

Breast Cancer Survivorship and Lifestyle Medicine

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Your Presenter



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Have you heard of Lifestyle Medicine?



Yes



Not Sure



No



Thought Experiment: A New Type of Medicine

- Prevent high blood pressure and many types of cancer
- Treat high cholesterol
- Reverse Type 2 Diabetes

- *Side effects: Improved sleep, stronger immune system, better mood*



Lifestyle Medicine - Definition



Lifestyle medicine is an evidence-based approach to preventing, treating, and even reversing diseases by replacing unhealthy behaviors with positive ones— such as eating healthfully, being physically active, managing stress, avoiding risky substances, adequate sleep, and having a strong support system.



Lifestyle Medicine

- >80% of chronic conditions can be prevented or treated by healthy lifestyle!
 - Diabetes, heart disease (i.e. heart attacks), strokes, high blood pressure, cancer
- Habits start early and can profoundly affect health
- Focus on healthy habits as a family: Everyone can benefit!

***Prescription for lifestyle change today versus
medication/medical visits tomorrow!***

Lifestyle
Medicine
treats the
root cause of
disease



Quick Start for Healthy Habits! Set an implementation intention!



When situation X arises, I will Perform Response Y.



For Example: If I get hungry after Dinner , I will take 5 deep breaths and if I am still feeling hungry eat an apple



To activate the habit-forming mechanism, you need a new alternative response rather than a non-response. Then repeat it day after day!

Source: Verplanken B, Wood W. Interventions to break and create consumer habits. J Pub Policy Marketing. 2006;25:90–103.

The Six Pillars of Lifestyle Medicine





Physical Activity

Engaging in regular and consistent physical activity.

Interesting facts



- **Only half of adults** get the physical activity they need to help reduce and prevent chronic diseases.
- Getting enough physical activity could prevent **1 in 10 premature deaths.**
- <https://www.cdc.gov/physicalactivity/about-physical-activity/why-it-matters.html>

Why it Matters

- Being active decreases risk for breast cancer.
- Regular physical activity helps regulate hormone levels.
- Reduced risk of disease
- Improved mental health
- Improved fitness and mobility
- Healthier aging
- Stronger bones and muscles
- **Feel better!**



Manage Stress

Incorporating stress-reducing behaviors may be difficult in modern society but is essential for whole-person health.

Why it Matters

- Decreases the risk for many types of physical health problems
Stroke, Type 2 Diabetes, and Heart Disease
- Reduces the risk for mental illness
- Improves sleep
- Supports healthy weight
- Improves resilience

<https://www.cdc.gov/mentalhealth/learn/index.htm>



Healthful Eating

Consuming a fiber-filled, nutrient-dense, antioxidant-rich eating pattern based predominantly on a variety of minimally processed vegetables, fruits, whole grains, legumes, nuts and seeds.

Interesting Fact

What percentage of adults meet the daily fruit or vegetable recommendation?



DIETARY SPECTRUM



THE AMERICAN COLLEGE OF LIFESTYLE MEDICINE DIETARY POSITION STATEMENT

ACLM recommends an eating plan based predominantly on a variety of minimally processed vegetables, fruits, whole grains, legumes, nuts and seeds.

WHAT AMERICA EATS



*Food items are not to scale

- Increased risk for Obesity, T2Diabetes, Heart Disease, and some Cancers
- Poor nutrition is the leading cause of death globally.

Increase whole plant foods, fruits, vegetables, whole grains, beans, legumes, nuts, seeds, water

Decrease sweets and snacks, fast food, fried foods, refined grains, refined sugar, meat, dairy, eggs, poultry, high sodium foods

WHOLE FOOD PLANT-BASED EATING PLAN



*Food items are not to scale

ADD HERBS & SPICES

- Decreased risk for Obesity, T2Diabetes, Heart Disease, and some Cancers
- Chronic disease treatment and potential reversal



TIPS FOR IMPROVED NUTRITION AND HEALTH

- Any movement toward WFPB eating is positive
- More movement toward a WFPB eating plan increases impact
- Tailored and sustainable approaches are recommended

What We Eat in America (WWEIA) Food Category analyses for the 2015 Dietary Guidelines Advisory Committee. Estimates based on day 1 dietary recalls from WWEIA, NHANES 2009-2010.

Tuso PJ, Ismail MH, Ha BP, Bartolotto C. Nutritional update for physicians: plant-based diets. Perm J. 2013;17(2):61-66.

Food Planet Health. Eatforum.org. Published 2020. Accessed June 4, 2020

Why it Matters

- Reduces risk for chronic diseases
- Increases the ability to fight diseases
- Helps achieve a healthy weight
- Reduces risk for cancer including breast cancer and breast cancer recurrence
- Prevents nutrient deficiencies
- Improves energy and wellbeing





Avoid Risky Substances

Reducing or eliminating the consumption of or exposure to any substances that cause harm through toxicity, addiction, physical damage, or adverse side effects.

Interesting Fact

16 million Americans

- People living with a disease caused by smoking

1 in 10 Deaths

- Drinking is responsible for 1 in 10 deaths among working-age adults

Why it Matters

• **When you quit smoking:**

- Your lungs, heart, and circulatory system will begin to function better.
- Less likely to have a heart attack or stroke
- Less likely to develop cancer
- Breathe more easily

• **When you quit drinking:**

- Less likely to hurt yourself or someone else by driving after drinking
- Less likely to injure yourself in a fall
- Less likely to develop cancer, liver damage, immune system disorders and brain damage
- More clear-headed



Relationships

Strengthening and maintaining relationships and connections with others that bring meaning and purpose to life.

Interesting Fact

The lack of strong relationships increases the risk of premature death from all causes by...

50%

Why it Matters

- Positive social interactions and relationships reduce the risk of depression and anxiety
- When we feel supported, we can better manage blood pressure and other health conditions





Sleep

Striving for 7-9 hours of high-quality sleep, allowing the body to reset and recover.

Interesting Facts

Adults who sleep <7 hour/night...

- are more likely to report more chronic conditions compared to those who get 7+ hours of sleep.
- are more likely to report being obese, physically inactive, and current smokers compared to people who get enough sleep.

Why it Matters

- More energy
- Better focus and attention
- Better mood
- More resilience
- Better metabolism
- Healthy weight



American Institute for Cancer Research (AICR) Recommendations for Cancer Prevention that overlap directly with Lifestyle Medicine pillars

Eat a Diet Rich in Whole Grains, Vegetables, Fruits and Beans	Limit consumption of sugar-sweetened drinks
Limit consumption of red and processed meat	Limit alcohol consumption
Limit consumption of “fast foods” and other processed foods high in fat/starches/sugars	Be Physically Active

BACKGROUND

- Over **4 million** breast cancer (BC) survivors live in the United States today¹
- Women with BC are at significantly **higher risk** of developing cardiometabolic risk factors (obesity, hypertension, and diabetes) and cardiovascular disease compared to women without BC^{2,3}
- Kaiser Permanente East Bay (KPEB)** diagnoses between 350-400 patients with BC each year with no clear survivorship program.

OBJECTIVE: To test the feasibility and acceptability of an online group-based lifestyle medicine program in women diagnosed with BC.

METHODS

Design: Quasi-Experimental (Pre-Post) Pilot Study

Eligibility: Female patient at KPEB, age ≤ 60, stage I-III BC, completed BC treatment (except endocrine therapy)

Program description (Sep. 29-Nov. 17, 2022):

- 8 x 90 min. weekly online group sessions
- Individual counseling sessions

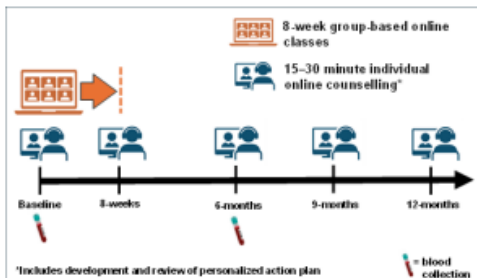


Figure 1. Overview of lifestyle medicine program

Program goals:

- Help BC patients build healthy lifestyle behaviors
- Improvement of overall health

Evidence-based classes were primarily aligned with the American College of Lifestyle Medicine (ACLM) six pillars: whole-food plant-based diet, physical activity, substance use, stress management, social connections and sleep.⁴

Additional BC related content: side effects from anti-estrogen medications, sexual and menopausal health.



Figure 2. ACLM six pillars

Table 1. Lifestyle medicine program topics^{a,b}

Week	Topic
1	Introduction and building community
2	Goal Setting and physical activity
3	Whole-food plant-based diets
4	Sexual and menopausal health
5	Mindfulness and stress management
6	Integrative medicine and substance use
7	Side effects of treatment
8	Restorative sleep

^aLed by multi-disciplinary team (Educators, physicians, nutritionists)

^bYoga/cooking classes were offered and participants formed personal groups outside class.

WHAT OUR PATIENTS ARE SAYING

"I am currently on Arimidex and without the support of this class I would have second thoughts about continuing it. With the right support the side effects are manageable but if you only rely on online group chats for support you will think its not worth it. This class gave me the tools I need to stay on the medication and keep hope that the cancer won't come back again."

REFERENCES
1. American Cancer Society. Key Statistics for Breast Cancer. 2023 From: <https://www.cancer.org/cancer/types/breast-cancer/about/new-statistics-breast-cancer.html>.
2. Kwan ML, et al. Risk of Cardiometabolic Risk Factors in Women With and Without a History of Breast Cancer: The Pathways Heart Study. J Clin Oncol. 2022; 40:5635-46.
3. Greenlee K, et al. Risk of Cardiovascular Disease in Women With and Without Breast Cancer: The Pathways Heart Study. J Clin Oncol. 2022; 40:5647-58.
4. American College of Lifestyle Medicine. From: <https://lifestylemedicine.org/about-us/>.

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RESULTS

- 17 of 18 total patients** consistently participated in the virtual classes with 90% overall attendance over 8 weeks
- 90% of attendees were extremely satisfied** with the course overall (highest satisfaction on the topic of sexual health/menopause and managing side effects of anti-estrogen medications)
- 80% of attendees reported an increased confidence** in their ability to apply what they've learned from the course
- On average, patients were metabolically healthy upon entry. **LDL improved at 6-month follow-up**

Table 2. Blood test results

Blood Test	Baseline	6-months
	Mean (SD)	Mean (SD)
LDL (mg/dL)	112.7 (32.7)	84.2 (26.1)
Hgba1c (%)	5.8 (0.4)	5.6 (0.4)

CONCLUSION

The KPEB lifestyle medicine pilot program was well-attended, addressed the needs of patients with BC, and demonstrated encouraging results for heart health.

Further research will explore broader and more rigorous application in oncology care.

NIH Grant Submission 10/2024

*Clinical application of
lifestyle medicine to
improve heart health in
breast cancer survivors*

Breast cancer survivors have an elevated risk of cardiovascular disease, yet scalable interventions to mitigate this risk are limited.

This study aims to evaluate an online group-based Lifestyle Medicine program, focusing on improving cardiometabolic health in women with invasive breast cancer (stages I-III).

We hypothesize that the lifestyle medicine program, which integrates six key lifestyle pillars endorsed by the American College of Lifestyle Medicine—diet, physical activity, avoidance of risky substances, stress management, social connections, and sleep—will lead to significant improvements in cardiovascular health compared to usual care.

Using a randomized controlled trial (RCT), 2,000 participants from Kaiser Permanente Northern California (KPNC) will be enrolled, with assessments at baseline, 3, 6, and 12 months. The study leverages telehealth to enhance accessibility and aligns with the NIH's Telehealth Research in Cancer Care initiative (NOT-CA-24-033). If successful, this LM program could be adopted widely, reducing CVD-related morbidity and mortality in BC survivors.

THANK YOU FOR JOINING US!