
Obtaining a Specimen for Papanicolaou (Pap) Diagnostic Evaluation

There are two methods of specimen collection for Papanicolaou (Pap) screening for cancer: (1) the conventional Pap smear, in which a slide is made directly from the specimen collected at the cervix, and (2) the ThinPrep Pap Test, in which the specimen collected at the cervix is first processed in the laboratory to reduce blood, mucus, other debris, and obscuring artifacts and then a slide is made of the

remaining cellular material. This material can also be used for human papillomavirus (HPV) testing. Both methods involve a speculum examination but there are variations in the collection and disposition of the specimen. The following procedure details both the commonalities and the variations in the two methods of obtaining a specimen for Papanicolaou microscopic analysis.

Procedure

1. Before starting the procedure be sure that the specimen container label is filled out. If you are doing a Pap smear, be sure that the slide is labeled *in pencil* with the date and the woman's name and number.
2. Put on gloves.
3. Insert the appropriate size speculum, visualize the cervix, and fix the speculum for appropriate exposure. (See "Preparatory and General Procedures" and "The Speculum Examination" in Chapter 56.) Be sure to *gently* remove any material that obscures visualization of the cervix or may interfere with the cytological study (e.g., mucus, discharge, blood) with a 2 × 2 or 4 × 4 gauze on a sponge stick.

Rationale

1. Labeling before the procedure helps make sure the specimen is properly labeled with the woman's name and the date and reduces the risk in a busy office or clinic of specimens from different women getting mixed up. Ink may smear or wash off during fixation of the slide, thus making it difficult to read. The fixative also makes it difficult to label the slide after it has been sprayed.
2. Universal precaution to protect you from exposure to any body fluid/discharge or bloodborne pathogens.
3. If a total pelvic examination is being done, inspect the external genitalia and check the urethra and the Bartholin's and Skene's glands prior to the speculum examination. The bimanual examination follows the speculum examination. It is imperative that no lubricating material except water be used prior to obtaining the Pap smear because lubricant may render this cytological study invalid.
Cleaning the cervix too vigorously will remove the epithelium.

Collection and Disposition of the Specimen for a Pap Smear

4. One of four methods of specimen collection for a Pap smear may be used.
 - a. Place the longer portion of the slightly notched end of a wooden spatula or plastic scraper against and into the external os of the cervix and press. Scrape the cervical canal by turning the spatula firmly in a full circle. Be sure that if the squamocolumnar junction is visible, you include it and scrape it throughout the full circle.
 - b. Lightly moisten the cotton end of a cotton-tipped applicator with normal saline, insert the applicator into the cervical canal 2 cm, and roll the applicator between your thumb and index finger 360 degrees.
 - c. Insert a cervical brush 1 to 2 cm into the cervical canal and rotate it 90 to 180 degrees.
 - d. Use a combination of methods to include the spatula method.
 5. Spread the cells on the labeled slide. If the cells were collected on a wooden spatula, place one flat side next to the label on the top half of the slide and stroke once to the end of the slide. Then turn the spatula over and place the other flat side next to the label on the bottom half of the slide and stroke once to the end of the slide. Do not stir in circles, stroke repeatedly, or stroke one side of the spatula on top of cells already spread from the other side of the spatula. If the specimen is too thick, then take the edge of the spatula and, with a single light stroke down the slide, remove the excess.

If the cells were collected on a cotton-tipped applicator or on a cervical brush, gently roll the cotton tip or the brush down the upper half of the slide from the label to the end of the slide. Repeat, rolling the cotton tip or the cervical brush down the lower half of the slide. Do not stir in circles or rub back and forth.
 6. Immediately spray the slide generously with the fixative or place it in a jar of fixative solution. Speed is of the essence. Avoid waving the slide in the air or placing it under a lighted lamp prior to its being fixed.
4.
 - a. Pressing inserts the tip of the spatula a short distance into the cervical canal; how far depends on the patulousness of the cervix. Cells from the squamocolumnar junction should be included for cytological study because cervical cancer most frequently begins at the squamocolumnar junction.
 - b. Moistening the cotton-tipped applicator with saline prevents the cotton from absorbing endocervical secretions and prevents the cotton fibers from getting on the slide.

This method is often used with pregnant women to decrease the risk of bleeding resulting from increased friability of the cervix.
 - c. The cervical brush increases endocervical cell retrieval, especially in women who are pregnant, postmenopausal, who have cervical stenosis, or who have had cervical procedures [1]. In women with any of these conditions, the squamocolumnar junction has retreated within the cervical canal. Cells from this area must be retrieved for a valid Pap smear.

Rotating the cervical brush only 90 to 180° decreases bleeding, which can obscure the endocervical cells from examination.
 - d. A combination of methods is used if you feel the need to sample the ectocervix as well as the endocervix.
 5. This procedure for spreading the cells is designed to avoid breaking and destroying the cells, which would render the Pap smear useless.
 6. Drying the cells in air or with a light distorts the cells.

Collection and Disposition of the Specimen for a ThinPrep Pap Test

4. One of two methods may be used.
 - a. Place the long central portion of the cervical broom into the cervical canal and press against the external cervical os. Turn the cervical broom a full circle.
 - b. Use a wooden spatula or cervical brush, as described in 4 (a) and (c) above for collection and disposition of the specimen for a Pap smear.
 5. Rinse the cervical broom (or cervical brush or wooden spatula) in the small container of liquid transport medium by gently stirring it in the solution.
 6. Immediately cap the container.
 7. Proceed with the remainder of the speculum examination, making the necessary observations. Remove the speculum and deposit it in the proper container.
 8. Dispose of the spatula, cotton-tipped applicator, cervical brush or cervical broom, and your gloves in a hazardous biological waste receptacle.
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 5. Removes the specimen from the collection device into the liquid transport medium.
 6. Prevents accidental spilling while completing the examination.

There are individual and institutional variations in the procedure for obtaining a Papanicolaou smear. The variations relate to the number of slides made with specimens from the different locations. Some protocols require two slides: one made from a specimen taken with the wooden spatula swept circumferentially at the os, and the second made from a specimen taken with the cotton-tipped applicator or cervical brush inserted into the cervical canal. Still other protocols require the examiner to make a third slide from a specimen taken from the poste-

rior vaginal fornix or vaginal vault either by aspiration or with a cotton-tipped applicator, or with the blunt end of a wooden spatula.

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1. Bauman, B. J. Use of a cervical brush for Papanicolaou smear collection: A meta-analysis. *J. Nurse-Midwifery* 38(5):267-275 (September/October) 1993.