INSTRUCTIONS FOR USING 
ZOÉ® GYNECOLOGIC SIMULATORS

A ZOE Gynecologic Simulator is a model of a full-sized, adult female lower torso (abdomen and pelvis). It is a versatile training tool developed to assist health professionals to teach the processes and skills needed to perform many gynecologic procedures. ZOE models are ideal for demonstrating and practicing the following procedures:

- Bimanual pelvic examination including palpation of normal and pregnant uteri
- Vaginal speculum examination
- Visual recognition of normal cervices and abnormal cervices
- Uterine sounding
- IUD insertion and removal
- Diaphragm sizing and fitting
- Laparoscopic inspection and occlusion of fallopian tubes (Falope rings or other clips)
- Minilaparotomy (both interval and postpartum tubal occlusion)
- Treatment of incomplete abortion using manual vacuum aspiration (MVA)

CONTENTS OF THE ORIGINAL ZOE MODEL

There are several models of ZOE Gynecologic Simulators now available, including an interval model and postpartum kit, so specific parts and accessories will vary. The original ZOE Gynecological Simulator kit includes the following:

<table>
<thead>
<tr>
<th>ITEM</th>
<th>QUANTITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal ante- and retroverted uteri with clear tops, attachments for round and ovarian ligaments as well as fallopian tubes and normal patent cervical os for pelvic examination and IUD insertion</td>
<td>2</td>
</tr>
<tr>
<td>6–8 week uterus with dilated (open) cervical os, which allows passage of a 5 or 6 mm flexible cannula</td>
<td>1</td>
</tr>
<tr>
<td>10–12 week uterus with dilated (open) cervical os, which allows passage of a 10 or 12 mm flexible cannula</td>
<td>1</td>
</tr>
<tr>
<td>Postpartum uterus (20 week size) with attached fallopian tubes for practicing postpartum tubal occlusion by minilaparotomy</td>
<td>1</td>
</tr>
<tr>
<td>Cervices (not open) for use in visual recognition:</td>
<td></td>
</tr>
<tr>
<td>- Normal cervix</td>
<td>1</td>
</tr>
<tr>
<td>- Cervix with proliferation of columnar epithelium (ectropion)</td>
<td>1</td>
</tr>
<tr>
<td>- Cervix with inclusion (nabothian) cyst and endocervical polyp</td>
<td>1</td>
</tr>
<tr>
<td>- Cervix with lesion (cancer)</td>
<td>1</td>
</tr>
<tr>
<td>ITEM</td>
<td>QUANTITY</td>
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<tr>
<td>----------------------------------------------------------------------</td>
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</tr>
<tr>
<td>Normal cervices with open os for IUD insertion/removal</td>
<td>5</td>
</tr>
<tr>
<td>Cervices for 6–8 week and 10–12 week uteri (2 of each size)</td>
<td>4</td>
</tr>
<tr>
<td>Normal tubal fimbriae and ovaries (2 of each)</td>
<td>4</td>
</tr>
<tr>
<td>Fallopian tubes for tubal occlusion</td>
<td>8</td>
</tr>
<tr>
<td>Simulated round and ovarian ligaments (set of 2 each)</td>
<td>4</td>
</tr>
<tr>
<td>Extra thin cervical locking rings</td>
<td>3</td>
</tr>
<tr>
<td>Flashlight with batteries</td>
<td>1</td>
</tr>
<tr>
<td>Soft nylon carrying bag</td>
<td>1</td>
</tr>
</tbody>
</table>

**Outer Skin**

The outer skin of the model is foam-backed in order to simulate the feel of the anterior pelvic wall. The entire outer skin is removable to allow the model to be used for demonstration purposes (e.g., performing IUD insertion).

The 3 cm incision (reinforced at each end) located just below the umbilicus can be used to insert a laparoscope to look at the uterus, round ligaments, ovaries and fallopian tubes and practice laparoscopic tubal occlusion. This incision also can be used for practicing postpartum tubal ligation by minilaparotomy.

The 3 cm incision located a few centimeters above the symphysis pubis is used for practicing interval minilaparotomy. This incision also is reinforced, which allows the skin to be retracted to facilitate demonstration of the minilaparotomy technique.

**Cervices**

The normal cervices have a centrally located, oval-shaped os, which permits insertion of a uterine sound, uterine elevator or IUD. The abnormal cervices are not open and can be used for demonstration only.

Each of the cervices for treatment of incomplete abortion has a centrally located, oval-shaped os, which is dilated to allow passage of a 5 or 6 mm or 10 or 12 mm flexible cannula, respectively.

The normal cervices and interchangeable uteri feature the patented “screw” design for fast and easy changing.

**ASSEMBLY OF THE ORIGINAL ZOE MODEL**

To use the original ZOE pelvic model for demonstrations or initially to learn how to change the parts (e.g., cervices and uteri), you need to know how to remove the skin.
Removing and Replacing the Detachable Skin and Foam Backing

1. First, carefully remove the outer skin and its foam lining away from the rigid base at the “top” end of the model. (“Top” refers to the portion of ZOE nearest to the metal carrying handle located above the umbilicus.)

2. Lift the skin and foam up and over the legs, one leg at a time.

3. *Be as gentle as possible.* The detachable skin is made of material that approximates skin texture and it *can* tear.

4. If you wish to change the anteverted uterus and normal cervix that are shipped attached to ZOE, first you must remove the uterus.

5. Start by pulling the round ligaments away from the wall.

6. Then grasp the uterus while turning the *wide* grey ring counterclockwise until the cervix and uterine body are separated.

7. To remove the *cervix*, turn the *thin* grey ring counterclockwise until it comes off.

8. You then can push the cervix out through the vagina.

9. To *reassemble*, simply reverse this process.

10. To replace the skin and foam lining, start by pulling them down over the legs.

11. Then make sure the rectal opening is aligned with the opening in the rigid base.

12. Pull the skin and foam over the top of the model.

13. Finally, make sure both are pulled firmly down around the rigid base, and the skin is smoothly fitted over the foam.

Once you understand how ZOE’s anatomic parts fit together, we suggest you change them through the opening at the top of the model. This helps to preserve ZOE’s outer shell as you will only have to remove it for demonstrations or to change the postpartum (20 week size) uterus.

The anteverted and retroverted uteri have transparent top halves and opaque lower halves for use in demonstrating IUD insertion. These uteri are supported by round ligaments attached to the pelvic wall. The round ligaments, ovaries and fallopian tubes are removable.

*To remove the uterus:*

- Unscrew the wide locking ring attached to the uterus using a counterclockwise rotation.
To remove the cervix:

- Unscrew the thin locking ring immediately outside the apex of the vagina.
- The cervix should be pushed through the vagina and removed from the introitus.

To reassemble, proceed in reverse order.

**PROCEDURES WITH ALL ZOE MODELS**

**Speculum examination:**

- Use a medium bivalve speculum.
- Prior to inserting the speculum, dip it into clean water containing a small amount of soap. (This makes inserting the speculum easier.)
- To see the cervix, fully insert the speculum, angle it posteriorly (as in the human, the vagina in the ZOE model is angled posteriorly), then open the blades fully.
- To increase the diameter of the opening, use the speculum thumb screw (Pederson or Graves specula).

**Passing instruments (uterine sound, uterine elevator, dilator or cannula) through the cervical os:**

- Apply a small amount of clean water containing a drop or two of soap solution to the cervix (just as you would apply it with antiseptic solution in a client). This will make passing the instrument through the cervical os easier.

**Sounding the uterus, inserting an IUD and interval minilaparotomy or laparoscopy:**

- Use either the normal (nonpregnant) anteverted or retroverted uterus with a cervix having a patent os.

**Postpartum minilaparotomy (tubal occlusion):**

- Use the postpartum uterus (20 week size) with a cervix having a patent os.

**Treatment of incomplete abortion using MVA:**

- Use either the 6 to 8 or 10 to 12 week uteri (incomplete abortion) with the appropriate size cervix.
CARE AND MAINTENANCE OF ALL ZOE MODELS

The specific model of ZOE Gynecological Simulator will vary, depending on the location of the training site and the procedures being performed, but the care and maintenance of these models are the same for all.

- ZOE is constructed of material that approximates skin texture. Therefore, in handling the model, use the same gentle techniques as you would in working with a client.
- To avoid tearing ZOE’s skin when performing a pelvic exam, use a dilute soap solution to lubricate the instruments and your gloved fingers.
- Clean ZOE after every training session using a mild detergent solution; rinse with clean water.
- DO NOT write on ZOE with any type of marker or pen, as these marks may not wash off.
- DO NOT use alcohol, acetone or Betadine7 or any other antiseptic that contains iodine on ZOE. They will damage or stain the skin.
- Store ZOE in the carrying case and plastic bag provided with your kit.
- DO NOT wrap ZOE in other plastic bags, newspaper, plastic wrap or any other kinds of material, as these may discolor the skin.