



E & N News to Use for cancer patients, survivors and caregivers

EXERCISE & NUTRITION during/after* CANCER

**CURRENT PEER-REVIEWED MEDICAL LITERATURE and EXPERT COMMENTARY
from RELIABLE SOURCES and DR. BLEYER**

***Studies on cancer prevention are included if they have special relevance to cancer survivors**

May 2009

E&N News is now listed as **one of 7 resources recommended by MD Anderson Cancer Center** in the *Complementary Therapies, General* category and endorsed by the Cancer Patient Education Network of the National Cancer Institute. The MD Anderson Cancer *Complementary/Integrative Medicine Educational Resources* resource (www.mdanderson.org/departments/CIMER) is rated #1.

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▶ Exercise

Endometrial cancer patients' assessment of the benefits of exercise

[Most women with uterus cancer report that exercise improves their physical and emotional quality of life; those who were regular exercisers before their cancer diagnosis were less convinced that exercise per se would help reduce their risk of other cancer or recurrence of their cancer](#)

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American Society of Clinical Oncology Annual Meeting, Orlando, May 30-June 3, 2009, Abstract e20553

Background: Endometrial cancer patients remain at risk for other obesity related cancers and illnesses. Patients should be counseled to increase their physical activity, however, their belief concerning potential outcomes of exercise will affect how they are counseled.

Methods: Patients treated for Stage I endometrial cancer with no other cancer diagnoses were asked if they had been exercising regularly for more than 6 months using the CDC definition of exercise (exercisers), how likely they thought regular exercise would result in health related outcomes (see Table) and how important these outcomes are to them using Likert-like scales ranging from 1 to 5. A weighed calculation of how likely regular exercise would result in an outcome of importance to them was obtained by multiplying the two scores. Chi-square and t-tests were used to analyze data with SPSS V15.

Results: 76 of 90 women approached completed the questionnaire (84%), mean age was 59.5 ± 1.1 (SEM). 45% were exercisers, their mean BMI was lower (31.2 ± 1.2 vs. 38.0 ± 1.4 , $p=0.001$) and a non significantly lower proportion reported having diabetes (15% vs 26%) or hypertension (26% vs 43%). The majority of all women believed regular exercise would result in positive outcomes; a lower proportion of exercisers reported it very to extremely likely that regular exercise would reduce the risk of developing cancer (27% vs 54%, $p=0.023$) or osteoporosis (46% vs 73%, $p=0.019$). The majority reported these outcomes were very to extremely important to them; a lower proportion of exercisers reported reducing the risk of developing a new cancer or diabetes were (cancer 79% vs 98%, $p=0.013$; diabetes 78% vs 100%, $p=0.003$). Both groups believed feeling better physically and emotionally were important and likely consequences of exercise; exercisers were less likely to believe several other outcomes were important and likely consequences (Table).

Likelihood that exercise will result in an outcome of importance (range: 1 - 25)

	Exercisers (n=34) Non-Exercisers (n=42) p value		
Maintain weight	$15.4 \pm 1.0^*$	15.0 ± 1.0	NS
Lose Weight	11.1 ± 0.9	16.0 ± 1.0	0.001
Feel better physically	18.4 ± 0.9	18.4 ± 0.7	NS
Feel better emotionally	18.3 ± 1.0	18.2 ± 0.7	NS
Reduce risk of heart disease	16.7 ± 0.9	18.7 ± 0.8	0.108
Reduce risk of developing cancer	11.8 ± 1.2	16.5 ± 1.0	0.003
Reduce risk of developing diabetes	15.1 ± 1.1	18.3 ± 0.9	0.023
Reduce risk of developing hypertension	14.6 ± 1.3	17.4 ± 1.0	0.088
Reduce risk of developing osteoporosis	15.2 ± 1.2	17.3 ± 1.0	0.180

*Mean SEM

Conclusions: Women who exercise regularly and develop cancer may become disillusioned with the potential health benefits of exercise despite having improved health.

Dr. Bleyer:

- ☑ Naturally, those who developed cancer despite regular exercise during most of the life will be less convinced that recurrence of their cancer or developing another cancer will be decreased by continuing to exercise or increasing their exercise routine
- ☑ Nonetheless, they are convinced that their quality of life will be better by continuing to exercise
- ☑ Again, from **DEFEAT Cancer**, the combination of E&N (exercise and nutrition) may be synergistic in improving the quality of life and for most cancer survivors, the quantity (longevity) of life

Phase III randomized anastrozole exercise (RAE) trial: First planned interim analysis

A structured exercise program is well tolerated and compliance is high among women with breast cancer who have hormonal-related musculoskeletal symptoms and early results point to a positive impact of exercise

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American Society of Clinical Oncology Annual Meeting, Orlando, May 30-June 3, 2009, Abstract e20674

Background: Adjuvant anastrozole (aA) is associated with arthralgias/myalgias (A/M), bone density loss, and hot flashes. Analgesics offer limited relief of musculoskeletal (MSK) symptoms and are associated with side effects of their own. The benefit of exercise on bone health, muscle strength, hot flashes, and quality of life (QOL) has been demonstrated; the objective of this trial is to determine if an exercise program improves anastrozole related A/M.

Methods: This is a phase III, randomized trial of standard of care (observation) vs 48 weeks (wks) of exercise for women with BC on aA. Subjects in the control group receive literature about AIs (information on bone health, management of SEs of AIs). Subjects in the intervention group participate in a semi-supervised, individualized, and graduated 3x/wk exercise program (aerobic, resistance training, stretching) for 24 wks. From wks 25-48 independent exercise is recommended 3x/wk. The 10 endpoint is change in MSK symptoms as measured by 12 wk SF-36v2 bodily pain scores, NCI CTG toxicity, and visual analogue scale. 20 endpoints are QOL, hot flashes, bone density, and body mass. Physical activity and compliance with aA was monitored in both arms. The 1st interim analysis was planned after 10 patients were enrolled to evaluate accrual, compliance, and rate of discontinuation.

Results: Accrual commenced December, 2007. Fourteen of a planned 72 patients have been enrolled (baseline data available for 13); 7 pts in the control arm (A) and 6 in the exercise arm (B). Median age was 59 (A) and 58 (B). Nine pts had baseline and 12 wk data available [5 (A), 4 (B)]. There were no withdrawals and compliance with scheduled exercise was 100%. Of the NCI CTG A/M deemed probably/definitely related to aA, there is no change in the number reported at baseline vs wk 12 in Arm A. In Arm B, 2 of 4 pts report a decrease in the number of A/M at wk 12. Mean norm-based wk 12 SF-36v2 bodily pain domain scores worsened by 4.1 in Arm A; an improvement of 1.9 in mean scores was observed in Arm B.

Conclusions: Interim results show that a structured exercise program is well tolerated and compliance is high among women with aA related MSK symptoms. Early results point to a positive impact of exercise on MSK symptoms in women with early BC. Updated data will be presented.

Dr. Bleyer:

- ☑ With only 14 of 72 patients required to complete this study, the results reported are obviously too premature
- ☑ Nonetheless, the fact that it only has taken the first 14 patients to demonstrate feasibility of a structured exercise program in women who have adverse musculoskeletal side effects from their therapy, and in whom exercise is more difficult, provide optimistic expectations for the final results of the study
- ☑ Furthermore it suggests that excellent compliance with an exercise program can be expected in patient with other cancers and with physical limitations from the toxicities of their therapies

Exercise may boost lung cancer survivors' well-being

[Survivors of early-stage lung cancer may enjoy a better quality of life if they can manage to get regular exercise](#)

S. Goyal, T. Puri, D. N. Sharma, P. K. Julka, G. K. Rath
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NEW YORK (Reuters Health) - Thursday, February 19, 2009

By Amy Norton

SOURCE: Cancer Epidemiology, Biomarkers & Prevention, February 2009.

Researchers found that among 175 patients who'd been treated for early-stage lung cancer up to 6 years earlier, **those who were regularly active tended to report a better quality of life** -- particularly when it came to physical well-being.

While the prognosis for lung cancer is often poor, people who are diagnosed before the disease has spread have better long-term survival odds. About half are still alive 5 years later.

Little is known about how often doctors recommend regular exercise to lung cancer survivors, according to lead researcher **Dr. Elliot J. Coups of Fox Chase Cancer Center** in Philadelphia.

He suggests that patients who are interested in getting physically active talk to their doctors about it.

"Lung cancer survivors often have (other) medical conditions that may affect their ability to be physically active," Coups told Reuters Health. "So, as a lung cancer survivor, it's important to engage in activities that match both your abilities and your preferences."

The study findings, published in the journal *Cancer Epidemiology, Biomarkers & Prevention*, are based on surveys of 175 survivors of early-stage non-small cell lung cancer -- the less aggressive of the two major forms of lung cancer.

Study participants were asked about their current exercise habits, as well as their habits before diagnosis and during the 6 months after treatment. They also completed a standard questionnaire on quality of life, which includes questions on physical functioning, mental health and emotional well-being.

Overall, the researchers found that 27 percent were currently meeting experts' general recommendations for exercise: moderate activity, such as walking, for at least 150 minutes per week, or vigorous exercise for at least 1 hour per week.

These men and women generally reported a higher quality of life than their less-active counterparts, Coups and his colleagues found. The difference was mainly seen in measures of physical well-being, but regular exercisers also tended to report fewer depression symptoms.

According to the researchers, more studies are needed to develop and test exercise programs designed specifically to help lung cancer survivors get active.

For now, they may want to try things like walking around their neighborhood, gardening or swimming, according to Coups.

"The main thing," he said, "is to **engage in activities that you enjoy and that you are comfortable with.**" ...

Dr. Bleyer:

- ☑ That exercise improves quality of life is uncontested; the importance of this report is that it helps those one of the most debilitating cancers (lung cancer) and intrinsically more difficult to engage in physical activity
 - ☑ One corollary to derive from this report is that if exercise can help lung cancer patients, it has an even greater effect, and likely can be accomplished more readily, in patients and survivors with other types of cancer
 - ☑ Another corollary, from **DEFEAT Cancer**, is that the combination of E&N (exercise and nutrition) can be synergistic in improving the quality of life and for most cancer survivors, the quantity (longevity) of life
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► Nutrition

Ounces of prevention—The public policy case for taxes on sugared beverages [Prevention]

An editorial by the New York City Commissioner of Health and director of the Rudd Center for Food Policy and Obesity at Yale University cogently argue for increasing the taxes on soda pop, carbonated drinks, and other sugared beverages, and in the process for reducing the cancer burden in our people

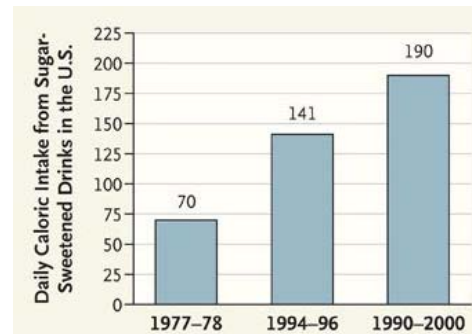
New York and Maine have proposed large taxes on sugared beverages to 1) reduce the obesity rate, 2) increase the consumption of fruits and vegetables, and 3) improve their state revenues.

Kelly Brownell, PhD, and Thomas Frieden, MD, MPH, of Yale University and Commissioner of Health for New York City, respectively, cogently defend the proposals in a New England Journal of Medicine editorial that have significant implications for cancer control. Sugared beverage consumption has increased dramatically in the U.S. (bar graph); they now account for 10 to 15 percent of the calories consumed by children and adolescents. **For each extra glass or can of sugared beverage consumed per day, the likelihood of a child becoming obese increases by 60%** (Nielson SJ, Poplin MM. Am J Prev Med. 28:413, 2008).

Moreover, the cost of fruits and vegetables has increased far more than carbonated beverages, such that beverages have become, by necessity for indigent families, and particularly during our current economy, a preferred item. Yet, it has been well established, like the taxes on cigarettes and alcohol, that higher prices steer expenditures away from the health-despairing commodities and reduce the public burden of associated healthcare costs. In addition, the savings on beverages by needy families can be used to purchase better nutritional sources.

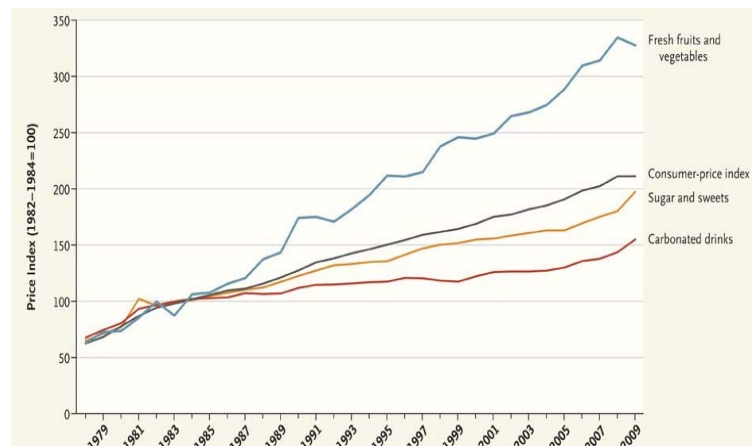
Source: Brownell KD, Frieden TR: N Engl J Med 360:1805-7, 2009

Daily Caloric Intake from Sugar-Sweetened Drinks in the United States



Brownell K and Frieden T. N Engl J Med 2009;360:1805-1808

Relative Price Changes for Fresh Fruits and Vegetables, Sugars and Sweets, and Carbonated Drinks, 1978-2009



Brownell K and Frieden T. N Engl J Med 2009;360:1805-1808

Dr. Bleyer:

- ☑ Although this editorial may seem like a long stretch from the mission of **DEFEAT Cancer** and **E&N News**, the relevance for Oregon and cancer prevention is too significant not to include.
- ☑ We are, as a state and a nation, consuming more and more of our gross domestic product and financial resources for our people and their families on our cancer burden
- ☑ Cancer is already affecting our healthcare expenditures and general economy more than any other disease
- ☑ Within a few years more of our people will die of cancer than of any other cause