



THE UNIVERSITY OF
AUCKLAND
Te Whare Wānanga o Tāmaki Makaurau
NEW ZEALAND

Perspectives on Nutrition for Breast Cancer

Dr Andrea Braakhuis

Sweet Louise Advanced Cancer Forum

World
Cancer
Research Fund



American
Institute for
Cancer Research

Continuous Update Project
Keeping the science current



Breast Cancer 2010 Report

Food, Nutrition, Physical Activity,
and the Prevention of Breast Cancer

Diet and post-diagnosis mortality



Diet does appear to reduce mortality in those with breast cancer

Mediterranean diet may have some advantages

ER+ types appear to respond to diet

A healthy diet improves non breast cancer mortality (often overlooked!)

Kim EH, Willett WC, Fung T, Rosner B, Holmes MD (2011) Diet quality indices and postmenopausal breast cancer survival. *Nutr Cancer* 63:381–388

Izano MA, Fung TT, Chiuve SS, Hu FB, Holmes MD (2013) Are diet quality scores after breast cancer diagnosis associated with improved breast cancer survival? *Nutr Cancer* 65:820–826

Inoue-Choi M, Robien K, Lazovich D (2013) Adherence to the WCRF/AICR guidelines for cancer prevention is associated with lower mortality among older female cancer survivors. *Cancer Epidemiol Biomark Prev* 22:792–802

George SM, Irwin ML, Smith AW et al (2011) Postdiagnosis diet quality, the combination of diet quality and recreational physical activity, and prognosis after early-stage breast cancer. *Cancer Causes Control* 22:589–598

George SM, Ballard-Barbash R, Shikany JM et al (2014) Better postdiagnosis diet quality is associated with reduced risk of death among postmenopausal women with invasive breast cancer in the women's health initiative. *Cancer Epidemiol Biomark Prev* 23:575–583



The University of Auckland

Just now · 🌐



Breast cancer survivors (grade 1-3) are invited to take part in a nutrition study at the University of Auckland. You will receive food samples, petrol vouchers and free nutrition education for 6 months!
To find out more about the BC-Med study, email nutritionclinic@auckland.ac.nz.



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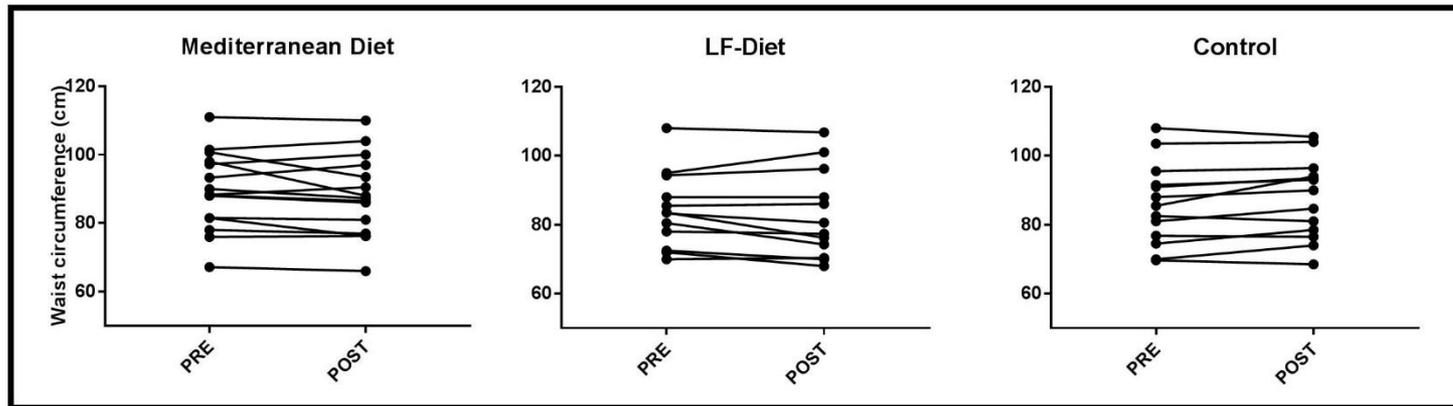
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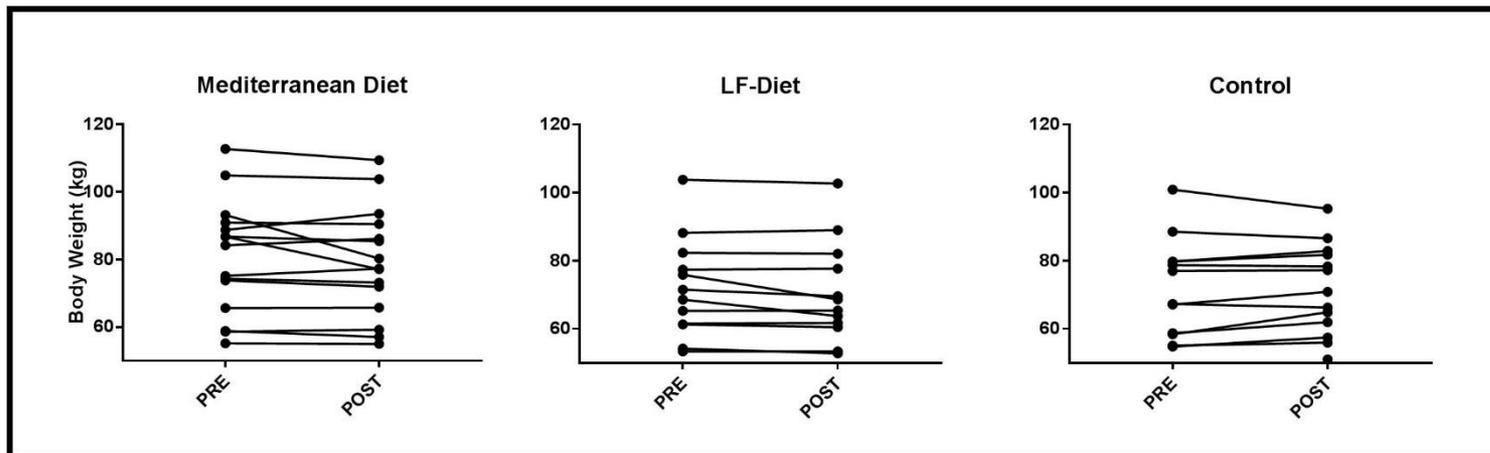


Findings

Waist circumference

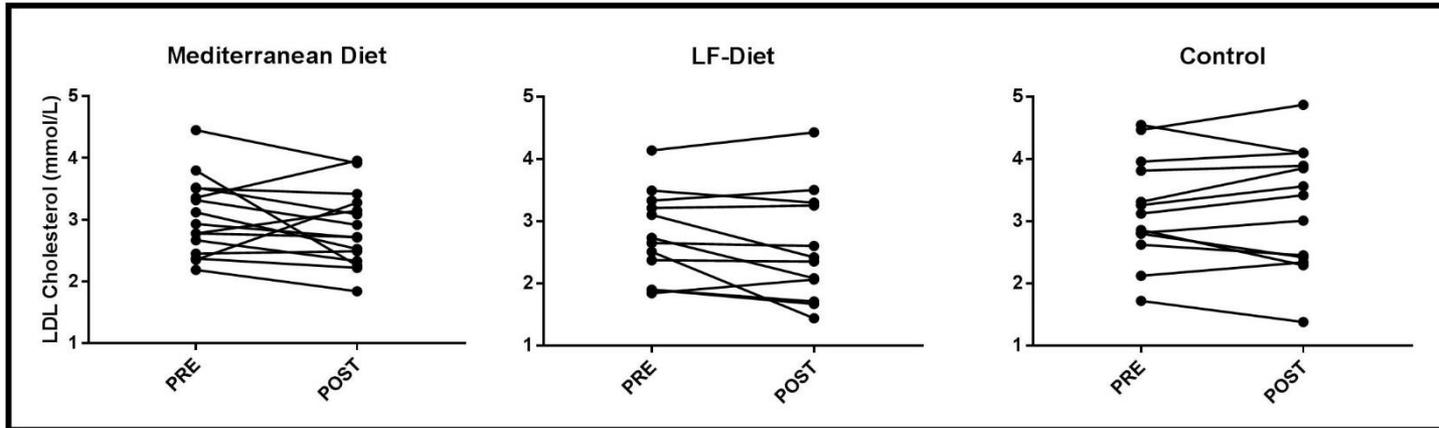


Weight



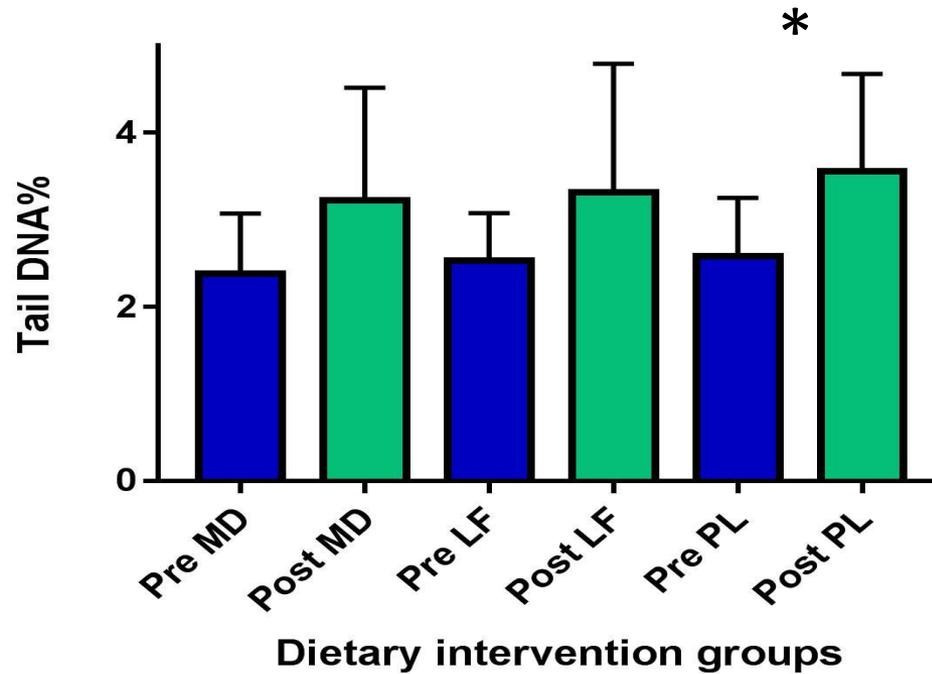
Findings

LDL cholesterol



Findings

DNA Damage



Conclusion

Nutritional education and group support appears to benefit breast cancer survivors and of lesser importance is the type of diet that forms the basis of the education



Mediterranean Diet

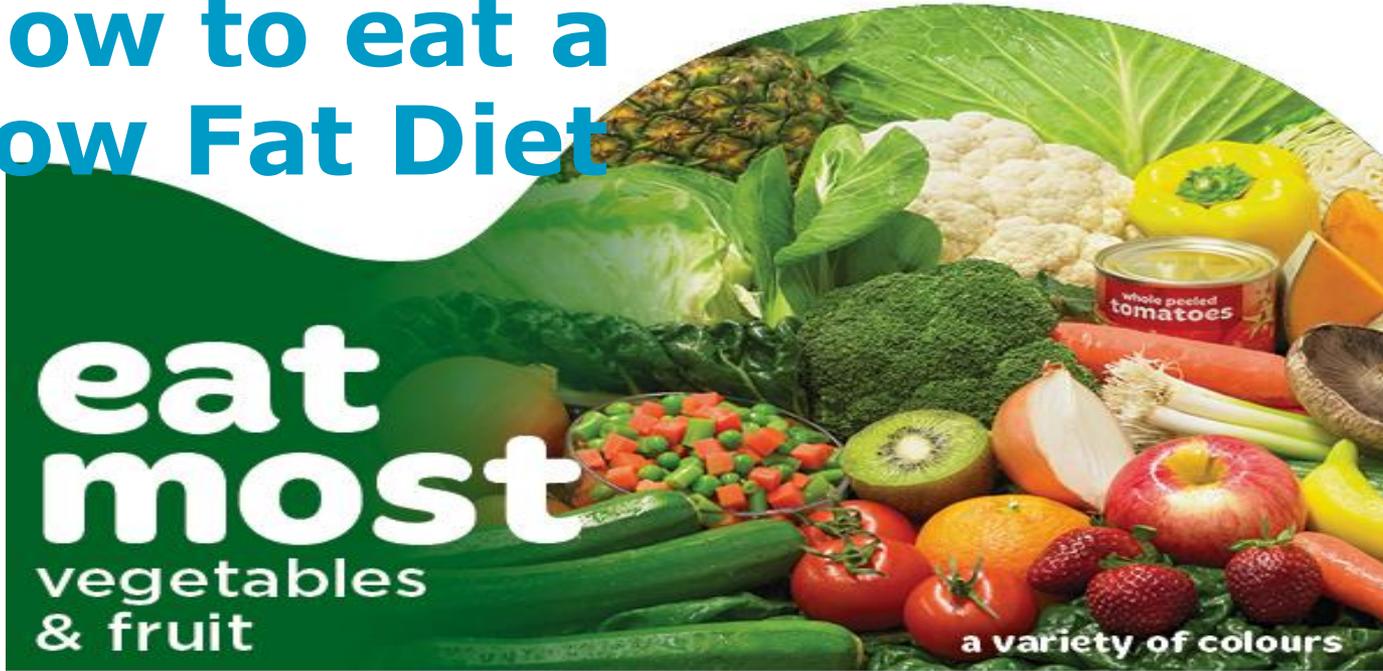


- High in fruits, vegetables, cereals, and legumes
- Low in red meat
- High in olive oil (unsaturated fat)
- Beneficial protective effect due to high levels of unsaturated fat and antioxidants (in particular, polyphenols)

How to eat a Mediterranean Diet

- Eat Daily
 - 3 servings of fruit
 - 3+ servings of vegetables
- Eat weekly
 - 3 servings of fish (not fried)
 - 3 servings of legumes
- Choose
 - Olive oil and nuts most days
 - Mostly white meat, chicken and fish
- Limit
 - Cookies, pastries, pies and candy
 - Red meat and processed meat
 - High fat dairy

How to eat a Low Fat Diet



eat most
vegetables
& fruit

a variety of colours



eat some
bread, cereals, grains,
starchy vegetables

wholegrain & high-fibre



fish, meat, chicken,
legumes, eggs

lean & skinless



milk, yoghurt,
cheese

reduced fat



use some oils, nuts

CUT BACK ON junk foods, takeaways & foods or drinks high in sugar, salt or saturated & trans fats



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Latest research....

What next?

Interview data

Theme B: Surprise and concern associated with changes to weight and diet

Weight gain was unexpected and disappointing

Theme C: Insufficient dietary information and support

Dietary information general or not provided

Theme C: Insufficient dietary information and support

Need for dietetic services

"During the post-diagnosis period, information about diet and dietary changes during treatment often lacked specificity or was not given. That lacking specificity included booklets and brochures from hospitals and clinics and verbal advice from health professionals. Several participants reported not receiving any dietary information at all. "

Kwok, A., Palermo, C. & Boltong, A. Support Care Cancer (2015) 23: 1561.
doi:10.1007/s00520-014-2496-5

Nutrition and metastatic cancer

Kanaya, N., Adams, L., Takasaki, A., & Chen, S. (2014). Whole **blueberry** powder inhibits metastasis of triple negative breast cancer in a xenograft mouse model through modulation of inflammatory cytokines. *Nutrition and cancer*, 66(2), 242-248.

Noratto, G., Porter, W., Byrne, D., & Cisneros-Zevallos, L. (2014). Polyphenolics from **peach** (*Prunus persica* var. Rich Lady) inhibit tumor growth and metastasis of MDA-MB-435 breast cancer cells in vivo. *The Journal of nutritional biochemistry*, 25(7), 796-800.

Mak, K. K., Wu, A. T., Lee, W. H., Chang, T. C., Chiou, J. F., Wang, L. S., ... & Ho, C. T. (2013). Pterostilbene, a bioactive component of **blueberries**, suppresses the generation of breast cancer stem cells within tumor microenvironment and metastasis via modulating NF- κ B/microRNA 448 circuit. *Molecular nutrition & food research*, 57(7), 1123-1134.

FRUIT IS GOOD!



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Thank-you

<http://dietitians.org.nz/find-a-dietitian/>