COMMENTS AND RESPONSES

Response to Comment on: Torres-Mejía et al. Moderate-Intensity Physical Activity Ameliorates the Breast Cancer Risk in Diabetic Women. Diabetes Care 2012;35:2500–2502

We appreciate the comments of Zhang et al. (1). We agree with them that the reduction in breast cancer (BC) risk was very strong, particularly in postmenopausal women (2). Our results are consistent with their recent meta-analysis (3). In our study, after analyzing moderate-intensity physical activity as a continuous variable, we found that for each h/week increment in moderate-intensity physical activity, the odds of having BC decreased by 2% (odds ratio [OR] = 0.98, 95% CI 0.97–0.99, $P = 0.003$) in premenopausal women and by 3% (OR = 0.97, 95% CI 0.95–0.98, $P < 0.001$) in postmenopausal women. Our results also agree with those that have shown that there is a stronger effect in Hispanic women than in white women and after age 50 than before age 50.

Zhang et al. mention that very few women could take more than 19 h/week of moderate-intensity physical activity, particularly diabetic women. Mexican women could easily take more than 19 h/week of moderate-intensity physical activity. According to the Organization for Economic Co-operation and Development, Mexican women spend, on average, 6 h per day doing household activities compared with women from developed countries such as Norway, who spend an average of 3.6 h/day doing household chores (4). Furthermore, in developing countries like Mexico, people walk more hours a day than in certain developed countries. This is partly due to the reduced number of cars per household. In 2008, the Mexican Association of Marketing Research and Public Opinion Agencies reported certain characteristics such as the number of cars per households according to six decreasing socioeconomic levels (AB, C+, C, D+, D, and E) (5). Level C corresponds to 17.9% of households in which only two-thirds own a car, 35.8% (level D+) only 1 out of 4 households own a car, 18.3% (level D) practically do not own a car, and 6.7% (level E) do not own either a car or a washing machine (5). Data from the Mexican National Health Nutrition Survey 2012, not yet published, showed that only 16.8% of women with diabetes aged 50–69 years found it difficult to perform their daily activities (walking, moving, or going up and down). Furthermore, our data showed a median of 14 h/week (interquartile range 3–25 h/week) of moderate-intensity activity in diabetic women.

As there is no evidence of an association between physical activity and in situ BC risk, our results are representative of women with invasive BC. Although we analyzed both women with in situ and invasive BC in a subsample of 354 premenopausal women, we found 9.9% of in situ BC cases and 5.7% in a subsample of 488 postmenopausal women. New breast carcinoma in situ cases in our study was lower compared with estimates from U.S. and Europe (20%) (6,7). In Mexico, over 80% of cases of women with BC seek clinical attention at later stages of the disease. The findings from our analysis (2) and the meta-analysis of Zhang and colleagues (3) support the idea that further research needs to be done in this area and consideration needs to be given to studies of interventions to reduce BC risk in patients with diabetes.

Gabriela Torres-Mejía, phd[1]
Carolina Ortega-Olvera, msc[1]
Louis Martínez-Matsushita, msc[1]
Eduardo Lazcano-Ponce, phd[1]
Elad Ziv, phd[2,3]
Angélica Angeles-Llerenas, msc[1]

From the [1]National Institute of Public Health, Center for Population Health Research, Cuernavaca, Morelos, Mexico; the [2]Division of General Internal Medicine, Department of Medicine, Institute for Human Genetics, University of California, San Francisco, San Francisco, California; and the [3]Department of Epidemiology and Biostatistics, Helen Diller Family Comprehensive Cancer Center University of California San Francisco, San Francisco, California.

Corresponding author: Angélica Angeles-Llerenas, aangelica@insp.mx.

DOI: 10.2337/dc13-1833

© 2013 by the American Diabetes Association. Readers may use this article as long as the work is properly cited, the use is educational and not for profit, and the work is not altered. See http://creativecommons.org/licenses/by-nc-nd/3.0/ for details.

Acknowledgments—No potential conflicts of interest relevant to this article were reported.

References

1. Zhang D, Wu Y, Jiang W, Jiang X. Comment on: Torres-Mejía et al. Moderate-intensity physical activity ameliorates the breast cancer risk in diabetic women. Diabetes Care 2012;35:2500–2502 (Letter). Diabetes Care 2013;36:e209. DOI: 10.2337/dc13-0158
2. Torres-Mejía G, Angeles-Llerenas A, Ortega-Olvera C, et al. Moderate-intensity physical activity ameliorates the breast cancer risk in diabetic women. Diabetes Care 2012;35:2500–2502
3. Wu Y, Zhang D, Kang S. Physical activity and risk of breast cancer: a meta-analysis of prospective studies. Breast Cancer Res Treat 2013;137:869–882
4. Organization for Economic Co-operation and Development Data Lab. Available from http://www.oecd.org/statistics/data-lab/. Accessed 18 October 2013
5. Asociación Mexicana de Agencias de Investigación de Mercado y Opinión Pública A.C. Available from http://www.amai.org/que_hacemos.php. Accessed 18 October 2013
6. Sprague BL, Trentham-Dietz A. Prevalence of breast carcinoma in situ in the United States. JAMA 2009;302:846–848
7. Leonard GD, Swain SM. Ductal carcinoma in situ, complexities and challenges. J Natl Cancer Inst 2004;96:906–920