

# Just the Berries



## *How accurate are they?*

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Every day thousands of women perform home pregnancy tests (HPTs) with their fingers crossed, hoping for either a positive or negative result, as the case may be. Much rests on the accuracy of these tests. The question is, how accurate are they?

To help find the answer to this question, Bastian et al<sup>1</sup> reviewed available studies. Their results were published in the *Archives of Family Medicine* in 1998. I did another search using PubMed to see if I could find any new articles since that review. I found one review article in *Professional Nurse* on home and laboratory pregnancy testing kits.<sup>2</sup>

For the review by Bastian et al,<sup>1</sup> studies were included if HPT kits were compared with a criterion standard (laboratory testing), if they used appropriate controls, and if data were available to determine sensitivity and specificity. Of 55 studies found, only five met these criteria.

Results from these five studies were very interesting. When subjects using the HPTs were volunteers who tested *previously collected samples*, overall sensitivity was 91% (range 52% to 100%). Specificity ranged from 61% to 100%. When subjects using the tests were women who collected and *tested their own samples*, overall sensitivity was 75% (range 53% to 82%). Specificity was also low, in the range of 52% to 75%.

Some reasons these tests might have been falsely negative include performing the test too early, poor technique, and too dilute a specimen.

These data suggest that, when the target group for these HPTs (ie, women testing their own urine) perform the test, accuracy is less than stellar. In fact, for every four women who use such tests and are pregnant, one will get a negative test result. Also, for every four women who are not pregnant, one will get a positive test result.

Wheeler<sup>2</sup> brought up the interesting point that in the United Kingdom some laboratories use a less expensive and less sensitive test. It is possible to have positive home test and negative laboratory test results. It is probably worth calling your local laboratory to find out whether they use a sensitive test.

Because so much hinges on these tests, women and family physicians should be aware of these results. Women would be wise to repeat the test, regardless of initial results. If pregnancy is suspected, it is always a good idea to consult a family doctor. ❖

"Just the Berries" for family physicians originated at St Martha's Regional Hospital in 1991 as a newsletter for members of the Department of Family Medicine. Its purpose was to provide useful, practical, and current information to busy family physicians. It is now distributed by the Medical Society of Nova Scotia to all family physicians in Nova Scotia. Topics discussed are suggested by family physicians and, in many cases, articles are researched and written by family physicians.

Just the Berries has been available on the Internet for the past 3 years. You can find it at [www.theberries.ns.ca](http://www.theberries.ns.ca). Visit the site and browse the Archives and the Berries of the Week. We are always looking for articles on topics of interest to family physicians. If you are interested in contributing an article, contact us through the site. Articles should be short (350 to 1200 words), must be referenced, and must include levels of evidence and resources searched for the data. All articles will be peer reviewed before publication.

### **Acknowledgment**

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### **Reference**

1. Bastian LA, Nanda K, Hasselblad V, Simel DL. Diagnostic efficiency of home pregnancy kits. *Arch Fam Med* 1998;7:465-9.
2. Wheeler M. Home and laboratory pregnancy-testing kits. *Prof Nurse* 1999;14(8):571-6.

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