

Information Sheet 1: Mediterranean Diet

Key Points

- Components of the Mediterranean diet are associated with a reduced risk of prostate cancer and better overall outcomes
- Key features: high in fruit and vegetables, high in omega-3 from fish, low in meat and processed foods, uses olive oil as main source of fat

Introduction

Following a Mediterranean dietary pattern may improve health outcomes of men with prostate cancer. In a large study which looked at the dietary patterns of men diagnosed with localised prostate cancer, men with a Mediterranean dietary pattern had longer life expectancy. No association was found between a Mediterranean dietary pattern and progression of their prostate cancer to advanced or lethal prostate cancer [1].

Main Features

The Mediterranean diet describes the dietary patterns of people living in countries bordering the Mediterranean Sea. Populations in these countries have a lower incidence of prostate cancer. The main features of their traditional diet include [2]:

- High consumption of vegetables
- High consumption of fruits and nuts – eg. avocado, walnuts, almonds, hazelnuts
- High consumption of whole-grain cereals and legumes
- Use of olive oil as the main source of fat
- Moderate to high consumption of fish
- Low intake of meat
- Low to moderate intake of dairy products
- Low intake of simple carbohydrates – eg. biscuits, cakes, lollies, white bread
- Almost no intake of processed foods



Specific Nutrients

The specific nutrients in the Mediterranean diet which are associated with a reduced risk of prostate cancer include [3]:

- Lycopene – eg. tomato sauce, cooked tomatoes
- Selenium – eg. cereals, legumes, eggs, meat, fish, seafood
- Cruciferous vegetables – eg. broccoli, cabbage
- Long chain omega-3 – eg. fatty fish
- Vegetable fat – eg. extra virgin olive oil
- Legumes – eg. soy and soy products, chickpeas, kidney beans
- Polyphenols – eg. Rosemary, olive oil
- Phytosterols – eg. walnuts, almonds, hazelnuts

Further information on these nutrients can be found on separate information sheets.

Comparison with the Western Diet and Lifestyle

In contrast to the Mediterranean dietary pattern, the main features of a western dietary pattern include a high intake of red and processed meats, fried fish, eggs, full-cream milk and white bread [4]. This dietary pattern has been associated with an increased risk of prostate cancer [4, 5]. Therefore, changing from a typical western diet to a Mediterranean diet may provide benefits additional to the benefits of the Mediterranean diet.

In addition to the Mediterranean diet, daily physical activity is also a big part of the Mediterranean lifestyle [2]. This further contrasts with the industrial shift of many Western countries towards reduced physical activity – a factor which is associated with an increased risk of prostate cancer [6].

Summary of Research

Most studies investigating the relationship between the Mediterranean diet and prostate cancer risk focus on the effects of specific components rather than the dietary pattern as a whole [1]. This section will summarise the research which looks at the Mediterranean dietary pattern as a whole. Information about specific components of the Mediterranean diet can be found on separate information sheets.

The NIH-AARP Diet and Health Study is an example of a large study which investigated the effects of the Mediterranean diet in healthy men with no previous history of cancer. The results show no significant association between adherence to the Mediterranean dietary pattern and development of prostate cancer [7]. This result is supported by other similar studies investigating the role of the Mediterranean diet in cancer prevention [8-10].

In a comprehensive review which collated information about components of the Mediterranean diet and risk of various cancers, the authors concluded that adherence to Mediterranean dietary pattern may reduce overall cancer risk in developed countries. They suggest that 10% of prostate cancer cases may be prevented if populations in developed Western countries shift to a Mediterranean dietary pattern [11].

The effects of following a Mediterranean dietary pattern after diagnosis of prostate cancer are less well studied. In the Health Professionals Follow-up Study, the effects of the Mediterranean diet were

investigated in men who have been diagnosed with localised prostate cancer. In this study, a greater adherence to the Mediterranean dietary pattern was associated with a 22% lower risk of overall mortality, but there was no association with prostate cancer progression. This reduced mortality is mostly attributed to its effects in reducing mortality from heart disease [1].

Studies investigating the effects of dietary patterns are also difficult because other variables may influence prostate cancer risk such as exercise, alcohol, smoking and family history. Another difficulty is the potential interaction between the different dietary components in the Mediterranean dietary pattern. While nutrients may have a synergistic effect, the beneficial effects of certain nutrients may also be diluted [1]. Therefore, investigation of individual nutrients may provide a better understanding of the role of specific components in the Mediterranean diet. The results of studies which investigate these individual components will be outlined in their respective information sheets.

References

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