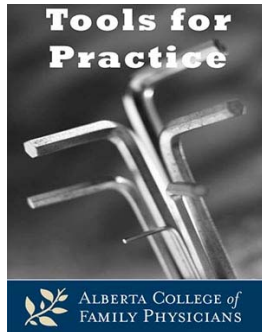


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Does Lubricant reduce the adequacy of the PAP test?

Clinical Question:

Does the use of small amount of water soluble lubricant on the speculum reduce the adequacy of the PAP test?

Evidence:

Fortunately 4 Randomized Controlled Trials (RCT) address this question.

- The largest RCT¹: 2906 patients
 - Water soluble lubricant on speculum vs. tap water
 - No difference in quality of cytology
- Two smaller RCTs:
 - 182 patients² and 70 patients³: No difference in PAP test adequacy^{2,3}
- Quasi-randomized (randomized months), 3460 PAP tests⁴
 - No difference in PAP test adequacy

Conventional cervical cytology smears (glass slide) were used in all studies¹⁻⁴

Context:

- One study found "more than the usual amount of gel" could affect PAP test adequacy by applying an additional 1-1.5 cm 'ribbon' of lubricant gel directly to the cervical os before sampling.⁵
 - Clinicians don't do this and it is not applicable to regular clinical practice.
- No RCT has assessed lubricant influence on liquid-based PAP tests
 - A retrospective review of 4068 liquid-based pap tests found 15 (0.4%) had obscuring material causing misinterpretation of PAP results: approximately half may have related to lubricant use (combined with technologist inexperience)⁶
 - Two studies applied lubricant directly into liquid-based cervical cytology samples^{7,8}
 - One reported reduced cell counts (after this purposeful dilution) but impact on adequacy was not assessed/reported⁷
 - Of note, Aquagel® reduced cell counts more than K-Y® gel.⁷
 - The second demonstrated no impact on liquid based PAP test outcomes⁸

- One RCT also examined if lubricant affected testing for Chlamydia and found no effect after 5535 samples.⁴ (Gonorrhea too uncommon to assess)

Bottom-line: A small amount of water soluble lubricant on a speculum does not reduce the quality of the PAP test and probably does not affect microbiologic results either. The present evidence suggests the adequacy of liquid-based PAP tests would be minimally affected or not at all.

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1. [Obstet Gynecol 2002; 100: 889-92.](#)
2. [Obstet Gynecol 2002; 100: 887-8.](#)
3. [J Am Board Fam Med 2006; 19: 340-4.](#)
4. [Contraception 2005; 72: 60-64.](#)
5. [Acta Cytol 2008; 52: 654-658.](#)
6. [J Lower Gen Tract Dis 2010; 14\(1\): 22-28.](#)
7. [Cytopath 2008; 19: 236-43.](#)
8. [Obstet Gynecol 2006; 107: 66-70.](#)

Tools for Practice is a biweekly article summarizing medical evidence with a focus on topical issues and practice modifying information. It is coordinated by G. Michael Allan, MD, CCFP and the content is written by practising family physicians. Archived articles are available on the Toward Optimized Practice and ACFP websites.

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