 supplements are much vaunted by some of the television doctors there is now a growing awareness of some potential adverse effects of the fish oil supplements in general the NHS Choices website has more on this.

Research continues into these Omega 3 supplements and various scientists have claimed a very wide range of benefits arising from their use including benefits to heart and joint health and mental health including depression and psychosis. If you are interested in how much Omega 3 you should have in your diet the NHS Choices website contains some useful information.

### **Vitamin and mineral supplements**

In the 1950s two Canadian doctors, Hoffer and Osmond, experimented with the use of extremely large doses of certain vitamins particularly Niacin, Nicotinic acid and vitamin C to treat schizophrenia and reported good results. This work was subsequently taken up by others and extended to include other vitamins and certain minerals such as zinc and manganese.<sup>18</sup>

The hypothesis at first seemed well founded. After all it had long been known that certain diseases such as scurvy, pellagra and goitre were caused by a deficiency of certain vitamins or minerals so why not schizophrenia? However this area of research was overtaken by the development of the antipsychotic medicines and although initially promising has not delivered any viable treatment options in the long run.

As far as specific minerals are concerned both zinc and selenium have been implicated in schizophrenia<sup>25</sup> and zinc and copper have been associated with dangerous behaviour in people living with schizophrenia.<sup>26</sup>

But for good general health, all the vitamins and minerals needed for a healthy life can be found in a well-balanced diet. Clearly this is an area that would benefit from further research but at the moment there is no conclusive evidence that vitamin or mineral supplements can help.

### **Ketogenic Diets**

Work on the possible dietary treatment of schizophrenia seems to be a very popular area of research with scientists and new theories surface from time to time. One recent hypothesis is that in some patients abnormalities in the way the brain metabolises glucose and energy may be implicated in the disease process and that the kind of so-called ketogenic diet favoured by body builders may help. This would certainly help to explain why people with schizophrenia are disproportionately affected by diabetes as well. However the evidence here so far is tissue-thin and this area definitely requires more work before we can

draw any firm conclusions.<sup>28</sup>

## **Changing your diet**

If you do decide to try modifying your diet, nowadays it is very simple to buy specialist foods and supplements. Fish oil supplements are freely available from all pharmacies and the healthcare aisles at all of our major supermarket chains. Omega 3 supplements are also available in a purified form as Omacor, for which you will need a prescription from your doctor. Specialist health food shops such as Holland and Barret also include supplements made from seeds such as flax seed and chia seed.

Today all of our major retail outlets such as Asda, Tesco, Sainsbury, Waitrose and Marks and Spencer have extensive organic and gluten free ranges. For instance Tesco's "Free From", Sainsbury's "FreeFrom" and Waitrose "Love Life" ranges. Both organic and gluten free food tend to cost a bit more than their non-organic counterparts.

Don't assume that because supplements are natural products that they don't have adverse effects; some do. For instance fish oil increases the time taken for bleeding to stop naturally after you cut yourself and should not be taken if you are on certain medicines such as warfarin. Before starting on a supplement it is essential that you consult your doctor or pharmacist to make sure that it will not interact adversely with any of the other medication that you are taking.

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### **Useful Links**

1. Tesco gluten free range

<http://realfood.tesco.com/our-food/tesco-free-from.html>

2. Sainsbury gluten free range

<http://www.sainsburys.co.uk/shop/gb/groceries/food-cupboard/gluten-free>

3. Waitrose gluten free range

[http://www.waitrose.com/home/inspiration/health\\_and\\_nutrition/special\\_diets\\_and\\_lifestyles/coeliac\\_disease.html](http://www.waitrose.com/home/inspiration/health_and_nutrition/special_diets_and_lifestyles/coeliac_disease.html)

4. Sainsbury organic range

<http://www.sainsburys-live-well-for-less.co.uk/products-values/sainsbury's-so-organic/>

5. Tesco organic range

<http://www.tesco.com/groceries/zones/default.aspx?name=organic-range>

6. Holland and Barret Omega 3 range

<http://www.hollandandbarrett.com/pages/categories.asp?cid=158&left=1>

8. NHS Choices (advice)

<http://www.nhs.uk/Pages/HomePage.aspx>

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