I. Pelvic organ prolapse explained.
   A. The pelvis lies at the bottom of the abdominopelvic cavity.
      1. It forms a supportive layer that prevents the pelvic organs from falling through the bony pelvis.
      2. It supports conception and parturition.
      3. It controls storage and evacuation of feces and urine.
   B. Mechanical principles in relation to prolapse of pelvic organs.
      1. The uterus and vagina lie suspended in a slingslike network of ligaments and fascial structures attached to the side walls of the pelvis.
      2. Levator ani muscles constrict forming an occlusive layer on which the pelvic organs may rest.
         a. They consist of strong striated muscle tissue, comprising the iliococcygeus, the pubococcygeus, and the puborectalis (Figure 24.1).
         b. They compress the rectum, vagina, and urethra against the pubic bone, holding them in position.
      3. As long as the pelvic floor musculature functions normally, the pelvic floor is closed and the ligaments and fascia are under no tension.
      4. Problems exist when the pelvic floor muscles relax or are damaged. Risk factors are listed in Box 24.1.
         a. The pelvic floor opens, and the vagina lies between the
**Risk Factors for the Development of Pelvic Floor Relaxation**

- Chronic cough (due to asthma or chronic bronchitis)
- Heavy lifting (prolonged)
- High impact sports
- Obesity
- Pelvic malignancy
- High parity
- White skin color (higher incidence in this population)
- Large uterine or ovarian masses
- Advancing age (estrogen deficiency)
- History of traumatic birth
- Genetic predisposition (less collagen support)
- Previous pelvic or vaginal irradiation
- Multiple antiincontinence procedures
- Metabolic diseases that affect muscle function
- Failure to reattach the cardinal ligaments at hysterectomy
- Decreased pelvic muscle strength

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High intraabdominal pressure and the low atmospheric pressure, where it must be held in place by ligaments. 

b. Eventually, connective tissue will become damaged and fail to hold the vagina in place.
5. The increase in intra-abdominal pressure placed on the pelvic floor muscles and ligaments causes the development of a prolapse, rather than problems with the organs themselves.

C. Urinary continence.
   1. Depends on support of the urethra.
      a. Fascial structures supporting the urethra at the vesical neck.
      b. Active muscle contraction.
      c. Intact neuromuscular mechanisms.
   2. Ability of the urethra to remain closed.
   3. Note: Closure pressure of urethra must equal or exceed intravesical pressure.

D. Several factors influence the development of genital prolapse and urinary incontinence.

II. Diagnosis of pelvic organ prolapse.
   A. The pelvic examination.
      1. Be sensitive to the fact that many of these women may be older and may not have had a pelvic examination in many years.
      2. They may have suffered for months or even years with symptoms and be anxious concerning the cause.
      3. If stress incontinence is present, the woman may be fearful that she will leak during the examination.
      4. It takes a while to develop assessment skills to diagnose correctly the type and extent of a prolapse. It is a good idea to examine all patients for a prolapse, regardless of whether or not they are symptomatic, in order to compare normal and abnormal findings.
      5. Reassure the patient that although pelvic relaxation is slowly progressive, it is unlikely to affect longevity.
      6. The clinician may use a hand-held mirror to explain pelvic findings.
   B. Position.
      1. Place the patient in a comfortable lithotomy position, with her feet in the stirrups (may be difficult for older women).
      2. She may have to stand and bear down at some point in the examination.
      3. Drape the patient appropriately.
   C. Vital steps in correctly diagnosing a prolapse.
      1. The examination must be made with the woman pushing down, as though she is straining at stool; the entire extent of the prolapse must be seen.
Table 24.1  Grading Prolapse of the Uterus

<table>
<thead>
<tr>
<th>Degree</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stage 1</td>
<td>Slight to moderate uterine descent with cervix still inside vagina to any distal point 1 cm above the hymen</td>
</tr>
<tr>
<td>Stage 2</td>
<td>Uterine descent to 1 cm above or below the hymen</td>
</tr>
<tr>
<td>Stage 3</td>
<td>Descent of uterus to a point beyond 1 cm distal to the hymen</td>
</tr>
<tr>
<td>Stage 4</td>
<td>Total eversion</td>
</tr>
</tbody>
</table>

a. Sometimes, women are reluctant to follow through with this part of the examination because they are afraid that they may leak or pass flatus, which would be very embarrassing to them.

b. It is useful to acknowledge what might occur and let the patient know that it is okay.

c. It may be difficult to exert enough pressure in the lithotomy position; the clinician may have to ask the woman to stand and bear down while examining her.

2. The clinician must examine each different structure independently.

D. Once the prolapse is visible, other structures need to be systematically assessed.

1. Focus on the specific defects.

2. Note the severity of the prolapse.

E. Identify the extent that the vaginal wall, cervix, and posterior walls have descended.

1. Examine the anterior and posterior walls by retracting the opposite wall with the posterior half of a vaginal speculum so that a larger cystocele does not obscure a smaller rectocele.

F. Classification of the severity of a prolapse.

1. Grading systems are varied and very subjective. Table 24.1 lists one form of classification.

2. It is best to describe the size of a prolapse in terms of the distance the prolapse descends below or rises above the hymenal ring with the prolapse extended to its fullest. (e.g., “The cervix lies 2 cm below the hymenal ring.”)

3. Describe the diameter of the prolapse to help assist in assessing the severity. The greater the diameter, the more severe the prolapse.
Chapter 24: Pelvic Organ Prolapse

4. Types of prolapse.
   a. First-degree prolapse is without symptoms and is mildly descended.
   b. Second-degree prolapse is halfway into the vagina and is usually asymptomatic.
   c. Third-degree prolapse is at the level of the introitus and is usually symptomatic.
   d. Fourth-degree prolapse is out of the vagina, even at rest. Symptoms are severe.

G. Evaluating anterior wall support.
   1. Establishes status of urethral and bladder support.
   2. Urethra is fused with the lower 3 to 4 cm of the vaginal wall.

3. Urethrocele.
   a. Diagnosed by descent of the lower anterior vaginal wall to the level of the hymenal ring during straining.
   b. Seen as a herniation between the urethra and vagina, as the urethra prolapses into the anterior vaginal vault, out of the correct angle with the bladder.
   c. Usually associated with stress incontinence and loss of urethral support.
   d. Often occurs with a cystocele.
   e. Difficult to grade.
   f. By itself, it is not usually an indication for use of a pessary.

   a. Defective support of the upper portion of the anterior vaginal wall or stretching of the vesicovaginal fascia because the bladder lies adjacent to this portion of the vaginal wall (Figure 24.2).
   b. Herniation occurring between the bladder and the vagina, with descent of a portion of the common wall between these structures.
   c. Occurs gradually with stretching, increased bladder capacity, and development of atrophic vulvovaginitis.

5. Cystourethrocele—defective support of the entire anterior wall which is often manifested by descent below the hymenal ring, whether or not stress incontinence is present.

6. Must include direct observation of the urethra while coughing in supine and standing positions.

H. Determine the position of the uterus and vagina.
1. Vagina and cervix are fused with one another.
2. If the cervix prolapses downward it brings the upper vagina along with it.
3. May be caused by:
   a. Stretching of the uterosacral and cardinal ligaments.
   b. Lacerations or damage to the levator ani and perineal body.
4. Prolapse (or procidentia).
   a. Descent of the uterus below its normal level.
   b. As support of ligaments give way, the uterus moves backward to a retroverted or retroflexed position.
   c. Round ligaments stretch, failing to hold the body of the uterus in the anteverted position.
   d. Uterus next aligns itself with the long axis of the vagina.
   e. An increase in intra-abdominal pressure causes the uterus to descend down the vaginal canal (similar to the action of a piston in a cylinder) (Figure 24.3).
5. Measured by the location of the cervix relative to the hymenal ring.
   a. Important. Cervix may not be visible behind a cystocele or rectocele and must be palpated as the patient bears down.
   b. May also test the extent to which the cervix and uterus descend by either of the following methods:
      (1) Have the patient stand. Using a mirror placed between her legs, have her observe for descent, as she is asked to bear down.
      (2) Grasp the cervix with a tenaculum to assess, while gently pulling the cervix toward the vaginal opening. (This is certainly the more invasive maneuver.)
   c. If the cervix descends to within 1 cm of the hymenal ring, there is considerable loss of support. Cervical elongation is common in women with a prolapse.

I. Posterior vaginal wall.
   1. Rectocele (see Figure 24.4).
      a. Protrusion of the anterior rectal wall and posterior wall of the overlying vagina.
      b. May protrude below the hymenal ring to form a bulging mass originating from the posterior vaginal wall, causing the anterior rectal wall to balloon down through the vaginal ring.
      c. Causes.
         (1) Disruption of the rectovaginal fascia during childbirth.
         (2) Chronic fecal constipation and straining.
   2. Enterocoele.
      a. The cul-de-sac becomes distended with intestine, and bulges the posterior vaginal wall outward.
      b. Hernia of the fascia of the posterior vagina above the rectovaginal septum and below the cervix.
      c. Sometimes mistaken for a rectocele.
      d. A large enterocoele may protrude through the vagina.
      e. Requires correction only if symptomatic.

III. The diagnosis.
   A. Assess pelvic muscle tone.
      1. Ask patient to squeeze around your two examining fingers while palpating the levator ani muscle (Table 24.2).
      2. Note the patient’s ability to sustain constriction and deflection of finger or fingers upward with a good squeeze. No deflection indicates weaker muscles.
Figure 24.4 Rectocele (sagittal section showing relative position of uterus and bladder).

Table 24.2 Assessment of Pelvic Muscle Strength

<table>
<thead>
<tr>
<th></th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pressure</td>
<td>None</td>
<td>Weak</td>
<td>Moderate</td>
<td>Strong—fingers compressed</td>
</tr>
<tr>
<td>Duration</td>
<td>None</td>
<td>Less than 1 second</td>
<td>1 to 3 seconds</td>
<td>More than 3 seconds</td>
</tr>
<tr>
<td>Displacement</td>
<td>None</td>
<td>Slight incline</td>
<td>Noticeable incline</td>
<td>Fingers drawn in</td>
</tr>
</tbody>
</table>
3. Constriction lasting a few seconds indicates weakening.
4. Stress incontinence protocol.

B. Provocative stress test.
1. Ask the patient, when she has a full bladder, to stand and cough.
2. Observe for small spurts of urine that escape simultaneously with each cough. (May place pad between legs to catch and observe any urine released.)
3. If urine escapes, place one finger on either side of the urethra.
4. Ask the patient to cough again.
5. If there is no loss of urine during the cough, the test is considered positive for stress urinary incontinence.

C. Assess the neuronal support to the sacral dermatone, S2, S3, and S4.
These dermatones innervate the micturation reflex.
1. Lightly stroke the skin area innervated by the dermatones.
   a. Note response to light touch.
   b. Compare contralateral sides.
2. Bulbocavernous reflex.
   a. Stroke or gently squeeze the clitoris.
   b. Note contraction of the bulbocavernous muscle around the clitoris.
3. Anal reflex (so-called anal wink).
   a. Lightly stroke the skin lateral to the anus.
   b. Note contraction of the anal sphincter.

D. The cotton-tipped swab (Q-tip) test (see chapter 25).

E. Digital rectal examination.
1. Assess for any fecal impaction.
2. Note sphincter muscle tone.

F. Assess vulvovaginal area for estrogen status (see also chapter 23).
1. Observe the vagina for the presence of rugae, degree of moistness, and color.
   a. These features decrease during menopause.
2. Estrogen status of the vulva and vaginal is important.
   a. The presence of mature squamous epithelium indicates good estrogen nourishment.
   b. Estrogen thickens the layers of the vaginal wall, enhancing support of the bladder and rectum.

G. May refer the patient for a cystometrogram or urodynamic techniques.
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1. To assess for detrusor instability before surgery.
2. To evaluate symptoms to determine need for anticholinergic medications.

H. Assessment of urinary symptoms.
   1. Determine postvoid residual if any retention is suspected.
      a. Should be less than 200 ml.
      b. Culture, if pyuria is present.
   2. Urinalysis (see chapter 11).

I. Referral as surgical candidates.
   1. Based on the particular situation and symptoms of the woman depending on:
      a. Size of the prolapse.
      b. Degree of symptoms.
      c. Any related physiologic complications.
      d. Patient’s feelings and attitudes toward pessary or surgery.

IV. Symptoms of anterior wall prolapse and uterine prolapse. Note: Symptoms increase with advancing age and tissue atrophy during the postmenopausal years.

A. Prolapse.
   1. Dragging sensation.
      a. Usually occurring in the groin and sacral and lumbar area.
      b. Caused by downward force on the uterosacral ligaments and fasciae that support the uterus and vagina.
      c. Discomfort improves when the woman lies flat, relieving the downward pressure.
   2. Sensation of peritoneal wetness probably caused by protrusion of moist vaginal walls rather than leakage of urine.
   3. The patient may complain of a sense of things falling out after prolonged standing.
   4. The patient may notice a mass protruding from her vagina, particularly after bearing down, heavy lifting, or prolonged standing.
   5. Erosions or ulceration of any mass that has protruded.
   6. Dyspareunia.

B. Cystocele.
   1. Stress urinary incontinence caused by loss of urethral support of the lower vaginal wall.
   2. Difficulty emptying the bladder caused by loss of support of the upper anterior vaginal wall and bladder.
   3. Urinary urgency and frequency probably due to stretching of
the bladder base associated with the prolapse, which is often less pronounced when patient is supine.

4. Development of recurrent cystitis or a stone from stagnant urine if residual urine occurs.

C. Stress incontinence.

1. Occurs when intravesical pressure exceeds the maximum urethral closure pressure, in the absence of detrusor muscle contraction.
   a. Normally, the sphincter at the upper urethra is able to withhold urine.
   b. Inability of the sphincter to withstand increased pressure is caused by:
      (1) Changes in the angle of the bladder.
      (2) Anatomic descent of the proximal urethra.
      (3) Failure of the neuromuscular support.
      (4) Inability of sphincter to resist increased abdominal pressure, resulting in uncontrolled expulsion of urine.

2. Loss of support may also cause descent of the bladder neck, with the internal sphincter opening prematurely without voluntary compensation by the muscle surrounding it.

3. Often results from injury to the vesicourethral structure during childbirth.

4. The condition is defined as the involuntary loss of urine with a sudden increase in intra-abdominal pressure from physical activity, laughing, lifting, aerobics, coughing, or sneezing.

5. Often leaks only small amounts.

6. Need to rule out acute causes such as:
   a. Urinary tract infection (usually associated with dysuria, urgency, and frequency).
   b. Atrophic vaginitis (may be present but may not be cause of the incontinence).
   c. Dietary irritants such as coffee, aspartame (Nutrasweet), and alcohol.
   d. Medications such as doxazosin (Cardura).
   e. Diabetes (mellitus or insipidus).
   f. Pelvic mass pressing against the bladder or urethra.
   g. Chronic urethritis.

7. Urgency, frequency, nocturia, and dysuria do not usually occur.

8. Assess for other types of urinary incontinence or mixed disorders.
D. Rectocele.
1. Feeling of rectal or pelvic pressure.
2. Difficulty in emptying the rectum.
3. Stool fills the rectocele the harder the patient strains.
4. Must differentiate between true constipation (common in older women) and symptoms of a rectocele.
5. A woman may state that she has to press between the vagina and rectum (to reduce the rectocele) or press in the vagina to help with defecation; further supports the diagnosis.

V. Pessary.
A. Historical perspectives.
1. Pessaries frequently appear in both Greek and Latin literature.
2. The term usually refers to a mechanical device such as a ball, wool, or lint soaked in medicine. They were very dissimilar from the modern pessary. The earliest pessaries were stones.
3. Most pessaries had string attachments to facilitate removal.
4. More than 200 different types of pessaries have been used throughout history.
5. Now pessaries are made of polyvinyl plastic or medical-grade silicone, replacing the traditional red rubber material.
   a. Nontoxic silicone does not absorb vaginal secretions or odors.
   b. Material is biologically inert; rare allergic reactions.
   c. This type of silicone material should not be confused with the silicone gel found in breast implants.
   d. The material can be autoclaved or boiled, or sterilized in Cidex.
6. Ten to 20 years ago, use of the pessary was replaced by vaginal surgery.
7. Pessaries are now increasing in use as baby boomers are aging and experiencing prolapse.
8. The pessary offers a viable alternative to surgery.
9. Different devices are often used to treat the same problem in different patients.
10. The satisfaction rate with pessary use is high, with 72 to 95% reporting symptom relief.
11. Pessary fittings and the device itself are reimbursed by Medicare.

B. Purpose.
1. To support the pelvic organs in close alignment to their
proper anatomic position in the treatment of second-through fourth-degree prolapse.
2. To restore continence by stabilizing the bladder base.
3. To support an anterior-pointing cervix during pregnancy (Hodge pessary).
4. To support and correct retrodisplacement of the uterus in early pregnancy.
5. To provide an alternative treatment for women who are at a high risk for surgical repair of the prolapse.

C. Cornerstone of therapy for genital prolapse.
D. Proper management of a pessary is significantly less expensive and is safer than its surgical counterpart.

E. Goals.
1. Can be used as a temporary measure for relief of symptoms while a patient delays surgery until a more opportune time, or until she decides whether to have surgery.
2. Used as a permanent alternative to prolapse surgery, particularly in elderly women who are at surgical risk.
3. Used as a diagnostic aid to determine whether there is relief of symptoms with prolapse replacement. It serves as a useful predictor of a successful outcome from surgical management.
   a. Can uncover urinary incontinence, which is masked by obstruction of the urinary outflow tract.

F. Some comments related to the role of the advanced practice clinician.
1. When selecting a pessary, a clinician may be overwhelmed by the choices of pessary size and style, and may feel insecure regarding which to choose for which condition.
   a. The three or four sizes in the middle are most commonly used.
   b. Most pessary wearers do well with the most common sizes.
2. Modern use is a function of the clinician’s experience and training, along with the availability of the device.
3. With knowledge and practice, an advanced practice clinician can become adept at fitting and caring for the supportive vaginal pessary.
4. As the elderly population increases, knowledge and skill in the use of pessaries in lieu of or as an adjunct to surgery should be considered.
5. Most pessaries come with printed material from the manufac-
Chapter 24: Pelvic Organ Prolapse

Reasons for Discontinuing Pessary Use

- Inconvenient to use
- Inadequate relief of symptoms
- Uncomfortable
- Elected for surgery
- Unable to remain in place
- Difficulty urinating
- Incontinence increased

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turer that gives instructions regarding the insertion and care of a specific device.

6. Clinicians soon develop favorite types that they become familiar with.

G. Coitus.

1. Coitus is possible with many pessaries that are not vaginally occlusive.
2. The woman must have the dexterity to remove and reinsert the pessary.
3. Never assume that because a patient is elderly that she is not sexually active.
4. Sexual intercourse is not possible with the following types of pessaries:
   a. Gellhorn.
   b. Doughnut.
   c. Shatz.
5. The inflato ball and cube: Intercourse is not possible with them in place; however, because they need to be removed daily, intercourse can occur after removal.

H. Pessaries are available in various sizes, shapes, and materials.

I. Uterine prolapse is the most common gynecologic problem that is corrected by pessaries.

J. If a pessary is made of latex rubber, the clinician needs to determine if the woman has a sensitivity to latex before fitting.

K. Not all women can use a pessary. Box 24.2 lists reasons for discontinuing use of a pessary.

VI. General principles for fitting a pessary.

A. Some comments.

1. Pessaries are generally fit by trial and error.
2. The pessary retention test. Insert two fingers in vagina and extend to both fornices. With fingers thus extended, pull
hand back through the introitus. If the fingers stay in the original extended position then it is unlikely that the woman will be able to retain a pessary because the vaginal introitus is too wide.

3. To measure for a pessary, once again insert the first two fingers deep into the vaginal canal. Fold thumb against the forefinger where it touches the introitus or use forefinger from other hand to measure. Withdraw hand and measure against the pessary or the fitting kit (Figure 24.5).

4. Inform the woman that two or three pessaries may be tried before proper fit is achieved.
   a. It may or may not be uncomfortable.
   b. Once the proper size is found the patient should be completely comfortable.

5. Have at least three sizes (often middle sizes) of a given pessary available during the fitting process.

6. A pessary fitting kit is available (Figure 24.6).

7. Many pessaries are difficult for the patient to remove and insert correctly, and she needs to receive routine follow-up care from her clinician.

Figure 24.5 Measuring the vaginal canal for a pessary.
8. Diaphragms are fit differently than most pessaries, except for the ring types.
   a. Ring types are fit in the same position; however, they have thicker rims.
   b. If diaphragm fitting rings are used, they will only give an approximation.

9. Inform the patient that it is not uncommon:
   a. To have to try a variety of pessaries during an initial fitting.
   b. To change the size on a subsequent visit (particularly after vaginal estrogenation).

10. Recommendations for follow-up vary. After initial visit, recommend:
    a. Routine return in 12 to 72 hours.
    b. Or return in 2 to 3 weeks.
c. Must return sooner if:
   (1) Urination or defecation is difficult.
   (2) The pessary is uncomfortable in any way.

d. Return visit is important to:
   (1) Recheck the size.
   (2) Question the patient regarding urination and defecation to assess status.
   (3) Observe for a tissue reaction such as discharge, irritation, or ulceration.
   (4) Reassure and support the woman.
   (5) Determine the presence of any discomfort. (If it is fit properly, the pessary should not be felt.)

11. Every woman with a pessary must be followed up closely by her clinician if she is not able to perform self-care.
   a. It is possible to forget or neglect a pessary. A list of pessary users within a given office must be kept and followed closely.
   b. Patient or clinician must routinely observe for any ulcerations or irritation from undue pressure (note, this is minimized by vaginal estrogen use).
   c. Return every 4 to 6 weeks (never more than 12 weeks) depending on individual considerations.
      (1) May alter follow-up plan. If odor develops at 12 weeks, the patient needs to return earlier for next visit.
      (2) Remember that a pessary is a foreign body and that there are limited nerve endings in the vagina and cervix. Therefore, a woman may not sense that any ulcerations are occurring.

12. A pessary should not be used in a noncompliant patient or a woman unable to care for herself unless her caregivers are well aware that the pessary is in place and that the patient will receive routine follow-up care.

13. Because many pessary users are elderly, it is important to keep in mind that a woman’s status may change over the years (e.g., due to a stroke).
   a. Caregivers (such as nursing home personnel) may not be aware that a pessary is in place.
   b. A list should be kept with the expected routine for follow-up; contact the patient if visits are missed.

14. Estrogen therapy (see chapter 23).
   a. Recommend estrogen therapy, preferably via the vaginal
Contraindications to Pessary Use

- Active vaginitis
- Abnormal Pap smear
- Acute pelvic inflammatory disease
- Endometriosis (research varies)
- Noncompliant patient
- Woman with dementia without possibility of reasonable follow-up

route, 1 to 2 weeks before the necessary fitting in order to:

1. Nourish the vaginal tissues.
3. Increase pliability of submucosal connective tissue.
4. Improve perineal muscle tone.

b. Routinely recommend as an adjunct to pessary use.
   1. May not be necessary in the postmenopausal woman receiving estrogen replacement therapy.
   2. May be in the form of estrogen cream, suppositories, or estradiol vaginal ring (Estring).
   3. If Estring is used, insert before the pessary and change every 3 months.

15. If any vaginal conditions are present:
   a. Perform a wet mount and treat diagnosed condition.
   b. If ulcerations are present, local estrogen therapy is recommended.

16. There are very few contraindications for pessary use (Box 24.3).
   a. After seeing the various types of pessaries, some women have an aversion to such a “foreign-looking object” being inside of them.
   b. Most patients view the pessary as a godsend.

17. Use the largest pessary a patient can accommodate comfortably.

18. Fit ring and lever pessaries snugly behind the symphysis pubis, posterior to the cervix.

19. If the pessary fits properly, the examiner should be able to sweep the tip of the finger around the pessary and the vaginal wall. This prevents the breakdown of tissue.

20. Many women who have had a hysterectomy are in need of a pessary.
a. Although most pessaries fit up against the cervix, a cervix is not necessary to anchor the pessary.
b. The vaginal wall works as well.

B. General insertion technique.
1. Ask the patient to empty her bladder and rectum, and to position herself as mentioned earlier.
   a. If a large cystocele is present, the woman may need to be straight catheterized, and the bladder emptied.
   b. With incontinence pessaries, it is imperative that the woman void before leaving the clinical site because the knob of the pessary may obstruct the urethra. Some clinicians do not recommend voiding before fitting, to ensure that the woman has urine to void following the fitting.
2. Wear gloves; an unlubricated glove makes handling of the pessary easier.
3. Perform a pelvic examination to determine the size, shape, and position of the uterus and associated structures.
4. Pessary Retention test.
   a. Insert 2 fingers in vagina and extend fingers to either side of the vaginal fornices.
   b. Keep fingers thus extended and pull back through the orifice.
   c. If you pull hand straight through without having to collapse the fingers, it is unlikely that a pessary will fit because the introitus is too wide.
5. Approximate size by using fingers to determine the length and depth of the vaginal vault (generally can predict within one size either way).
   a. May use lubricant for a narrow or small introitus.
   b. May cause the pessary to be slippery and difficult to bend or hold.
   c. Best to lubricate only the entering edge.
6. Spread the labia, and pull downward with the nondominant hand.
7. Ask patient to bear down.
8. Grade prolapse, as described in Table 24.1.
   a. Insert two fingers into the vagina, push the uterine corpus out of the cul-de-sac, and anteflex it into or above the long axis of the vagina.
   b. With the opposite hand on the anterior abdominal wall, elevate the fundus and hold it in place while inserting the pessary into the vagina.
10. Fit for various pessaries as described under each section below.
11. Begin fitting with the largest size that will fit comfortably, allowing room for the fingertip to sweep around.
12. After insertion.
   a. Separate the labia, observing the introitus.
   b. Ask the patient to stand and bear down while being examined.
   c. The pessary should descend and become visible at the introitus but ascend with relaxation.
   d. The presence of the pessary should not be apparent to the user.
   e. Ask the patient to walk around the room, to sit, or to even use the toilet.
   f. Reassess fit.
   g. If the pessary has shifted, try a larger size.
13. A larger size may be necessary after using the pessary for a few weeks, due to an enlargement of the vault with the pessary in position.

VII. Description of the various types of pessaries.
   A. Ring (Figure 24.7).
      1. Indications.
         a. First- and second-degree uterine prolapse.
         b. The administration of estrogen is advocated to improve tissue circulation and regain vaginal mucosal integrity.
         c. The folding ring pessary is especially useful for a patient who is sexually active because it can easily be inserted and removed, or it may remain in place during intercourse (as with a diaphragm).
         d. If a cystocele or rectocele is present, use the ring with support.
      2. Description: Comes with a porous diaphragm for additional support.
         a. Membrane helps support a mild cystocele that accompanies a prolapse.
         b. It is usually made of medical-grade silicone.
      3. Insertion technique.
         a. Fit similar to a diaphragm.
         b. Measure the length of the vaginal canal against the examining finger, measured against the pessary.
         c. Bend pessary in half at the notches.
         d. Insert the pessary with the folded arc concavity facing downward.
Figure 24.7 Pessary ring.

- Direct downward past the cervix into the posterior fornix.
- Place in the posterior fornix, allowing ring to spring open once it is in the vagina.
- Give a quarter turn to secure in position to prevent the pessary from falling in on itself and coming out of the vagina.
- When the pessary is placed properly, it will take up redundant vaginal tissue, forming a sling that will support and elevate the uterus, to flatten and support the cystocele.

4. Removal.
   - Palpate the notch, and rotate a quarter turn, gently pulling down and out to remove. It is nearly impossible to refold while it is inside the vagina.
   - It is much easier to insert a pessary than to remove one.

5. Available sizes.
   - Available in 14 sizes, numbered 0 to 13.
   - Correlate to a diameter of 4.44 cm to 12.7 cm.

B. Lever pessary called Hodge or Smith.
   1. Indications.
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a. Uterine retroversion: Posteriorly displaces the cervix and the uterus is antverted.
b. Incompetent cervix in pregnancy.
c. Mild uterine prolapse with retroversion.
d. Diagnostic evaluation of patients with large cystocele or urinary stress incontinence demonstrates support of the anterior vagina.
e. Provides support to the proximal urethra, promoting increase in urethral function length and closing pressure without causing obstruction.
f. Useful for stress urinary incontinence, with or without prolapse

g. If it is properly fitted, sexual intercourse is possible.

2. Insertion technique.

a. First, manually elevate a retrodisplaced uterus.
b. Fold the device along the long axis, with the curved end oriented toward the vaginal introitus.
c. Push into the vagina by the index finger, advancing the posterior bar into the posterior vaginal fornix.
d. Keep pressure on the posterior bar during insertion.
e. Anchor the anterior bar under the symphysis pubis (similar to diaphragm insertion).
f. Note: The long arm of the pessary should face anteriorly, so that the device straddles the rectum.

3. The Smith pessary has a narrower anterior limb for use in a patient with a deep symphysis and a well-defined, narrow pubic arch.

4. Hodge pessary.

a. Border anterior limb prevents the pessary from turning.
b. Used when there is minimal pubic support and the symphysis is somewhat shallow.
c. The anterior notch prevents urethral impingement and obstruction.
d. It comes with a support for correction of a concomitant cystocele.
e. It is especially useful for patients with stress incontinence.
f. Establishes a diagnostic means of predicting which patients would be responsive to surgical correction.
g. The Hodge pessary with support is indicated for women with stress urinary incontinence, with a mild cystocele and a very small introitus.

5. Risser pessary.
Unit 7: Evaluation of the Pelvic Floor

a. Modification of the Hodge pessary.
b. The Hodge pessary has a wider bar and a deeper notch, which allows a larger weight-bearing region with a lesser likelihood of soft tissue-pressure necrosis.

6. Available sizes.
a. Ten available sizes (0–9), measuring width and length.
b. Recommend stocking fitting sizes 2 through 4.

C. Gehrung pessary.
1. Indications: Correction of a cystocele and rectocele.
2. Description.
a. Provides support to the anterior vaginal wall; arms or heels rest flat on the vaginal floor.
b. Avoids pressure on the rectum while supporting the bladder.
c. Does not interfere with douching or coitus.
d. Arclike, flexible plastic.
e. Bars may also flatten out a rectocele.
f. May be underused.
3. Insertion. Creates a bladder bridge.
a. The unusual shape of the pessary may make the clinician uncomfortable with insertion.
b. It is relatively simple to insert.
c. Fold with the arch convexity oriented upward, with both heels parallel to the pelvic floor, left heel first.
d. Hold the device on its side, and insert the lateral bar over the perineum and into the vagina.
e. When it is positioned intravaginally, push one heel back and the other forward to complete a 90-degree rotation, so that the convex curved portion lies against the anterior vaginal wall.
f. The back arch should be positioned over the cervix in the anterior fornix, and the front arch should be positioned behind the symphysis.
g. Both heels should be resting on the pelvic floor, with the arches and cross-support forming a bridge to raise the bladder.
4. Available sizes.
a. Choice of nine sizes (0–9).
b. Recommended stocking sizes: 3, 4, and 5.

D. Gellhorn pessary (Figure 24.8).
1. Indications: Provides support of a third-degree uterine prolapse and procidentia.
2. Description.
   a. Most commonly used pessary for uterine prolapse (ring and doughnut pessaries also commonly used).
   b. Available:
      (1) Flexible silicone.
      (2) 95% rigid acrylic.
      (3) Rigid acrylic.
   c. Silicone can be boiled or autoclaved; acrylic should not be autoclaved or boiled because heat can alter the shape.
      (1) Needs to be disinfected in Cidex.
      (2) Never use alcohol because it will give the acrylic a shattered appearance.
   d. Provides less support for a rectocele because it fits superiorly and anteriorly, with less surface area to support the posterior segment.
e. May be difficult to insert in women with a narrow introitus (e.g., virginal).

f. Cervix rests against the flat base of the pessary, with the stem extending to the vaginal orifice.
   (1) Base of the pessary is large enough to support the tissue proximal to it, and rests above the levator muscles.
   (2) Its concave shape provides suction, helping to prevent spontaneous expulsion.
   (3) Stem fills the vagina, preventing the device from turning (requires a capacious vaginal vault).

g. It is useful with intact (not lax) perineal body. If the patient is not successful, may progress to a cube.

3. Insertion.
   a. The main method of determining the proper size of the Gellhorn pessary is by trial and error.
   b. Lubricate the edge of the round disc.
   c. Insert sidewise, with the disc portion held parallel to the introitus.
   d. Apply downward pressure on the perineum with the non-dominant hand.
   e. Be careful to avoid the urethral opening while the perineum is pushed downward.
   f. Push the pessary into the vagina using a corkscrew-like motion until the disc lies transversely beneath the cervix.
   g. Once the large disc is inside the vagina, push forward until the end of the stem slips within the orifice.

4. Removal.
   a. Grasp the knob and gently pull disc toward introitus.
   b. The clinician may have to reach behind disc to break any seal caused by suction. (May be difficult.)
   c. The knob may be slippery and may require use of a forceps for gentle traction.
   d. Use fingers to spread labia and turn the disc so that it is nearly parallel to the introitus.
   e. Push downward on the perineum to ease the pessary out of the vagina.

5. Available sizes.
   a. Comes in varying sizes of disc diameter, from 1-1/2 to 3-1/2 inches, increasing in quarter-inch increments.
   b. Choose from sizes 1 to 9.
   c. The recommended fitting size includes 2-1/4, 2-1/2, 2-3/4.
E. Doughnut (Figure 24.9).

1. Indications: Occludes upper vagina and supports a uterine prolapse.
   a. Mass of the inflated pessary must be greater than the defect in the levator sling.
   b. It provides no support for the proximal urethra and can actually increase incontinence.
   c. Good for prolapse of the vagina after hysterectomy.

2. Description.
   a. Useful for uterine prolapse, some recommend for third- to fourth-degree cystocele or rectocele.
   b. The hollow ring comes in two models of medical-grade silicone.
c. Coitus is not possible with the pessary in place.

3. Insertion technique.
   a. Similar to the ring pessary, but there is no notch, so internal rotation is not necessary.
   b. Once the labia is separated with nondominant hand, compress the doughnut. (It is somewhat rigid, so it does not compress too much.)
   c. With two fingers of the nondominant hand pressing down on the peritoneum, hold the pessary parallel, angle slightly, and slip past introitus into vagina.

4. Removal technique.
   a. Hook finger inside on the center of the pessary (will not fit through hole, however).
   b. Compress the doughnut using the thumb and middle finger, and bring them parallel.
   c. Gently pull down and out through introitus. (The clinician may have to lubricate the pessary to remove it.)

5. Available sizes.
   a. There is a choice of six sizes, ranging in diameter from 2 to 3-3/4 inches.
   b. Recommended stocking size includes 2 and 3.

F. Cube.
1. Indications: Third-degree prolapse, cystocele, or rectocele, with or without vaginal tone.
   a. Often, this is the only satisfactory support for patients with complete prolapse complicated by cystourethrocele.
   b. Known as the pessary of last resort.
   c. It is excellent for vaginal wall prolapse in that it keeps the vaginal wall from collapsing by six pressure points.

2. Description.
   a. Each side of cube has concave suction cups that adhere to the vaginal walls, helping to restore the anatomic vaginal support of the pelvic organs (Figure 24.10).
   b. Moist vaginal mucosa invaginates into the concavities owing to a slight negative pressure.
   c. Needs to be removed daily or requires regular follow-up care initiated by clinician or patient.
      (1) Requires highly motivated patient with good dexterity.
      (2) Difficult to remove (action of suction), so it may not be possible to be removed by the elderly client.
      (3) Remember that the longer the cube is left in place,
Figure 24.10 Cube pessary.

the stronger the negative pressure and thus the more difficult it is to remove.
(4) The cube completely fills the vagina and blocks off drainage of any secretions.

d. Some clinicians recommend its use in younger women who have incontinence with exercise.
(1) It can be inserted before vigorous exercise in young women to eliminate leakage.
(2) Other clinicians would recommend the ring with support for this condition.

3. Insertion.
   a. It requires the compression of the cube before placement into the vagina.
   b. The string should be oriented toward the vagina.
(1) Some clinicians recommend that the string be removed because it may be irritating.
(2) It should never be used to pull the pessary out because it may cause vaginal tears of the fragile mucosa.

c. Insert by compressing the cube as much as possible.

d. Spread the labia with the nondominant hand.

e. Push the compressed cube through introitus.

f. Place as high in the vagina as possible.

4. Removal.
   a. Removal may be difficult because of the suction that has been created.
   b. Suction must be broken before removal.
   c. Do not pull on the string to remove.
   d. Slide the fingertips between the vaginal mucosa and the pessary to break the seal.
   e. Compress the pessary and remove.
   f. If the woman is not able to remove the pessary, she needs to see her clinician immediately. If the pessary is firmly suctioned to the vaginal wall, the following technique may be necessary:
      (1) Insert 5 mL of lidocaine jelly.
      (2) Sweep the fingertips around the cube to dispel the jelly.
      (3) Visualize the pessary.
      (4) Grasp the pessary with ring forceps.
      (5) Apply gentle traction, and pull down and out.

5. Available sizes.
   a. Eight sizes (0–7).
   b. The sizes correspond to 1 inch and 2 inches (25 mm to 50 mm).
   c. Recommend stocking sizes 2 to 4. Need a minimum of four sizes to fit a patient properly.

G. Inflato ball pessary.
   1. Description. Rarely used today because it is made of latex.
      a. Support is adjusted by varying air pressure via the two-way valve.
      b. The patient can easily remove and clean this device herself; even with a stenotic introitus, it can be inflated and reinflated.
      c. Made of latex rubber. Cannot be used with any hormonal creams because they may rapidly deteriorate rubber.
         (1) The clinician must question the patient concerning latex allergy before insertion.
         (2) It absorbs vaginal secretions and should not be kept
in place more than 24 hours (as is recommended with a diaphragm).

2. Indications.
   a. Genital prolapse.
   b. Extreme degrees of uterine prolapse.
   c. Prolapse of the vagina following a total hysterectomy.

3. Insertion.
   a. Approximate size by using fingers to determine the vaginal vault width.
   b. With the pessary deflated, hold it compressed between the thumb and forefingers.
   c. While it is deflated, insert the metal part of the bulb into the air vent.
   d. Insert the deflated pessary into the vaginal vault.
   e. Inflate the ball by squeezing the bulb.
   f. To close the air vent and maintain pressure within the ball, push the small bead at the tip of the stem 1 to 2 inches forward.
   g. Inflate the ball to a diameter large enough so that one finger can pass around the pessary and the vaginal wall.

4. Removal.
   a. Push the small bead in the direction opposite to its original position.
   b. Allow time for air to escape from the ball.
   c. Reach into vaginal vault, and squeeze the ball to deflate.
   d. Gently pull the deflated pessary through the introitus (do not pull on the stem).

5. Available sizes.
   a. Small, medium, large, and extra large.
   b. Corresponding to ball diameter of 2 to 2.5 inches.
   c. Recommended fitting sizes include medium and large.

6. Care should be performed frequently because rubber absorbs secretions and odors.

H. Incontinence ring pessary (Figure 24.11)

1. Description.
   a. Designed to stabilize the urethra and the urethrovesical junction.
   b. Woman must void following insertion before leaving the office to make sure the urethra is not obstructed.

2. Indication.
   a. Stress incontinence.
   b. Diagnostic test to assess the surgical outcome.
3. Insertion technique.
   a. Similar to the ring pessary without support.
   b. Must be fit properly because if it is too small, the knob may not remain in proper position, and if it is too large, it may obstruct the urethra and cause urinary retention.
   c. Insert the end without the knob first.
   d. Push the pessary up and behind cervix, with the knob resting behind the pubic bone.

4. Incontinence dish.
   a. Variations of the incontinence ring.
   b. It is indicated for stress urinary incontinence associated with a mild first- or second-degree prolapse.
   c. It is available in sizes of 55 mm to 85 mm in increments of 5 mm.
   d. Insert end without knob first. It is fitted with the knob behind the pubic bone.

5. Incontinence dish with support.
   a. Variation of dish with flexible membrane to support a mild cystocele.

Figure 24.11  Incontinence ring pessary.
b. It is indicated for stress urinary incontinence in conjunction with a first- or second-degree prolapse, or a mild cystocele. (Some clinicians recommend this type of pessary for second or third-degree cystocele because it provides additional support for the cystocele.)
c. It is available in sizes 55 mm to 85 mm, in increments of 5 mm.
d. It is fit with the knob behind the pubic bone.

VIII. Follow-up.
A. Must continuously monitor the woman for as long as the pessary is in place: although it is inert, it is still considered a foreign body.
B. Keep a list of all pessary users to make sure they are seen every 2 to 3 months. A forgotten pessary can cause serious complications. The woman can obtain a medic alert card at www.medid.com/phorm/phorm.php.
C. The pessary may require sizing alterations or a complete change in style at subsequent visits.
D. Discuss with the patient any possible problems.
   1. Coital discomfort (if intercourse is allowable).
   2. Disturbance in bowel or urinary function.
   3. Whether or not it remained in place.
   4. Overall comfort.
   5. Presence of any odor.
   6. Change in discharge.
      a. A yellow or white, or mild-to-moderate discharge is usually present.
      b. If the discharge increases during subsequent visits, question the patient’s compliance with the vaginal care routine.
      c. The discharge should never be foul smelling.
         (1) Perform a wet mount, and treat any infection.
         (2) Replace the pessary after the infection is resolved.
E. At this point, one may discuss the possibility of the woman cleaning her own pessary.
   1. Particularly if she is used to touching her own genitals.
      a. Elderly women are not as familiar.
      b. If the woman has previously used a diaphragm, it may be easy for her to learn how to use a pessary.
      c. Observe dexterity.
      d. Evaluate compliance issues and ability to perform self-care.
   2. Most pessaries are difficult to insert and remove, so a
woman must not feel that she has failed if she is unable to do it herself.

3. Do not even raise the possibility if it is obvious that the woman is unable to manage the pessary.

F. Provide instructions regarding:

1. Use of lubricant.
   a. Estrogen cream may be used for insertion.
   b. Nonpetroleum-based lubricants are not caustic and can be used.

2. Douching.
   a. No consensus has been presented as to its effectiveness.
   b. The woman should always consult with her clinician first.
   c. Mild vinegar may help to acidify the vagina.

3. Use of estrogen.
   a. Vaginal estrogen, unless contraindicated, is recommended over systemic estrogen.
      (1) Vaginal creams or pill are inserted twice weekly.
      (2) Estring should be replaced every 3 months (should be inserted before pessary).
   b. May be used in conjunction with systemic preparations.
   c. The patient may have difficulty using the applicator and inserting the cream. (Many patients are elderly and have limited experience with devices such as tampons.)
   d. Will mature vaginal epithelium and improve perineal muscle tone.

4. Use of Trimo-San.
   a. This is a cleansing, deodorant gel with a pH of 4 to maintain antibacterial acid environment.
   b. The patient should use one-half applicator two times per week.
   c. The active ingredient is oxyquinoline sulfate.

G. Pessary care and cleaning.

1. If the patient is unable to remove the pessary, it should be removed and the patient should be observed for any excoriation, ulceration, or foul discharge.

2. Clean the pessary in warm, soapy water; rinse thoroughly; and reinsert.

3. Irrigate the vagina using a 20-cc syringe with an irrigating tip using warm water. A weak solution of betadine or vinegar may be used.

4. Document type and amount of solution used and note character of discharge.
5. Replace the pessary if the old one shows signs of physical defects.
   a. It may become discolored, but does not need to be replaced.

H. Complications.
1. Increase in vaginal discharge.
2. Odor.
3. Cytologic atypia from inflammatory changes that may occur.
4. Poorly fitted or improper schedule of cleaning may cause ulcerations and excoriation.
5. Incarceration—the cervix and uterus may herniate through the center of a poorly fitted ring pessary and become strangulated.
6. In a neglected pessary, tissue may grow around it.
7. There should be no evidence of serious problems with long-term wear of a well-maintained pessary.

I. Maintenance visits.
1. Slight bleeding may be seen during removal of pessary; question the patient’s compliance with estrogen therapy.
2. If using the Estring, replace the ring every 3 months and insert before the pessary.
3. Refit pessary if there has been a gain or loss of 20 pounds or more. (Discuss diet.)
4. If heavy discharge:
   a. Perform wet mount to check for infection.
   b. If no infection is present, recommend vinegar and water douche.
      (1) One quarter cup vinegar to one quart of warm water.
      (2) Douche once to twice weekly.
5. Reinforce use of Kegel exercises.
   a. Compliance is the key.
   b. Success rate of over 80% resolution of incontinence can be achieved in 4 to 8 weeks.
6. Offer support groups.

J. Monitor urination.
1. Ask woman to keep a voiding diary.
   a. Keep the diary for 1 week.
   b. Include frequency and quality of fluids.
   c. Note number and frequency of urination.
   d. Record which type of activities cause leaking.
2. Note use of pads.
   a. Brand name.
**Table 24.3 Reimbursement Codes**

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Codes</th>
<th>Average Reimbursement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pessary A4562</td>
<td>$40</td>
<td></td>
</tr>
<tr>
<td>Pessary Insertion 57160</td>
<td>$35</td>
<td></td>
</tr>
<tr>
<td>Vaginal Irrigation 57150</td>
<td>$35</td>
<td></td>
</tr>
</tbody>
</table>

b. How often has to wear (continuous versus intermittent).
c. How often has to change if continuous.

a. Inquire if the patient has done them in the past.
b. Was she successful.

a. These cones were designed as an aid to locating and identifying the correct pelvic floor muscle to be used during Kegel exercises.
b. Begin by inserting the lightweight cone; the patient is unable to retain for 5 minutes while walking about.
c. Work up to being able to retain the cone for 15 minutes twice a day while walking.
d. Progress to the next heavier size, and continue.
e. Patients with a prolapse or pessary cannot use cones.

K. Reimbursement Codes (see Table 24.3).

IX. Pessaries in the 20th century.
A. Newer devices to manage pelvic organ prolapse.
1. Uresta.
a. Uniquely shaped pessary that allows a woman to self-manage. Easy to remove and insert.
b. The tissues compress the urethra and may reduce leakage.

2. Colpexin Sphere.
a. Round plastic sphere which is placed intravaginally above the levator ani muscle.
b. Space-occupying properties allow support of the prolapse.
c. Reflectively causes contraction of the pelvic floor muscle in an attempt to retain the sphere.

3. Vaginal weights/cones.
a. Five interchangeable cone-shaped plastic weights ranging from one to three ounces.
b. Smooth, hypoallergenic.
c. Used in conjunction with a home exercise program.
d. Insert twice daily and wear for 15 minutes. Once the weight is able to be retained, increase to the next heavier cone.

B. Medications to increase contractility of the urinary sphincters.
1. Have side effects.
   a. Rapid heart rate.
   b. Dry mouth.
2. May be very useful if stress incontinence is associated with urge incontinence.
3. Does not help most patients.

C. Biofeedback.
1. Widely used worldwide to help patients regain control and awareness of pelvic muscles.
   a. Assists in the identification and strengthening of pelvic muscles.
   b. Is an audiovisual display of pelvic muscle activity.
2. Useful for stress and mixed urinary incontinence.
3. Usually, four to six treatments are needed.
4. Many reliable studies show improvement of 87% in women with stress incontinence.
5. Many nurses and physical therapists use this technique to retrain pelvic support.

D. Electrical stimulation of pelvic muscles.
1. Low-frequency stimulation of the pelvic floor via a rectal or vaginal probe causes muscles of the periurethral and pelvic floor to contract.
   a. Uses an electrical probe, needle, or sensor to artificially contract the pelvic floor muscles.
   b. Causes pelvic muscle contraction with accompanying detrusor reflex inhibition.
   c. May cause some pain or discomfort.
2. In the past, this method was used to treat urge incontinence and detrusor hyperreflexia.
3. Recent indications include genuine stress incontinence.
4. Clinical trials show an improvement rate of 89% after 6 weeks of treatment.

E. For more information on pessaries go to www.bioteque.com.