

Diet and Exercise for Cancer Survivors



Overview

- Review current diet and exercise guidelines for cancer prevention and control and evidence that supports them
- Let you know about the AMPLIFY diet and exercise clinical trial

Why Should I Care about....

What I Eat, How Much I Move, or How Much I Weigh?

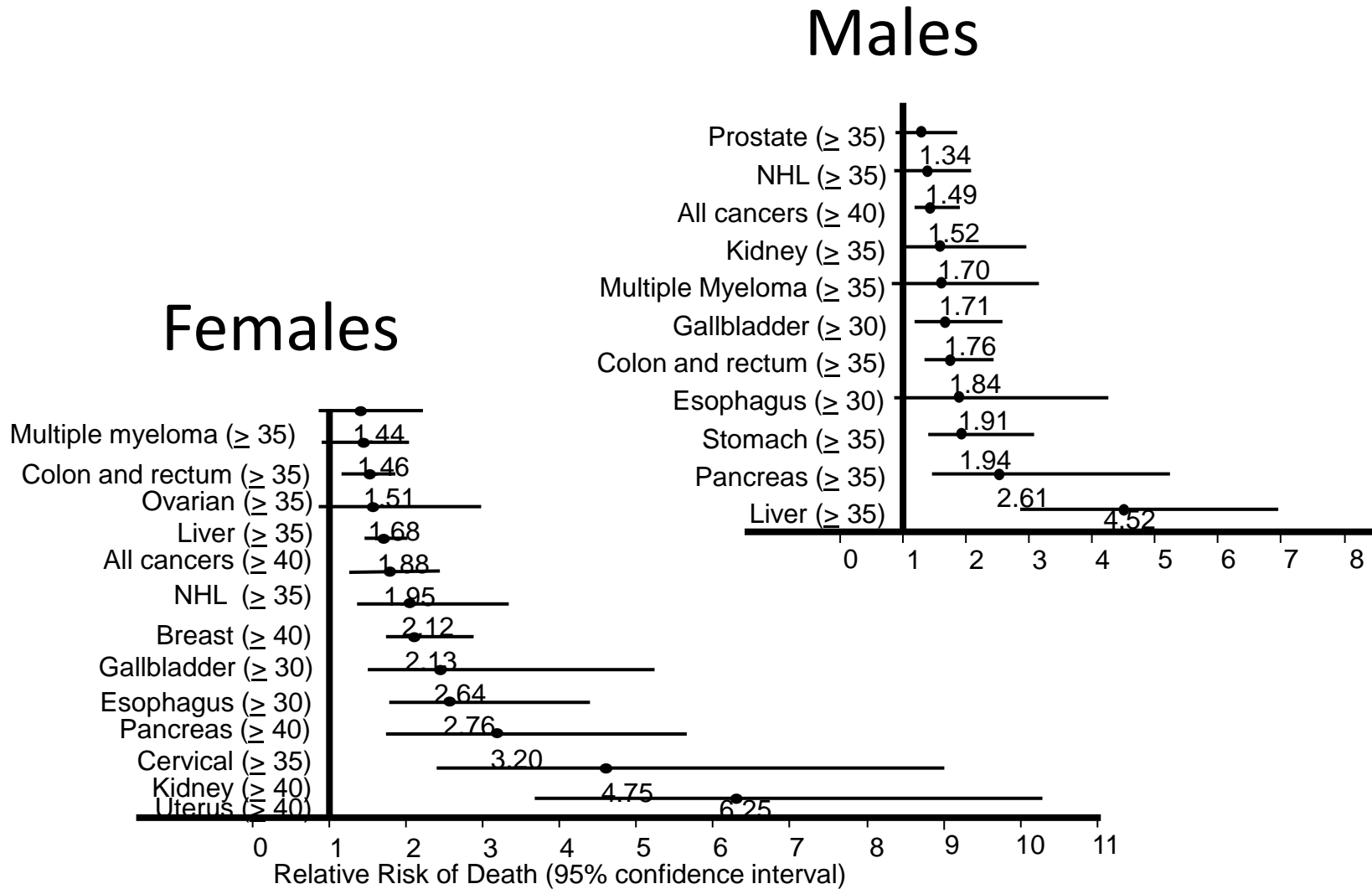
- Incidence of second cancers is growing rapidly, 1-in-5 people diagnosed with cancer this year will have had previous diagnosis
- Cancer survivors have more than double the risk of dying from heart disease
- You might feel a lot better, sleep a lot better, and function a lot better if you ate better and became more active



Guidelines for Diet & Physical Activity for Cancer Prevention & Control

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Obesity and Cancer-related Mortality



Prognostic Effects of Weight Gain Among Individuals with Breast and Prostate Cancer: Results of 2 Meta-Analyses

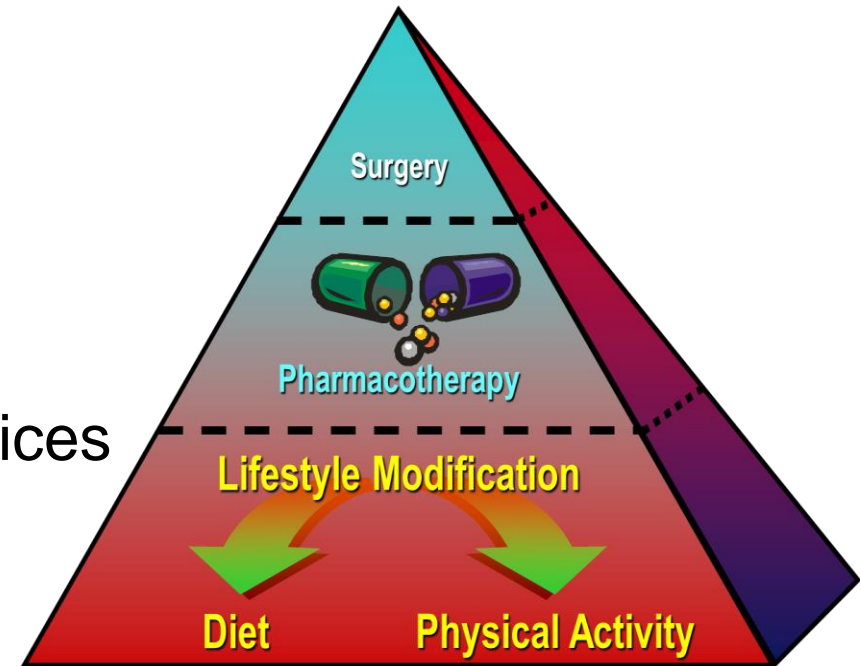
Group (year)	# of studies	Sample	RR (95% CI) for every 5 kg/m ² increase in BMI from pre- to post-dx
Chan et al. (2014)	82	213,075 women with breast cancer	<u>Breast CA Specific Mortality</u> 1.29 (0.97-1.72) <u>Total Mortality</u> 1.08 (1.01-1.15)
Cao & Ma (2011)	6 cohort	18,203 men with prostate cancer	<u>Biochemical Recurrence</u> 1.21 (1.11-1.31) <u>Prostate CA Specific Mortality</u> 1.20 (0.99-1.46)

Body Mass Index Chart

	Normal Weight						Overweight						Obese				
BMI	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35
Height (inches)	Body Weight pounds																
4'10" (58)	91	96	100	105	110	115	119	124	129	134	138	143	148	153	158	162	167
4'11" (59)	94	99	104	109	114	119	124	128	133	138	143	148	153	158	163	168	173
5' (60)	97	102	107	112	118	123	128	133	138	143	148	153	158	163	168	174	179
5'1" (61)	100	106	111	116	122	127	132	137	143	148	153	158	164	169	174	180	185
5'2" (62)	104	109	115	120	126	131	136	142	147	153	158	164	169	175	180	186	191
5'3" (63)	107	113	118	124	130	135	141	146	152	158	163	169	175	180	186	191	197
5'4" (64)	110	116	122	128	134	140	145	151	157	163	169	174	180	186	192	197	204
5'5" (65)	114	120	126	132	138	144	150	156	162	168	174	180	186	192	198	204	210
5'6" (66)	118	124	130	136	142	148	155	161	167	173	179	186	192	198	204	210	216
5'7" (67)	121	127	134	140	146	153	159	166	172	178	185	191	198	204	211	217	223
5'8" (68)	125	131	138	144	151	158	164	171	177	184	190	197	203	210	216	223	230
5'9" (69)	128	135	142	149	155	162	169	176	182	189	196	203	209	216	223	230	236
5'10" (70)	132	139	146	153	160	167	174	181	188	195	202	209	216	222	229	236	243
5'11" (71)	136	143	150	157	165	172	179	186	193	200	208	215	222	229	236	243	250
6' (72)	140	147	154	162	169	177	184	191	199	206	213	221	228	235	242	250	258
6'1" (73)	144	151	159	166	174	182	189	197	204	212	219	227	235	242	250	257	265
6'2" (74)	148	155	163	171	179	186	194	202	210	218	225	233	241	249	256	264	272
6'3" (75)	152	160	168	176	184	192	200	208	216	224	232	240	248	256	264	272	279
6'4" (76)	156	164	172	180	189	197	205	213	221	230	238	246	254	263	271	279	287

Weight Loss Guidelines

- Loss of as little as 3% of body weight associated with health benefit
- Weight loss of up to 2 pounds/week in adults (go slower after age 60 populations)
- Energy restriction(1200–1800 kcal/day), increased physical activity, behavior modification
- No recommendation regarding distribution of carbohydrate, fat and protein
- Self-monitoring: Weighing everyday, keeping a food and exercise log/journal, electronic devices



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Effects of Exercise on Health-Related Outcomes in Those with Cancer

What can exercise do?

- **Prevention of 7 common cancers***

Dose: 2018 Physical Activity Guidelines for Americans: 150-300 min/week moderate or 75-150 min/week vigorous aerobic exercise







- **Survival of 3 common cancers****

Dose: Exact dose of physical activity needed to reduce cancer-specific or all-cause mortality is not yet known; Overall more activity appears to lead to better risk reduction

*bladder, breast, colon, endometrial, esophageal, kidney and stomach cancers

**breast, colon and prostate cancers

Overall, avoid inactivity, and to improve general health, aim to achieve the current physical activity guidelines for health (150 min/week aerobic exercise and 2x/week strength training).

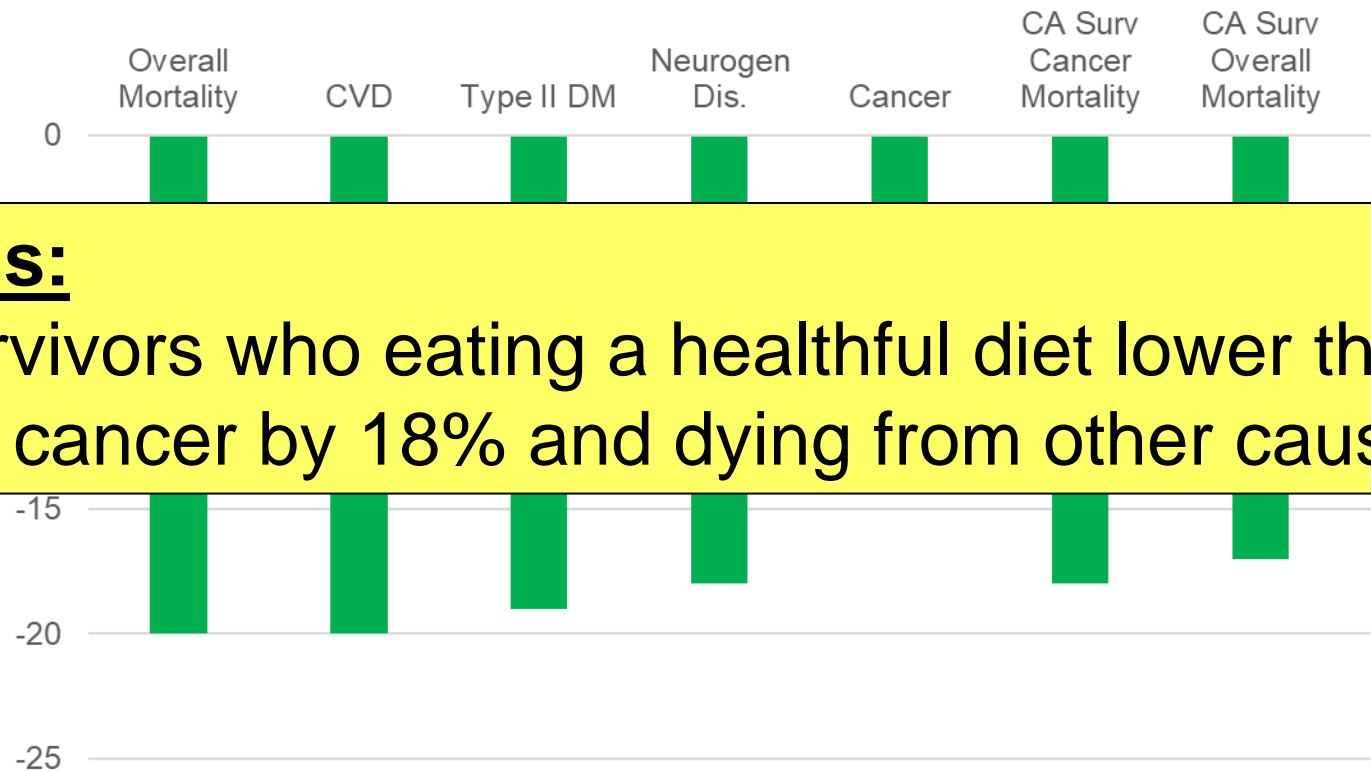
Outcome	Aerobic Only	Resistance Only	Combination (Aerobic + Resistance)
Strong Evidence	Dose	Dose	Dose
 Cancer-related fatigue	3x/week for 30 min per session of moderate intensity	2x/week of 2 sets of 12-15 reps for major muscle groups at moderate intensity	3x/week for 30 min per session of moderate aerobic exercise, plus 2x/week of resistance training 2 sets of 12-15 reps for major muscle groups at moderate intensity
 Health-related quality of life	2-3x/week for 30-60 min per session of moderate to vigorous	2x/week of 2 sets of 8-15 reps for major muscle groups at a moderate to vigorous intensity	2-3x/week for 20-30 min per session of moderate aerobic exercise plus 2x/week of resistance training 2 sets of 8-15 reps for major muscle groups at moderate to vigorous intensity
 Physical Function	3x/week for 30-60 min per session of moderate to vigorous	2-3x/week of 2 sets of 8-12 reps for major muscle groups at moderate to vigorous intensity	3x/week for 20-40 min per session of moderate to vigorous aerobic exercise, plus 2-3x/week of resistance training 2 sets of 8-12 reps for major muscle group at moderate to vigorous intensity
 Anxiety	3x/week for 30-60 min per session of moderate to vigorous	Insufficient evidence	2-3x/week for 20-40 min of moderate to vigorous aerobic exercise plus 2x/week of resistance training of 2 sets, 8-12 reps for major muscle groups at moderate to vigorous intensity
 Depression	3x/week for 30-60 min per session of moderate to vigorous	Insufficient evidence	2-3x/week for 20-40 min of moderate to vigorous aerobic exercise plus 2x/week of resistance training of 2 sets, 8-12 reps for major muscle groups at moderate to vigorous intensity
 Lymphedema	Insufficient evidence	2-3x/week of progressive, supervised, program for major muscle groups does not exacerbate lymphedema	Insufficient evidence

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How Important is Diet Quality?

Meta-analysis of 113 studies including 3,277,684 people



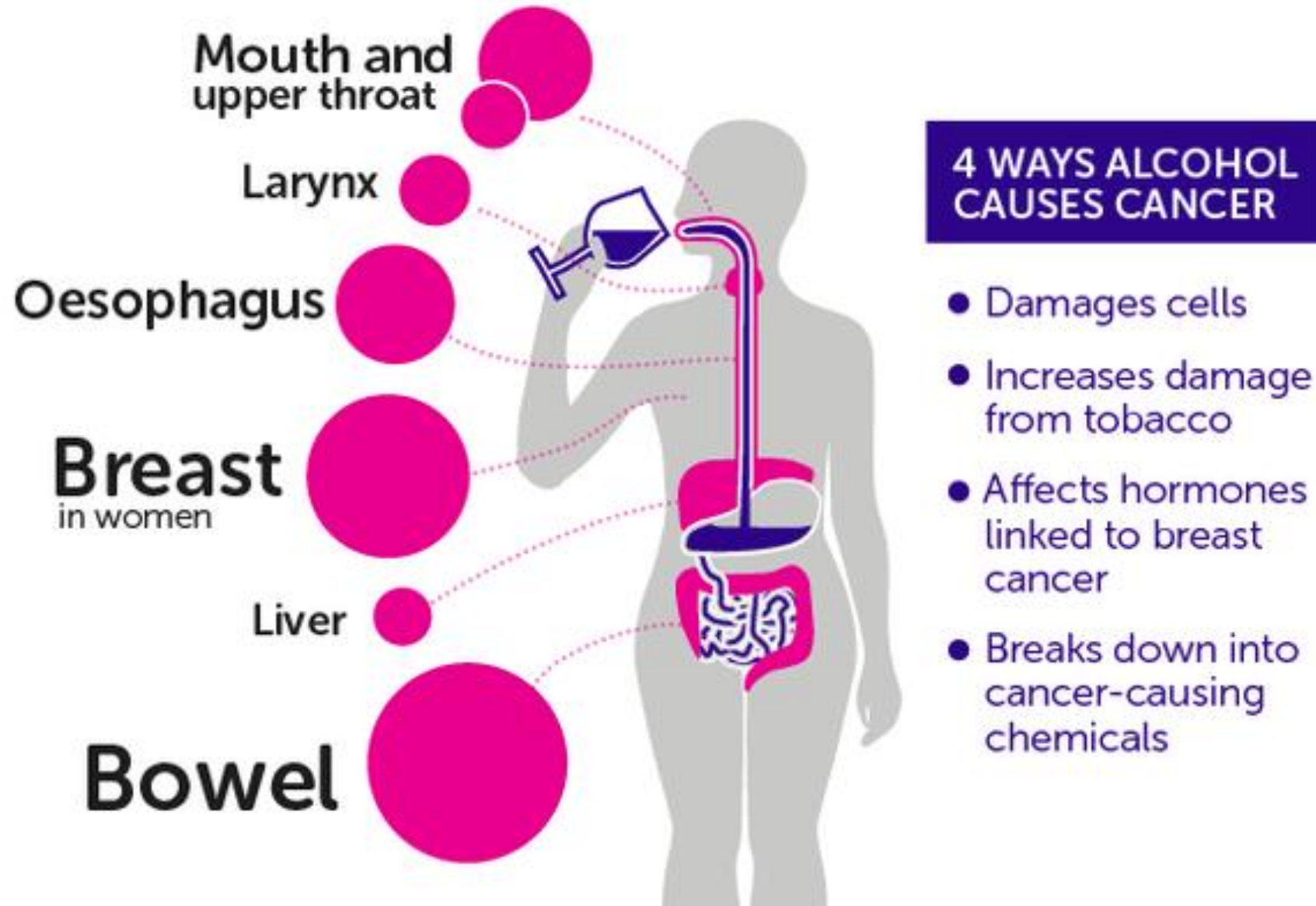
Consensus:

Cancer survivors who eating a healthful diet lower their risk of dying from cancer by 18% and dying from other causes by 17%

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Association between Alcohol and Cancer is Linear no amount is “safe”



You could participate in a clinical trial sponsored by the National Cancer Institute



AiM Plan and act on LIFestYles: AMPLIFY Survivor Health
(Adapting MultiPLe behavior Interventions that eFfectively Improve (AMPLIFI) Cancer Survivor Health)

P01 CA229997, R01 CA246695, R01 CA242737, ACS (134169-CRP-19-175-06-COUN)

NCT04000880



DIET AND EXERCISE INTERVENTIONS

- Interventions done totally over the internet (accessed by computers, tablets or smartphones). Totally free – no special foods
- Weekly self-directed sessions with weekly challenges; one of 3 programs below:
 - 24 weeks of diet followed by 24 weeks of exercise; or
 - 24 weeks of exercise followed by 24 weeks of diet; or
 - 48 weeks of combined diet and exercise
- Optional Facebook group
- Scales, pedometers, exercise bands and portion plates provided
- Interventions are based on diet and exercise recommendations of the American Institute of Cancer Research and the American Cancer Society



THINGS AMPLIFY PARTICIPANTS WILL LEARN

- Safe way to lose weight
- Safe ways to exercise and exercise that can most benefit physical function
- Ways to reduce exposure to pesticides
- What about dietary supplements? What do I need to know?
- What about sugar? ...alcohol? ...meat? ...etc?
- Tips for grocery shopping, meal preparation and planning, eating out, etc.

WHAT AMPLIFY PARTICIPANTS ARE SAYING ABOUT THE PROGRAM?

Mrs. H

I'm a breast cancer survivor. The biggest thing I got out of AMPLIFY was being able to go online and answer the questions and put my weight in every day. I have never weighed myself daily, and that has really been a big help. AMPLIFY is a wonderful program. I've been very successful with it.

Ms. H has been in the program for about 6 months, and she lost 36 pounds (21% of her body weight), and dropped her waist size by 5.5 inches .

Mr. C

"I'm a 68 year old prostate cancer survivor. Before I started AMPLIFY, I was completely washed-out. I could barely walk a hundred feet without having to stop and catch my breath. I have enjoyed the program. I am eating and sleeping better, and have lost weight."

Over the course of the past 12 months, Mr. C lost 16 pounds (10% of his body weight) and improved his endurance by walking 27% more steps during a 2-minute testing period.

Ms. W

"I'm a breast cancer survivor. I would describe AMPLIFY as being very helpful to live a healthier and better life and be successful in your survivorship. Others should join AMPLIFY because they'll feel better about themselves. Their fight is not over. ... Life needs to get better and better, and I believe the AMPLIFY study can help that."

Over 12 months, Ms. W lost 26 pounds (14% of her body weight) and reduced her waist size from 37 inches to 33 inches (4 inches).

MEASURES AT BASELINE, & EVERY 6 MONTHS FOR 2 YEARS \$20 PROVIDED EACH TIME POINT (UP TO \$100 IN TOTAL)

- Phone and computer-based questionnaires to assess well-being and diet.
- Zoom visits assess the following:
 - Weight/Waist circumference
 - Blood pressure/resting heart rate (will send a monitor)
 - Physical performance and Balance
 - 30 sec chair stand, chair sit & reach, back scratch, 8-ft up & go, 8-ft walk, 2 min step test
- Muscle mass (D3 creatine)
- Dry blood Spot to test inflammatory markers
- Activity monitor to track physical activity and sleep

Urine test strip detects muscle mass



Finger prick detects inflammation



ELIGIBILITY CRITERIA

- Age: 50+ years
- Survivors completing primary treatment for the following cancers (with no recurrence or other second cancers):
 - Localized through regional Breast, Colorectum, Endometrium, Prostate and Thyroid
 - Localized Kidney, Ovary
 - Multiple Myeloma, non-Hodgkin Lymphoma
- Overweight/Obese (BMI: 25–50 kg/m²)
- Moderate-to Strenuous Physical Activity < 150 minutes/week
- Not enrolled in a diet or exercise program
- English writing/speaking + completed 8th grade

THANK YOU! QUESTIONS?

Referrals:

<https://amplifymyhealth.org/info>

<https://www.facebook.com/AmplifySurvivorHealth>

NCT04000880

833-535-7934.

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