

# Papanicolaou tests

## Does lubricant reduce the quality or adequacy?

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### Clinical question

Does using a small amount of water-soluble lubricant on the speculum reduce the adequacy of Pap tests?

### Evidence

Four RCTs address this question. Conventional cervical cytology smears (glass slides) were used in all studies.<sup>1-4</sup>

- The largest RCT<sup>1</sup> examined 2906 patients.
  - Water-soluble lubricant was compared with tap water.
  - No difference in the quality of cytology was found.
- Two smaller RCTs (N=182 and N=70)<sup>2,3</sup> and a quasi-randomized (randomized by month) trial<sup>4</sup> of 3460 Pap tests found no difference in test adequacy.

### Context

- One study found that “more than the usual amount of gel” (ie, a 1- to 1.5-cm “ribbon” of lubricant directly on the cervical os) could affect Pap test adequacy.<sup>5</sup>
  - Clinicians do not do this; it is not applicable to regular clinical practice.
- No RCT has assessed lubricant influence on liquid-based Pap test results.
  - A retrospective review of 4068 liquid-based Pap tests found 15 (0.4%) had obscuring material causing misinterpretation of results: approximately half might have been related to lubricant use (combined with technologist inexperience).<sup>6</sup>
  - Two studies applied lubricant directly into liquid-based cervical cytology samples.<sup>7,8</sup>
    - One reported reduced cell counts (after this purposeful dilution), but the effect on adequacy was not assessed.<sup>7</sup> Of note, Aquagel reduced cell counts more than K-Y jelly did.<sup>7</sup>
    - The second demonstrated no effect on liquid-based Pap test outcomes.<sup>8</sup>
- One RCT also examined if lubricant affected testing for chlamydia and found no effect after 5535 samples.<sup>4</sup> (Gonorrhea was considered too uncommon to assess.)
  - A laboratory study demonstrated that gel mixed with chlamydia and gonorrhea cultures did not affect plating or diagnosis.<sup>9</sup>

### Bottom line

A small amount of water-soluble lubricant on the speculum does not reduce the quality of Pap tests and probably does not affect microbiologic results. Current evidence suggests the adequacy of liquid-based Pap tests would be minimally or not at all affected.

### Implementation

Pap tests remain an essential aspect of cervical cancer screening. Recommended screening intervals have been extended for many patients,<sup>10</sup> but some physicians continue to advise intervals shorter than those suggested by newer guidelines.<sup>11</sup> Some patients, particularly smokers, the obese, and those with depression, might be at risk of being screened too infrequently.<sup>12</sup> Reminder letters increase the proportion of patients with adequate screening.<sup>13</sup> In general, patients are accepting of reminders,<sup>14</sup> and providers appreciate the utility of recall systems for Pap smears.<sup>15</sup> Practices should consider developing registries for recall and reminder systems, focusing on those patients who are less likely to be screened. Clinicians can use water-soluble lubricant on speculums as needed. 🌿

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