

The Bristol Approach to Healthy Eating – the Rationale and the Research

Introduction

The Bristol Approach to Healthy Eating offers a set of dietary recommendations for people living with cancer. These recommendations are based on current research evidence together with the experience of staff at Penny Brohn Cancer Care, an organisation which has provided nutritional support to those with cancer for 29 years. This document gives an overview of the rationale behind the Bristol Approach to Healthy Eating and the research on which it is based.

Rationale for creating healthy eating recommendations

Studies investigating the impact of diet on the health of cancer survivors are limited at this time. It could therefore be seen as premature to create a set of dietary guidelines for people with cancer. However, a recent survey carried out by Penny Brohn Cancer Care found that many people with cancer would like to be given dietary guidance and often seek this information for themselves¹. Other research supports this finding^{2,3}. For this, and the other reasons listed below, Penny Brohn Cancer Care feels it is important to provide this group of people with nutritional information and guidance.

1. There is growing recognition that nutrition is important for general health and wellbeing
2. Strong evidence supports the view that diet is an important risk factor for cancer⁴
3. Studies show that those people with cancer who are well nourished tolerate their medical treatments better than those who are not and that the treatments may be more effective in those who are well nourished⁵
4. Evidence suggests that malnutrition is common amongst cancer patients⁵
5. People with cancer are at greater risk than the general population of experiencing weight changes – either weight gain or loss⁵
6. People with cancer are more likely than the general population to develop particular degenerative diseases, such as heart disease and diabetes, the progression of which may be influenced by diet⁶.
7. People with cancer want information on diet and nutrition¹
8. People with cancer will seek out dietary information if they are not provided with it, the sources of this information are of variable quality¹
9. Making positive lifestyle changes, such as improving the diet, can provide people with some sense of control over their cancer journey⁷. Feelings of lack of control and helplessness are very stressful and therefore lifestyle improvements can have a positive impact on psychological and emotional wellbeing. This is a frequent observation by the therapy team at Penny Brohn Cancer Care.

The target audience

People with cancer may have very different nutritional needs depending on the stage of their disease and the particular treatments they are having. The Bristol Approach to Healthy Eating has been designed for people with cancer who do not

have nutritional needs that require specialist or intensive intervention. Therefore, in their most basic form these guidelines are not suitable for people with cachexia or those who have difficulty swallowing, for example. However, they can be modified by a nutritionally qualified health professional to be suitable for these groups of people.

Survival times for people diagnosed with cancer are ever increasing⁸ and the majority of those living with this disease are able to live a relatively normal life. Many of these people are interested in helping themselves to live well with cancer⁹ and diet can play a significant role in ensuring they achieve this. The Bristol Approach to Healthy Eating is particularly suited to people who want to help themselves as the recommendations are easy to follow and do not necessarily require support from a nutritionally qualified health professional, although many may benefit from this.

Scientific basis for the Bristol Approach to Healthy Eating

An extensive amount of research has been published investigating the effect of diet and nutrition on cancer prevention. The evidence underpinning the field of nutrition for cancer survivors is not so well developed and to date only a relatively small number of papers have been published focusing on this issue. However, the idea that diet and nutrition may influence the health of people with a cancer diagnosis is emerging as an area of interest amongst scientists and health professionals, recently leading to an increase in the number of publications in this field.

The Bristol Approach to Healthy Eating is based on nutritional research concerning cancer prevention together with that focused on cancer survivorship.

The diet and cancer prevention data is relevant when considering the nutritional needs of people living with cancer as evidence suggests that some of the mechanisms of primary cancer development are the same as those involved in secondary cancer development¹⁰. Therefore the diet that helps to prevent a primary cancer may also reduce the risk of a secondary cancer. It could also possibly reduce the chances of primary cancer recurrence.

The diet and cancer prevention data can not be considered in isolation as cancer survivors often have particular nutritional needs that relate to their disease or its medical treatments. For this reason the research on diet for cancer survivors has also been of key importance in informing these guidelines.

Towards the end of 2007 the World Cancer Research Fund published its landmark report 'Food, Nutrition, Physical Activity, and the Prevention of Cancer: a Global Perspective'¹¹. This, the largest and most comprehensive report on the relationship between diet, lifestyle and cancer, was based on a series of systematic literature reviews and the evidence then interpreted by a team of renowned experts. The report forms the basis of the evidence consulted in developing the Bristol Approach to Healthy Eating. In addition, prevention and survivorship studies published subsequent to the report were consulted as well as general nutritional studies.

Throughout the process of producing the Bristol Approach to Healthy Eating it has been recognised that certain limitations exist with regards to nutrition research. For example, many intervention trials measure the effects of single foods or even single nutrients whereas in reality we consume diets composed of many different foods that each contains thousands of compounds, the interactions between these

compounds are likely to be complex. The problems with a reductionist approach to nutrition research is appreciated by many scientists¹² but although whole diet studies are preferable they are expensive and therefore few and far between.

Experiential basis for the Bristol Approach to Healthy Eating

Due to gaps in the cancer nutrition research and the limitations of many of the studies, it seems unwise to rely solely on research when creating recommendations for those with cancer. Penny Brohn Cancer Care has used nutrition as part of a larger support package for thousands of people over the past 29 years and the experience gained throughout this time has been utilised in producing the latest recommendations.

The experience of using nutritional support in cancer is extremely important to take account of when creating actual recommendations. However, it may be even more important when considering the delivery of such recommendations. Those facing a serious diagnosis such as cancer are often vulnerable and sometimes easily swayed by outside opinions on issues that may affect their health such as nutrition. These and other sensitivities need to be recognised and understood to ensure that advice is delivered in a way that best supports the person with cancer.

Key messages

A significant amount of information is contained within the 8 pages of the Bristol Approach to Healthy Eating. However, the information can be pared down to just a few key messages, the details of which are provided below.

- A diet composed of whole foods, by which we mean foods that are minimally processed, is most conducive to health. It is recommended that people consume a diet based on whole, unprocessed, fresh foods.
- A plant-based diet is the most supportive to health. It is recommended that people consume a diet composed mainly of plant foods, with vegetables and fruit as the primary source but also including whole grains, pulses, nuts and seeds, herbs and spices. For a complete and balanced diet, animal products are also recommended.
- There is no perfect diet that suits everyone as we all have individual, ever-changing nutritional needs. It is recommended that people use the guidelines as a starting point but then experiment and adapt the recommendations to suit themselves. They may also wish to enlist the help of a nutritionally qualified health professional.
- Physical activity is very important alongside a healthy diet for the promotion of optimal weight and general good health in those with cancer. It is recommended that people engage in regular physical activity.
- The healthiest diet will be one that delivers pleasure as well as all the correct nutrients. It is recommended that people find a way of eating that they enjoy and allow themselves treats to maximise the pleasurable experience.

Rationale for the Bristol Approach Healthy Eating Plate

The Bristol Approach Healthy Eating Plate provides a diagrammatic representation of the key healthy eating recommendations. Presenting the information in the form of a plate of food allows people to visualise the types of foods and proportions that are recommended.

It is suggested that people fill around half of their plate with vegetables or fruit. Evidence clearly shows that a diet rich in vegetables and fruit reduces the risk of degenerative diseases such as cancer¹¹. Emerging evidence suggests that such a diet may also support those living with cancer¹³. The UK government recommends an intake of at least 400g (5 portions of 80g) of vegetables and fruit per day. However, other countries such as Canada, Japan and France recommend a higher intake. As vegetables and fruit are the foods where the strongest evidence of benefit with cancer exists we have recommended 8-10 portions per day. We suggest that a portion need only be an approximate value equating to about the amount that will fit into a person's own cupped hand.

Starchy carbohydrates such as wholegrains and potatoes are an important aspect in the daily diet and, in the case of the wholegrains, there is evidence that they may decrease the risk of certain types of cancer¹¹. The amount of starchy carbohydrates on the plate is smaller than the amount of vegetables and fruit as the evidence of their benefit is not so strong. Another reason is that their relatively high starch content can promote unhealthy changes to blood glucose levels and weight gain when consumed in excess¹⁴.

Protein-rich foods are also an important aspect in a healthy balanced diet. The pulses have been included in this section as they provide a good source of protein for those wanting to avoid all animal products. Ideally people would include some animal products but they would form a smaller proportion of the overall diet in relation to the plant foods. We have classed dairy products as an optional food as there is evidence that milk products may increase the risk of prostate cancer¹¹ and they may also cause digestive disturbance in some.

Foods rich in fat are an essential part of a balanced diet. Only fats that are minimally processed are recommended. Saturated fats are best consumed in moderation but it is not necessary to avoid them totally as they are required for good health. The inclusion of a selection of foods that provide the essential polyunsaturated fats, in an undamaged form, plus the monounsaturated fats and some saturated fats is important.

A section of the plate has been devoted to the herbs and spices to encourage people to include them on a daily basis. There is growing evidence of their benefits with regard to general health and cancer¹⁵.

Accessing the Bristol Approach to Healthy Eating

The Bristol Approach to Healthy Eating is freely available to anyone. A copy can be requested by calling the National Telephone Helpline (0845 123 23 10) or by downloading them from the website (www.pennybrohncancercare.org).

References

1. Butler E, Seers H, Lockyer L, Benjamin C. Getting the Best Nutritional Advice with Cancer – Findings from a UK Survey on the Nutritional Advice Given to People with a Cancer Diagnosis. Penny Brohn Cancer Care Publication, May 2006.
2. Molassiotis A, Fernandez-Ortega P, Pud D et al. Complementary and alternative medicine use in colorectal cancer patients in seven European countries. *Complement Ther Med*. 2005; 13: 251-7.

3. Nahleh Z, Tabbara IA. Complementary and alternative medicine in breast cancer patients. *Palliat Support Care*. 2003; 1: 267-73.
4. World Cancer Research Fund and American Institute for Cancer Research. Food Nutrition and the Prevention of Cancer: a global perspective. Washington, American Institute for Cancer Research, 1997.
5. National Cancer Institute. Nutrition in Cancer Care, 2004.
www.nci.nih.gov/cancertopics/pdq/supportivecare/nutrition/HealthProfessional
6. Demark-Wahnefried W, Aziz N M, Rowland J H et al. Riding the crest of the teachable moment: promoting long-term health after the diagnosis of cancer. *J Clin Oncol*. 2005; 23: 5814-30.
7. Adams C, Glanville N T. The meaning of food to breast cancer survivors. *Can J Diet Pract Res*. 2005; 66: 62-6.
8. Cancer Research UK, 2006.
www.info.cancerresearchuk.org/cancerstats/survival/fiveyear/?a=5441
9. Molassiotis A, Fernandez-Ortega P, Pud D. Use of complementary and alternative medicine in cancer patients: a European survey. *Annals Oncol*. 2005; 16: 655-63.
10. Knowles M, Selby P Eds. Introduction to the Cellular and Molecular Biology of Cancer. Oxford University Press, Oxford, 2005, Fourth Edition.
11. World Cancer Research Fund and American Institute for Cancer Research. *Food, Nutrition, Physical Activity and the Prevention of Cancer: a Global Perspective*. 2007.
12. Gerber M. The comprehensive approach to diet: a critical review. *J Nutr*. 2001; 131: 3051S-3055S.
13. Berkow S.E., Barnard N.D., Saxe G.A., Ankerberg-Nobis T. Diet and survival after prostate cancer diagnosis. *Nutr Rev*. 2007; 65 :391-403.
14. Ludwig D.S. Dietary glycemic index and obesity. *J Nutr*. 2000; 130: 280S-283S.
15. Kaefer C.M., Milner J.A. The role of herbs and spices in cancer prevention. *J Nutr Biochem*. 2008; 19: 347-361.