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## Pelvic Examination

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### Procedures, Observations or Findings, and Significance

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#### Preparatory and General Procedures

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##### Procedure

1. In general terms explain what you will be doing during the pelvic examination. If this is a woman's first pelvic examination, show her the equipment you will be using and explain its purpose. Ask the woman if she would like to learn about her own body. If she says yes, provide a mirror so she will be able to see her external genitalia and hymenal ring. Use the mirror and a flashlight to enable her to see her own cervix and vaginal walls during the speculum examination. Throughout the examination, keep the woman informed a step ahead of what you are doing. Forewarn her when you are about to touch her or insert the speculum or when something may be uncomfortable or painful.
2. Be sure the woman's bladder is empty before starting the examination.
3. Position the woman in the lithotomy position on an examining table. Be sure that her buttocks are slightly beyond the edge of the table. Help her to know how far to move down the table by telling her to move until she touches your hand (which is just beyond the edge of the table; see Figure 56-1).

Her arms should be down beside her or across her abdomen. Place a pillow under her head. If there is no pillow but there is a thin mat on the table, roll up the mat behind her as she moves down to the end of the table and use the rolled mat as a pillow.

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##### Rationale

1. An informed woman is more relaxed and cooperative than an uninformed woman. Explanations of what you are doing and the equipment you are using are in keeping with the philosophy of a woman's right to know what you are doing to her body.
2. Bimanual examination is extremely uncomfortable for a woman if her bladder is full. A full bladder also makes it difficult for you to palpate the pelvic organs.
3. If the woman is not properly positioned, the edge of the table will be in the way of the handle of the speculum and you will have difficulty positioning the speculum.

Many women automatically put their hands behind their heads when in the lithotomy position. Raising the arms stretches and tightens the abdominal muscles, making the bimanual examination more difficult and uncomfortable. You can avoid this by having the woman put her arms down (explain why) and putting something else under her head to increase comfort and relaxation.



**FIGURE 56-1** Positioning the woman for a pelvic examination.

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**Procedure**

4. Drape the woman so she feels the minimal possible exposure and so your view of her face is not blocked when you are either sitting or standing during the examination.
5. Wash your hands and put on gloves.
6. Ask the woman to separate or spread her legs. Do not try to spread the woman's legs forcibly or even gently.

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**Rationale**

4. Protecting the woman's modesty and privacy facilitates relaxation. You must be able to see her face at all times in order to maintain personal contact and notice any facial expressions indicative of discomfort, pain, embarrassment, or fear so you can help her. In other words, you must maintain active awareness that there is a person involved above the waist.
5. The old "one glove or two gloves" debate ended with the advent of HIV/AIDS. Now your decision is whether to wear one *pair* or two *pairs* of gloves. (See Chapter 45, Universal Precautions.)
6. Pelvic examination is an intrusive procedure and should proceed only as the woman is ready for it. Separating her legs signals her readiness and cooperation.

7. Throughout the examination help the woman to be as relaxed as possible. It is *not* helpful to just tell her to relax; you need to tell her *how* to relax:
- If she is familiar with breathing and relaxation techniques used in labor, have her utilize these. If not, have her concentrate on slow abdominal or chest breathing—whichever she can do most easily.
  - Ask her to think of herself as a rag doll or wet washcloth or anything else you can think of that connotes the idea of limpness.

It is vital that the woman's legs remain well separated as she relaxes and that you emphasize this point and its rationale to the woman.

8. Your approach to the woman should be super gentle, both verbally and physically. Your touch and manipulation of the speculum should be firm but gentle (i.e., firm enough not to tickle but not so firm as to traumatize).

Remember that the woman's whole attitude toward necessary future pelvic examinations, her concept of her sexuality, her sex life, and her willingness to cooperate with any therapeutic regimen you suggest may be positively or negatively influenced by the way you conduct her pelvic examination.

9. If the woman gets uptight, tense, or upset during your examination, immediately stop whatever you are doing. This means holding your fingers, hand, or the speculum still—do not remove your hand or the speculum. Ascertain what the problem is. If the woman complains of pain, help her differentiate between feeling discomfort as a result of pressure, feeling actual pain, and not feeling any discomfort or pain but being fearful and tense in anticipation of feeling pain. Tell the woman that you will not proceed further until she is again in control, relaxed, and ready. Help the woman with relaxation techniques and anything else she identifies that will help her cope with this procedure.

7. Relaxation is essential to a pelvic examination. It ensures that the woman experiences the least possible discomfort; facilitates your ability to adequately feel and evaluate the pelvic organs; and shortens the length of time of the examination by virtue of your not having difficulty in the conduct of the examination.

It is next to impossible to conduct an adequate and accurately informative pelvic examination if the woman clamps her legs around your examining hand. You simply cannot maneuver your hand in this situation to feel and evaluate the pelvic organs and structures.

8. There is no excuse for a rough pelvic examination. There is considerable difference between gently doing something that may be uncomfortable or may even hurt, such as clinical pelvimetry, and being rough. The woman knows the difference.

Pelvic examination is an intrusive procedure and women are acutely alert to your attitude of respect—or lack of respect—for their bodies. They can tolerate and cope with any necessary discomfort or pain if they are forewarned and know why it is necessary, and if procedures are done in a supportive, caring manner that expresses regret for their necessity and facilitates the woman's efforts to relax throughout.

9. The rationale is the same as for 6, 7, and 8 above.

**Inspection of the External Genitalia**

Procedure	Observations	Significance
<p>1. Seat yourself on a stool at the end of the examining table so you are at eye level with the woman's perineum. Your light should already be adjusted for good visualization of the woman's perineum and your gloves should be on. Tell the woman that you are going to examine her external genitalia ("privates," "the outside down here") and that she will feel your fingers touching this area.</p>	<p>1. a. Observe the mons pubis (mons veneris) for</p> <p>(1) pattern of hair growth</p> <p>(2) pediculosis (lice)</p>	<p>1. a.</p> <p>(1) secondary sex characteristic</p> <p>(2) if lice are present, treatment will vary, depending on whether the woman is pregnant</p>
	<p>b. Inspect the labia majora and perineum for</p> <p>(1) normal size and shape</p> <p>(2) localized labial swelling, edema, or small cysts</p>	<p>b.</p> <p>(1) may vary from individual to individual</p> <p>(2) localized labial swelling may be caused by a Bartholin's abscess or cyst; labial edema may be due to an allergic reaction; small cysts may be sebaceous cysts</p>
	<p>(3) inflammation, dermatitis, irritation</p>	<p>(3) may be indicative of a vaginal infection; ask the woman if she has been itching or scratching in the area</p>
	<p>(4) discoloration and tenderness</p>	<p>(4) traumatic bruising</p>
	<p>(5) varicosities</p>	<p>(5) useful information in planning birth techniques for a pregnant woman</p>
	<p>(6) lesions, vesicles, ulcerations, crusting</p>	<p>(6) may be syphilitic chancre, herpes</p>
	<p>(7) condylomata (lata or acuminata, wartlike growths)</p>	<p>(7) condylomata lata are usually syphilitic; condylomata acuminata are caused by human papillomavirus, the most common sexually transmitted virus, and exaggerated by increased vaginal secretions during pregnancy (see Chapter 15)</p>
	<p>(8) old episiotomy scar or scars of repaired or unrepaired perineal lacerations</p>	<p>(8) useful information in planning birth techniques for a pregnant woman</p>

Procedure	Observations	Significance
<p>2. Separate the labia majora and inspect the labia minora. Then separate the labia minora and inspect the clitoris, the inside of the labia minora, vestibule, urethral orifice, and vaginal introitus.</p>	<p><b>2. a.</b> Inspect the labia minora and vestibule for</p> <p>(1) normal size and shape</p> <p>(2) inflammation, dermatitis, irritation, or caking of discharge in the fold between the labia majora and the labia minora</p> <p>(3) discoloration and tenderness</p> <p>(4) fistulas</p> <p>(5) fissures</p> <p>(6) herpetic vesicles</p> <p>(7) chancre</p>	<p><b>2. a.</b></p> <p>(1) there is considerable variation in what is normal</p> <p>(2) may indicate a vaginal infection or poor hygiene</p> <p>(3) traumatic bruising</p> <p>(4) physician consultation required</p> <p>(5) physician consultation required</p> <p>(6) culture</p> <p>(7) scrape lesion for dark-field examination for syphilis; serologic tests</p>
	<p><b>b.</b> Inspect the clitoris for</p> <p>(1) adhesions with the labia minora</p> <p>(2) enlargement</p>	<p><b>b.</b></p> <p>(1) ascertain if problematic or not</p> <p>(2) possible masculinizing condition</p>
	<p><b>c.</b> Inspect the urethral orifice for</p> <p>(1) growths—polyps, caruncles</p> <p>(2) irritation, dilatation</p> <p>(3) fistulas</p>	<p><b>c.</b></p> <p>(1) physician consultation required</p> <p>(2) may be indicative of repeated urinary tract infections or insertion of foreign objects; question the woman accordingly</p> <p>(3) physician consultation required</p>
	<p><b>d.</b> Inspect the vaginal introitus for</p> <p>(1) the hymen or its remnants (myrtiform caruncles)</p> <p>(2) vaginal discharge</p> <p>(3) discoloration and tenderness</p> <p>(4) scars of old lacerations</p>	<p><b>d.</b></p> <p>(1) an intact hymen is normal unless tight and rigid or imperforate; myrtiform caruncles are also normal</p> <p>(2) may be indicative of a vaginal infection</p> <p>(3) traumatic bruising</p> <p>(4) useful information in planning birth techniques for pregnant women</p>

Procedure	Observations	Significance
	(5) abnormal growths	(5) physician consultation required
	(6) fistulas	(6) physician consultation required
	(7) fissures	(7) physician consultation required
	(8) uterine prolapse	(8) physician consultation required
	(9) note if the introitus is nulliparous, parous, or gaping	(9) helpful in determining what size speculum to use

### Examination of the Urethra and Skene's and Bartholin's Glands

Some midwives examine the urethra and Skene's and Bartholin's glands prior to the speculum examination. Other midwives examine these after the speculum examination as the first part of their bimanual examination.

The advantage of examining the urethra and Skene's and Bartholin's glands before the speculum examination is fourfold:

1. The examination can be incorporated into the total pelvic examination during the inspection of the external genitalia.
2. It allows for immediate palpation of a suspicious labial swelling, cyst, or growth.

3. The pressure of the speculum may cause discharge from the urethra or Skene's glands, which may go unnoticed during the procedure and yield a false negative result when they are stripped afterwards.
4. It allows the midwife to also identify the position of the cervix. This information is useful to have prior to insertion of the speculum.

The disadvantage of examining these structures at this time is that you cannot use lubrication (other than water) on your examining fingers as lubricating material may interfere with the Pap smear obtained during the speculum examination.

Procedure	Findings	Significance
<ol style="list-style-type: none"> <li>1. Separate the labia with the thumb and index finger of one hand. Tell the woman that you are going to insert one finger into her vagina (birth canal) and that she will feel it pressing forward. With your palm up, gently insert the index finger of your examining hand into the vagina as far as the second joint. Exerting upward pressure, strip (or milk) the Skene's gland on one side of the urethra by moving your finger alongside the urethra from inside to outside. Repeat for the Skene's gland on the other side. Then strip the urethra by again inserting your index finger and exerting upward pressure directly on the urethra itself as you move your finger from inside to outside.</li> </ol>	<ol style="list-style-type: none"> <li>1. Identify the urethral meatus. While stripping the Skene's glands, look for discharge either from the vestibule on either side of the urethra or from the urethra itself. Sometimes the ducts of the Skene's glands open on the posterior wall of the urethra just inside the meatus. If you observe a discharge while stripping the Skene's glands or the urethra, note its color, consistency, and odor.</li> </ol>	<ol style="list-style-type: none"> <li>1. Discharge from the Skene's glands or urethra is indicative of an inflammation of one or all these structures (e.g., urethritis). Usually such an inflammation is due to gonorrhea. You should obtain a specimen of any discharge from the Skene's glands and urethra for immediate diagnostic testing.</li> </ol>

Procedure	Findings	Significance
<p>2. Tell the woman that she will now feel you pressing around the entrance to her vagina (birth canal). With your hand in the position you used in examining the Skene's glands and urethra, sweep your finger laterally, palpating between it on the inside of the vagina and your thumb on the outside of the labia majora. Palpate the entire area, paying particular attention to the posterolateral portion of the labia majora, behind which the Bartholin's glands are located. Continue to sweep your finger and thumb across the perineum and palpate the same area on the other side. Your hand will have turned 270 degrees by the time you are finished.</p>	<p>2. Palpate for</p> <ol style="list-style-type: none"> <li>tenderness</li> <li>swelling</li> <li>masses</li> <li>heat</li> <li>fluctuation</li> </ol> <p>Observe for any discharge from the opening of the Bartholin's gland duct just outside the posterolateral margin of the vaginal introitus on the side of the vestibule. Palpation and observation must be bilateral because each gland is separate.</p> <p>If there is a discharge from either Bartholin's gland, note its color, consistency, and odor; also note any erythema of the duct opening.</p>	<p>2. Painful swelling, hot to touch and fluctuant, is indicative of an abscess of the Bartholin's gland. Such an abscess usually is gonococcal in origin and contains pus. Obtain a specimen of any discharge expressed from a Bartholin's gland duct for diagnostic testing.</p> <p>A nontender mass of variable size is indicative of a Bartholin's cyst, which is the result of chronic inflammation of the gland. The usual, although not only, cause of Bartholinitis is gonorrhea since the Bartholin's glands are a site that harbors the gonococci.</p>

## The Speculum Examination

**Description of a Speculum** A speculum consists of two blades and a handle. The posterior blade of the speculum is fixed. The anterior blade is hinged and movable and is controlled by a thumb-piece attached to it. A thumbscrew on the thumb-piece, when tightened, holds the anterior blade in the position desired for intravaginal visualization. When the speculum is closed, the posterior and anterior blades come together at the distal end. From this point the anterior blade slants slightly upward away from the posterior blade and curves sharply upward at the proximal end to a distance of approximately 1 in. from the posterior blade.

When the speculum is opened with the thumb-piece, a tubelike space is created between the blades. Through this tubelike space, intravaginal and cervical observations are made and instruments are passed for any intravaginal or cervical procedures. The blades may be further separated by manipulating the thumbscrew on the handle of the speculum. Ordinarily, and always during insertion, the thumbscrew is adjusted so that the two blades are in the closest possible approximation. Once the speculum is in place and opened by use of the thumb-piece and its thumbscrew, the entire anterior blade may be elevated from the posterior blade, if need be, by sliding the anterior blade away from the posterior blade and tighten-

ing it in this position with the thumbscrew on the handle.

It is important for the inexperienced examiner to practice manipulating the speculum and become intimately familiar with how it is put together and how it operates before attempting insertion into a woman. Such practice will eliminate the possibility of hurting the woman by mishandling the speculum during examination. Also, it is not uncommon for a speculum to come apart or become malaligned during storage, and the examiner should know how to get it ready for use. The plastic disposable specula work a little differently than the metal speculum described above and require more practice to operate smoothly and avoid pinching the woman. Knowing how to handle a metal speculum does not make you facile with a plastic speculum, and vice versa. The key to smooth handling of both specula is practice.

**Types of Specula** There are three types of metal specula (see Figure 56-2). The variations among the three enable the midwife to select a speculum that is appropriate for the individual woman.

The smallest speculum is the *virginal speculum*. It has short, narrow, flat blades. It is used in young girls and in women who have had little or no coitus.

The *Graves speculum* is both the standard and largest speculum as it comes in these two sizes. The standard size is most commonly used, since it is most



**FIGURE 56-2** Types of specula. From left to right: metal Graves (large size), vaginal, Pederson, Graves (standard size), and plastic (regular size).

appropriate for women who are sexually active or who have had a baby. The large size is used with women who have collapsing vaginal walls, generally grand multiparas or very obese women. The Graves speculum varies in length from 3½ to 5 in. (8.75 to 12.75 cm) and in width from ¾ to 1¼ in. (about 2 to 3.25 cm). The blades are curved, forming a concave space between the two blades. The posterior blade is approximately ¼ in. longer than the anterior blade to conform with the longer posterior vaginal wall and aid in visualization of the cervix.

### Procedure for Speculum Examination

#### Procedure

1. The woman has been properly positioned, draped, and informed as to the procedure, has emptied her bladder, and has her legs apart for the examination. You have already positioned your light source, washed your hands, and put on your glove(s).
2. Select the appropriate speculum for the woman on the basis of her sexual and obstetric history and your observations during inspection.
3. Lubricate the speculum with water only if you plan to obtain cytologic or other studies. If no studies are planned you may lubricate the speculum with any lubricating jelly used for a vaginal examination. However, some studies that you hadn't originally planned on may be indicated after you have visualized the vaginal walls and the cervix. For this reason most clinicians never lubricate the speculum with anything but water.

The *Pederson speculum* is as long as the Graves speculum but has more narrow blades. Also, its blades are flat rather than curved. It is used in women who may be sexually active but tight and who have never had a baby. It is also useful for a woman whose vagina may be contracted by scars, radiation, or senescence.

Plastic specula come in regular or large sizes that are approximately the same as the metal Graves standard and large sizes.

#### Rationale

1. See Steps 1 through 6 under "Preparatory and General Procedures" for the pelvic examination.
2. The appropriate speculum is one that will cause the woman the least discomfort while providing adequate intravaginal and cervical visualization.
3. Lubricating jellies or creams may interfere with cytologic or other studies, rendering them invalid.



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 Procedure
 

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4. Warm the speculum in one of four ways:
  - a. Use *warm* water to lubricate it.
  - b. Hold it in your hands until it is warm.
  - c. Hold it under the light source until it is warm.
  - d. Some examination tables are equipped with a warming drawer. If a warming drawer is not available, a heating pad set on low may be placed in the bottom of the drawer and speculums in a towel may be set on top of it.
5. Touch the woman with the warmed speculum on the inner aspect of her thigh close to the external genitalia. Ask her if the temperature of the speculum is comfortable.
6. Help the woman to relax and tell her she will feel you touching her on the outside and then will feel the speculum going inside her vagina (birth canal).
7. Separate the woman's labia with a gloved hand (see Figure 56-3).
8. Hold the speculum in your other gloved hand with your index finger over the top of the proximal end of the anterior blade and your other fingers around the handle.
9. Insert the speculum into the vagina at an oblique angle past the hymenal ring (see Figure 56-3).

*Note:* An alternative method of inserting the speculum is to insert one or two fingers of one hand just inside the vagina (to the first joint on the fingers). Then gently but firmly depress the perineal body with these fingers while the other hand guides the entry of the speculum over and past your fingers.



**FIGURE 56-3** Inserting a speculum.

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 Rationale
 

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4. For comfort. This has a great effect on what the woman thinks of you and about the examination. Always be aware of the temperature of the speculum, as too hot is just as bad, or worse, than too cold.
5. This reassures you and the woman that you will neither burn nor freeze her when you insert the speculum. This also involves the woman in the procedure.
6. See Steps 1, 7, and 8 under “Preparatory and General Procedures” for the pelvic examination.
7. Done to expose the vaginal orifice.
8. This ensures that the blades will stay closed.
9. The oblique angle avoids pressure on and trauma to the urethra and periurethral structures.

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 Procedure
 

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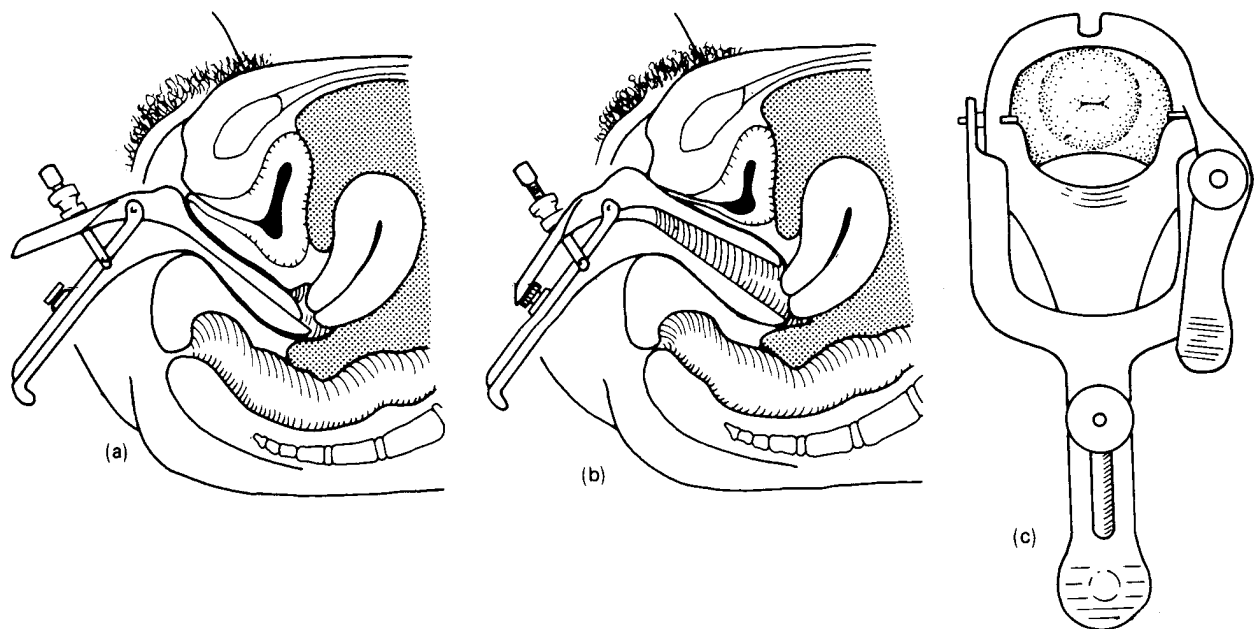
10. Rotate the speculum to a horizontal angle and while pressing firmly downward, insert the speculum the length of the vaginal canal, as shown in part (a) of Figure 56-4. Avoid catching pubic hair or pinching or pushing in the labia by virtue of not having spread the labia enough during this insertion procedure.
11. Maintaining downward pressure, open the speculum by pressing on the thumb-piece. Downward pressure can be maintained either by exerting downward and outward pressure on the lower end of the speculum handle or by putting your thumb or a finger on the proximal end of the posterior blade and exerting downward pressure. Adjust your light source as needed.
12. Sweep the open speculum slowly upward from its posterior (downward) position until the cervix comes into view, as shown in part (b) of Figure 56-4.
13. Manipulate the speculum a little further into the vagina so the cervix is well exposed between the anterior and posterior blades, as shown in part (c) of Figure 56-4.

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 Rationale
 

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10. Downward pressure again avoids trauma to the urethra. The anatomical angle of the vagina when the woman is in the lithotomy position is approximately 45 degrees downward toward the lumbar area. If the speculum is inserted straight in, the anterior vaginal wall and urethra are traumatized and the woman feels pain. (See Figure 56-4[a].)
11. and 12. These steps permit intravaginal visualization. If the speculum was directed downward firmly during insertion and this position was maintained, you are assured of finding the cervix during your sweep upward, regardless of whether the cervix is located in a posterior, midline, or anterior position. This method prevents you from having to hunt for the cervix, which would entail much maneuvering of the speculum up and down and in and out, to the discomfort of the woman and the distress of both the woman and you.
13. Adequate visualization is needed for observation and exposure of the cervical os for obtaining the Papanicolaou smear and specimens for gonococcal and chlamydia diagnostic testing.



**FIGURE 56-4** Placement of the speculum. (a) Speculum inserted the length of the vaginal canal; note downward angle that avoids anterior structures. (b) Open speculum positioned for visualization of the cervix. (c) View of the cervix when speculum is properly positioned.

Source: Reproduced by permission from Lichtman, R., and Papera, S. *Gynecology: Well-Woman Care*. Norwalk, CT: Appleton and Lange, 1990, p. 35. Reproduced with permission of The McGraw-Hill Companies.

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**Procedure**


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14. Tighten the thumbscrew on the thumb-piece. If further exposure is needed, elevate the anterior blade by manipulating the slide and thumb-screw located on the speculum handle. Remember the comfort of the woman and do not open the speculum any wider than is absolutely necessary.
15. If the cervix is covered with a copious amount of discharge, put a gauze  $2 \times 2$  or  $4 \times 4$  on a sponge stick and blot or gently wipe off the cervix.
16. Obtain specimens for Papanicolaou smears, gonococcal and chlamydia testing, and for wet smear slides of vaginal discharge, as well any other indicated tests or treatments. The procedures for obtaining these specimens are discussed in Chapters 57, 58, and 59.
17. Before removing the speculum, gently rotate it 90 degrees while again exerting downward pressure on it. This will most likely be uncomfortable for the woman, so forewarn her of this manipulation before doing it.
18. Return the speculum to its horizontal position. Release the thumbscrew on the thumb-piece (and on the speculum handle, if used). While holding the blades apart with pressure on the thumb-piece, begin withdrawing the speculum until the cervix is released from between the blades of the speculum.
19. Release your pressure on the thumb-piece, thereby closing the blades. Avoid pinching the vaginal mucosa or catching pubic hair when the blades close. Again avoid pressure on or trauma to the urethra and periurethral structures by exerting downward pressure, rotating the speculum to the oblique angle, and making sure the blades are closed by hooking your index finger over the anterior blade as the speculum is withdrawn. Some midwives ask the woman to bear down to ease the speculum out and only guide its removal.
20. Note the odor of any vaginal discharge pooled in the posterior blade and obtain a specimen for making a wet smear if indicated and a specimen was not already obtained.
21. Deposit the speculum in the proper container.
22. Wipe any discharge from the woman's genitalia and perineum if you do not plan to do a bimanual examination.

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**Rationale**


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14. Tightening the thumbscrew frees your hand for handling other equipment.  
Watch that the woman does not involuntarily push the speculum back out. This is possible even with the speculum in an open position. If it looks like this may happen keep one hand on the speculum at all times to sense and prevent this from occurring.
15. Too much discharge will prevent you from obtaining a Pap smear representative of the tissue being scraped. Do not use a cotton ball because the cotton fibers will interfere with the wet smear microscopic examination you will want to make of the discharge.
17. This allows you to visualize the anterior and posterior walls of the vagina as well as the lateral vaginal walls.
18. Avoid pinching or pulling on the cervix during removal of the speculum.
19. For the woman's comfort
21. For protection of yourself and others
22. For the woman's comfort

## Observations

1. Observe cervix for
  - a. color
  - b. growth, nodules, masses
  - c. polyps
  - d. lesions, erosions, ulcerations
  - e. position
  - f. size (hypertrophy, atrophy) and shape
  - g. edema
  - h. nabothian cysts
  - i. inflammation (cervicitis)
  - j. discharge—color, amount, character, consistency, odor
  - k. friability (bleeding)
  - l. eversion
  - m. ectopy
  - n. size and shape of os and any lacerations
  - o. patulousness and dilatation

## Significance

1. *Color* is significant in aiding in clinical diagnosis of pregnancy. A bluish color is due to increased vascularity to the cervix and is known as Chadwick's sign, a presumptive sign of pregnancy. A nonpregnant cervix is pink.

*Growths, nodules, masses, polyps, lesions, erosions, ulcerations, and infected nabothian cysts* are all abnormal findings requiring physician consultation.

It is useful to note the *position of the cervix* based on where you locate it with the speculum. This information serves to identify or confirm the position of the uterus during the bimanual examination. A cervix located anteriorly is indicative of a retroverted uterus; a posterior cervix indicates an anteverted uterus; a cervix in the horizontal midline indicates a uterus in midposition. Deviations of the cervix to the right or left of the vertical midline indicate the possibility of pelvic masses or uterine adhesions; these need to be carefully ruled out during the bimanual examination.

Variations in the *size and shape* of the cervix give different information. The normal cervix in a woman of childbearing age is 2 to 3 cm (about  $\frac{3}{4}$  to  $1\frac{1}{4}$  in.) in diameter, with the exception of the larger patulous cervix of the grand multipara. A *small cervix* is seen in the postmenopausal woman and is concomitant with the endometrial and myometrial atrophy of the rest of the uterus. Normal cervical size should match the size of the nonpregnant uterus. A *hypertrophied, large, or edematous cervix* is generally an indication of cervical infection and may be observed along with the other signs of *cervicitis*. An *irregularly shaped cervix* may indicate the presence of an *infected nabothian cyst* swollen with fluid.

*Nabothian cysts* may be observed as white or yellow pinpoint (1–3 mm in diameter) on the cervix. *Infected nabothian cysts* distort the shape of a portion of the cervix since they are swollen with fluid. Nabothian cysts are retention cysts arising from the occlusion of the ducts of endocervical glands extending near the surface of the vaginal portion of the cervix. They most frequently occur in the presence of chronic cervicitis.

*Cervicitis* is an inflammation of the cervix usually caused by an infection (e.g., *Trichomonas vaginalis*, chlamydia, gonorrhea) but which may also be caused by irritation from injury, obstetric lacerations, mechanical devices, foreign objects, or allergic reactions.

Note carefully whether any *discharge* is merely a continuation of a vaginal infection de-

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 Observations
 

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 Significance
 

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posited on the cervix (e.g., the plaques of a *Candida* [monilial] infection) or originates from the endocervix itself (for example, the pus of gonorrhea exuding from the external cervical os).

*Friability* of the cervix, as evidenced by its bleeding easily after obtaining the Pap smear or sponging for purposes of observation, frequently accompanies cervicitis.

*Eversion* of the cervix, caused by too much pressure in the vaginal fornices by the tips of the blades of the speculum, exposes the rougher and redder looking columnar epithelium of the cervical canal. Usually eversion is circumoral, showing the line of demarcation between the continuation of the stratified squamous epithelium of the vagina, which covers the vaginal portion of the cervix and extends a short distance into the cervical canal, and the columnar epithelium. Eversion is differentiated from erosions or ectopy by simply withdrawing the speculum slightly and watching the columnar epithelium disappear from view as the cervical canal returns to its correct, noneverted position.

*Ectopy*, from the Greek word meaning “out of place,” occurs when the columnar epithelium of the cervical canal has grown downward and outward and competes for territorial space with the squamous epithelium on the vaginal surface of the cervix. Again, the rougher, redder-looking columnar epithelium is visible. Unlike the columnar epithelium visible in eversion, however, it may be quite irregular in its line of demarcation with the squamous epithelium. Ectopy is sometimes observed in the multiparous cervix, especially if the cervix has been lacerated. Usually ectopy is also present in women who use oral contraceptives.

*Size and shape of the os* largely depend on the woman’s childbearing experience. A nulligravid os is small and round or oval; the typical parous os is a horizontal slit. Trauma incurred during induced abortion results in a change in the shape of the external os. Trauma incurred during difficult removal of an intrauterine contraceptive may change the shape of a nulligravid os to a slit. *Cervical lacerations* resulting from trauma during childbirth are clearly observable. Severe cervical lacerations may result in subsequent difficulty in carrying a pregnancy to term due to an incompetent cervix (see Chapter 24). Observation of the shape of the os is important in confirming the woman’s obstetric history. Infrequently, a woman will attempt to conceal a previous pregnancy. In so doing she unknowingly also conceals information vital to the management

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Observations

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2. Observe vagina for
  - a. color
  - b. inflammation/vaginitis
  - c. discharge—color, odor, character, consistency, amount
  - d. plaques
  - e. bleeding/friability
  - f. lesions and ulcerations
  - g. growths or masses
  - h. cysts
  - i. fistulas
  - j. vaginal wall muscle tone

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Significance

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of another pregnancy. If you observe that a woman's os does not match her obstetric history or family planning history, you should ask her for an explanation.

The nulligravid cervix is closed, whereas the multiparous os is *patulous*, the degree depending on the woman's parity. The higher the parity, the more patulous the os which may be permanently open 2 to 3 cm at the external os. *Dilatation* of the os is also observable upon speculum examination; the fetal membranes may be visible when examining a pregnant woman, if they have not ruptured. The amount of dilatation is determined by manual vaginal examination.

2. The *color* of the vagina has the same significance as the color of the cervix. The nonpregnant vagina is pink; the vagina of pregnancy is bluish. Again, this color change in pregnancy is known as Chadwick's sign.

*Growths, masses, lesions, ulcerations, cysts, and fistulas* are all abnormal findings requiring physician consultation.

*Inflammation* and *discharge* go hand in hand as signs of *vaginitis*. Vaginitis caused by *Trichomonas vaginalis* additionally may cause red petechiae. Vaginitis due to candidiasis (monilial infection) also exhibits whitish or grayish patches, or *plaques*, which adhere to the vaginal wall and may *bleed* when scraped off. Severe vaginitis causes *friability* of the vaginal mucosa.

*Blood* in the vagina must always be investigated for its source. If bleeding is not obviously caused by menstruation, a friable cervix or vagina, or trauma in these areas, physician consultation is required.

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### The Bimanual Examination

When clinical pelvimetry is indicated, midwives include it while doing the bimanual examination. The procedure and findings for clinical pelvimetry are described in Chapter 61. Whether or not clinical pelvimetry is performed during the bimanual examination, it is important that the midwife develop a procedure for doing the bimanual examination that (1) is the same each time, as a routine aids in not forgetting any part of it and (2) moves smoothly *once* from outside to inside and back out again, which is most comfortable for the woman (as opposed to going back and forth repeatedly). (If clinical pelvimetry is included it should be incorporated into the routine established for the combined skills.)

The woman is already properly positioned, draped, and informed as to the procedure and has her bladder empty and her legs apart for the examination. You have already positioned your light source, washed your hands, and put on your gloves. If you have done a speculum examination, it is not necessary to rewash your hands or change your gloves.

Be sure that the woman's arms are down by her sides or across her abdomen to aid relaxation of her abdominal muscles. Remember to use a firm but gentle touch and to be alert throughout the examination to any indication from the woman of discomfort or tenseness that might cause her to tighten up or move away from you. See Steps 1 through 9 under "Preparatory and General Procedures."