

EXECUTIVE SUMMARY: Diet, nutrition, physical activity and body weight for people living with and beyond breast cancer

The latest evidence, our guidance for patients, carers and health professionals, and recommendations for future research



Background

Breast cancer is the most common cancer in women and the second most common cancer overall, accounting for 1 in 9 (11.6%) new cancer cases worldwide in 2022. At the same time, progress in early detection and treatment has significantly increased the number of years lived after a diagnosis. Survival rates differ between countries, but worldwide there are an estimated 7.8 million women who have survived at least 5 years after a diagnosis of breast cancer. There is increasing demand for reliable, evidence-based guidance on diet and physical activity from health professionals and people living with and beyond cancer.

This report is from World Cancer Research Fund International's Global Cancer Update Programme (CUP Global) - the world's largest source of scientific research on cancer prevention and survivorship through diet, nutrition, physical activity and body weight. The research in this report builds on the 2014 (updated 2018) report *Diet, nutrition, physical activity and breast cancer survivors* which was published as part of the Third Expert Report produced by WCRF/ AICR on *Diet, Nutrition, Physical Activity and Cancer: a Global Perspective*. At that time, research on cancer survival was limited, but there was

enough evidence to conclude that people living with and beyond cancer should follow our Cancer Prevention Recommendations. These outline an integrated pattern of behaviours that the evidence consistently shows is linked to reduced cancer risk.

The increasing recognition of the importance of diet, nutrition, physical activity and body weight in cancer survival provides the rationale for the current work.

Aims of this report

This report summarises the latest research on diet, nutrition, physical activity and body weight for people living with and beyond breast cancer. It also presents guidance for patients and recommendations for future research. This information can be used to develop materials for those responsible for the care of patients and patients themselves. We intend for this work to supplement our existing Cancer Prevention Recommendations. Whilst we recommend that people living with and beyond cancer follow these as much as they can, they were not specifically developed for this group. Our new guidance adds to these recommendations by highlighting specific behaviours which evidence suggests may be beneficial for people living with and beyond breast cancer.

The evidence underpinning this report

The Global Cancer Update Programme research team at Imperial College London carried out a comprehensive analysis investigating the extent to which certain modifiable risk factors impact mortality (cancer-specific and all-cause), risk of cancer recurrence and health-related quality of life in women after a breast cancer diagnosis. Four systematic reviews were carried out. Review 1 analysed data from 108 studies on diet and breast cancer outcomes and there were 2 reviews on physical activity (the first included 20 studies on breast cancer outcomes and the second included 79 studies on health-related quality of life outcomes). The fourth review focused on body weight and breast cancer outcomes and included 225 studies.

An independent panel of experts graded the strength of the evidence from each review using WCRF International's pre-determined criteria to give a final evidence judgement for each exposure.

The panel judged the strength of much of the evidence as 'limited' which hampered the expert panel's ability to develop recommendations. Despite this, we consider it important that people living with and beyond cancer can access reliable information based on the latest evidence that has been judged by our expert panel. The recommendations and guidance described here have been developed using a robust and transparent process, incorporating input from expert clinicians and scientists, along with user input from health professionals and patients.

As an evidence-based organisation, we have used the best available evidence to develop this process and produce practical guidance on diet, physical activity and body weight for people living with and beyond breast cancer.

Recommendations for future research

WCRF International, our panel of experts and the cancer survivors expert committee are continually discussing how the evidence base within survivorship research can be strengthened. We have agreed upon several key areas:

- Well-designed clinical trials and prospective cohorts are needed. These studies should account for differences in cancer sub-types, treatment types and other patient characteristics.
- Studies should aim to use the most accurate methods possible for assessing diet, nutrition, physical activity and body weight within populations living with and beyond cancer. They should include more accurate reporting of the timing of exposures.
- Novel methods for understanding the biological processes and mechanisms that underpin the associations we find in our cancer survivorship research are much needed.
- Research should aim to study more diverse populations.

By highlighting gaps in the evidence base, current research enables us to look to the future with insights on where further (high quality) research is needed. Observational studies can also help to identify promising exposures for testing in randomised-controlled trials. This allows us to develop new areas of investigation, with the aim of future new findings being used to develop specific recommendations for this group and to further confirm the benefits of following our recommendations and guidance.

Recommendations and guidance for people living with and beyond breast cancer

The recommendations and guidance opposite have been developed using the best available evidence and consultation with experts in the field and individuals living with and beyond breast cancer.

Evidence comes from the 4 systematic reviews described in the full report, along with previous evidence reviewed for the Third Expert Report which led to the development of WCRF/AICR's Cancer Prevention Recommendations.

Summary of our recommendations and guidance for those living with and beyond breast cancer

EVIDENCE



General guidance

WCRF/AICR's recommendations for cancer prevention

Nutritional factors and physical activity appear to predict outcomes in people living with beyond cancer, but there is insufficient evidence that changing these improves outcomes.

New specific recommendation on physical activity



Physical activity

Increasing physical activity improves health-related quality of life after a diagnosis of breast cancer. People who are more physically active have better health outcomes, but it is uncertain whether increasing physical activity will improve health outcomes.

New specific guidance on diet and body weight



Diet

Dietary fibre

People who eat more dietary fibre have better health outcomes after a diagnosis of breast cancer. But it is uncertain that increasing dietary fibre improves these outcomes.

Soy

There is limited evidence suggesting that people who eat more soy foods have better health outcomes after a diagnosis of breast cancer. There have previously been concerns over soy foods increasing the risk of developing breast cancer, but systematic reviews show no consistent evidence of a link between soy foods and breast cancer risk.

Vitamin D

This review found limited evidence suggesting that those with higher vitamin D status have better health outcomes after a diagnosis of breast cancer, but there was no evidence of any benefit from vitamin D supplements.



Body weight

Those with body weight in the 'healthy range' after a diagnosis of breast cancer have the best health outcomes. But it is uncertain that deliberate weight loss by people with overweight or obesity improves these outcomes.

RECOMMENDATIONS/GUIDANCE

We suggest that people consider following as many of WCRF/AICR's cancer prevention recommendations as they are able to.

We recommend that people are physically active. However, physical activity should be increased under the supervision of health care professionals.

We suggest that people consider increasing their dietary fibre intake.

The current evidence does not support guidance to consume more soy foods (or to introduce soy foods if these are not currently part of the diet) after a diagnosis of breast cancer, but for those who already consume them, there is no need to stop.

We are not making specific guidance about vitamin D supplements to improve outcomes after a breast cancer diagnosis.

We suggest that people who are not underweight aim to avoid gaining weight during and after treatment.

Recommendations are based on strong evidence.

Guidance is based on evidence graded as 'limited suggestive'. Limitations in the evidence meant that the panel could not be confident that associations were causal, so we cannot be sure that changing the exposures would change the outcomes. Despite the limitations in the evidence, this represents the best advice based on the current evidence and expert opinion. Outcomes are health outcomes (including all-cause mortality and cancer outcomes) and health-related quality of life.

Please note: We recommend that individuals living with and beyond cancer speak to their healthcare team before making any changes related to diet, nutrition, physical activity or body weight. Any healthcare professionals using this guidance should consider where a patient is in their cancer journey and interpret the guidance appropriately to suit each person's individual needs.



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