

Breast Self-Examination

This committee opinion was developed by the Breast Disease Committee of the Society of Obstetricians and Gynaecologists of Canada. It was approved by the Executive and Council of the Society of Obstetricians and Gynaecologists of Canada.

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Abstract

Objective: To examine the value of teaching regular breast self-examination (BSE).

Outcome: Reduction of benign biopsy rates.

Benefits: To provide better advice for women about the risks and benefits of BSE, and to ensure that women who choose to practise BSE are taught to perform it proficiently.

Summary Statement: Routine teaching of BSE does not reduce mortality and likely increases benign biopsy rates. (I)

Recommendations:

1. Breast self-examination should not be routinely taught to women. (ID)
2. A full discussion of breast self-examination, including risks, should be provided for the woman who requests it. (IIIA)
3. If a woman makes an informed decision to practise BSE, care providers should ensure she is taught the skills and that she performs self-examination proficiently. (IIIA)

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Key Words: Breast self-examination, breast cancer, mammography, mortality

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BACKGROUND

Since the release of recommendations by the Canadian Task Force on Preventive Health Care in 2001¹ women have been confused about the value of regular breast self-examination (BSE). A review of the evidence not only showed that regular BSE conferred no benefit in terms of survival from breast cancer, but also provided evidence of harm. A 1994² review concluded that there was insufficient evidence to include or exclude teaching at the periodic health exam. The addition of “harms” in the 2001 update led to the recommendation that “routine teaching of BSE be excluded from the periodic health exam of women in the 40 to 49 and the 50 to 69 age groups.” At the time of release there was an outcry in the media from cancer organizations and women’s groups, and there was a concomitant outpouring in the professional journals.

Lerner³ sets it in the historical context. Systematic BSE has been recommended for more than 70 years and promoted by the American Cancer Society and the National Cancer Institute. In the 1970s, with the introduction of formal screening recommendations, which included BSE, the women’s movement took up the cause. Since then, women have come to believe that early detection of breast cancer can be equated with prevention and even cure.⁴ This belief places a heavy burden on women.

DISCUSSION

Although BSE has been widely promoted, researchers have been unable to find evidence that it reduces mortality from breast cancer. It was the publication of the randomized controlled trials in Shanghai⁵ and Russia^{6,7} showing no reduction in mortality or stage of breast cancer and the higher rates of benign breast biopsies that led to the review in which Baxter and the Canadian Task Force on Preventive Health Care lowered the grade for the routine teaching of BSE from a C to a D, indicating fair evidence to exclude

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Criteria for quality of evidence assessment and classification of recommendations

Level of evidence*	Classification of recommendations†
I: Evidence obtained from at least one properly designed randomized controlled trial.	A. There is good evidence to support the recommendation that the condition be specifically considered in a periodic health examination.
II-1: Evidence from well-designed controlled trials without randomization.	B. There is fair evidence to support the recommendation that the condition be specifically considered in a periodic health examination
II-2: Evidence from well-designed cohort (prospective or retrospective) or case-control studies, preferably from more than one centre or research group.	C. There is poor evidence regarding the inclusion or exclusion of the condition in a periodic health examination.
II-3: Evidence from comparisons between times or places with or without the intervention. Dramatic results from uncontrolled experiments (such as the results of treatment with penicillin in the 1940s) could also be included in this category.	D. There is fair evidence to support the recommendation that the condition not be considered in a periodic health examination.
III: Opinions of respected authorities, based on clinical experience, descriptive studies, or reports of expert committees.	E. There is good evidence to support the recommendation that the condition be excluded from consideration in a periodic health examination.

*The quality of evidence reported in these guidelines has been adapted from the Evaluation of Evidence criteria described in the Canadian Task Force on the Periodic Health Exam.²¹

†Recommendations included in these guidelines have been adapted from the Classification of Recommendations criteria described in the Canadian Task Force on the Periodic Health Exam.²¹

such teaching from the periodic health examination for women aged 40 to 69.

Of all of the studies cited, the Shanghai study⁵ provides the highest quality evidence we have about teaching BSE. It resulted in the analysis of 266 064 women randomly assigned to either a BSE instruction group or a control group. Intensive instruction in BSE and reinforcement over five years did not reduce the mortality rate from breast cancer. However it did result in a higher rate of benign breast biopsies in the BSE group than in the control group (relative risk [RR] 1.84, 95% confidence interval [CI] 1.73–1.95), a finding also evident in the Russian/WHO trial^{6,7} (at 5 yr RR 1.5, 95% CI 1.1–1.9) and the UK trial⁸ (0.91% vs. 0.61%). These findings led to the conclusion that “Programs to encourage breast self-examination, in the absence of mammography, would be unlikely to reduce mortality from breast cancer.”⁹ Therefore women who choose to practice BSE should be informed that its efficacy is unproven and that it may increase their chances of having a benign breast biopsy.

One of the criticisms¹⁰ was that the Shanghai study was based on only five years of follow-up, but the results were upheld in the publication of the 10-year data.⁹ Nekhlyudov and Fletcher¹⁰ also pointed out that since the rates of breast cancer in China and Russia are lower than the rates in North America, false positive rates with BSE would likely be higher in those countries and questioned whether the false positive findings with BSE would be similarly high in countries that use concomitant screening methods.

Miller, Baines, and Harvey¹¹ noted that the Russian study referred only to the St Petersburg component. They questioned the statistical validity of the reports because of cluster randomization and suggested that recommendations based on the trial are premature in the absence of data approved by the WHO. Unfortunately, data from the Moscow branch are incomplete and may never be completed.

In a letter to the editor of the CMAJ,¹¹ Baxter was criticized by the investigators of the study for her interpretation of the results of a case control study nested within the Canadian National Breast Screening Study,¹² which reported a significant effect of good compliance with BSE in reducing breast cancer mortality. However, in a sub-group analysis, the performance of some components of BSE differed between case and control subjects, which, based on a regression analysis, Baxter suggested increased the chance the results may have been confounded.

Harris¹³ points out that there is evidence that excellent physical examination practice, whether clinical breast examination or breast self-examination, may indeed be effective and case control evidence that BSE done correctly may reduce mortality. However, the logistical and financial challenges of teaching all women to perform BSE correctly make this ineffective as a population strategy for reducing breast cancer mortality.

A meta-analysis¹⁴ and several reviews are in accordance with the results of the Canadian Task Force on Preventive Health Care, including a 1999 literature review from the Australian National Breast Cancer Centre¹⁵ and a 2003 review by the Cochrane Collaboration, reprinted in 2005.¹⁶

These studies were unable to find any benefit, and concluded that there is good evidence of harm from BSE.

As well as the increased likelihood of an invasive procedure for a benign result, BSE screening can cause emotional distress, an increased probability of diagnostic mammography, and breast deformity and scarring, although the latter is becoming increasingly less likely with the widespread use of core biopsy.

There was a move in 1991 to replace BSE with “Breast Awareness” in the UK, which has been described as confusing^{11,17,18} and not unlike BSE. A review¹⁹ concluded that “breast awareness provided women with some acknowledgement of the part they can play in being empowered to fight breast disease.” Even though breast lumps are found incidentally, by women themselves, including those practising BSE, BSE is seen by many women as maintaining some control over their health and, as such, they are reluctant to give it up. Others, who find the monthly ritual anxiety-provoking, are relieved. Physicians and other practitioners need to respect the beliefs and expectations of these women. Although the evidence indicates no benefit from routine instruction of BSE, some women, especially those at high risk of developing breast cancer, will request instruction in BSE. It is imperative that women be counselled in the risks of performing BSE. If it is to be practised, good technique is essential, teaching must be thorough and proficiency should be evaluated. In many situations referral to a health care professional trained in the technique would be appropriate.

Women should be encouraged to know what is normal for them, be informed of early symptoms of breast cancer, and promptly report any changes or concerns. It is encouraging to note that a recent study showed that not recommending BSE is unlikely to influence mammography participation.²⁰

SUMMARY STATEMENT

1. Routine teaching of breast self-examination does not reduce mortality and likely increases benign biopsy rates. (I)

Recommendations

1. BSE should not be routinely taught to women. (ID)
2. A full discussion of BSE, including risks, should be provided for the woman who requests it. (IIIA)
3. If a woman makes an informed decision to practise BSE, care providers should ensure she is taught the skills and that she performs self-examination proficiently. (IIIA)

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