

Labor Induction

Labor is the process that leads to the birth of a baby. Labor usually starts on its own. Labor induction is the use of medications or other methods to bring on (induce) labor. More than 1 in 5 pregnant women in the United States have labor induced.

Labor may be induced for many reasons. Some medications used for induction also can be used to speed up labor that is going too slowly.

This pamphlet explains

- reasons for labor induction
- when labor is not induced
- how labor is induced
- risks of labor induction

Reasons for Labor Induction

Labor is induced to stimulate contractions of the *uterus* in an effort to have a vaginal birth. Labor induction may be recommended if the health of the mother or *fetus* is at risk. Some of the reasons for inducing labor include the following:

- Your pregnancy has lasted more than 41 to 42 weeks.
- You have health problems, such as problems with your heart, lungs, or *kidneys*.
- There are problems with the *placenta*.
- There are problems with the fetus, such as poor growth.
- There is a decrease in *amniotic fluid*.
- You have an infection of the uterus.
- You have *gestational diabetes* or had *diabetes mellitus* before pregnancy.
- You have chronic *hypertension*, *preeclampsia*, or *eclampsia*.
- You have *prelabor rupture of membranes (PROM)*.

Before labor is induced, your *obstetrician–gynecologist (ob-gyn)* should review the fetus's *gestational age*, how your pregnancy is going, and the possible risks for you and the fetus. With some complications, labor

induction may be needed even if it means that the fetus will be born early. In these cases, the risks of continuing the pregnancy outweigh the risks of the fetus being born too early.

Elective Reasons for Labor Induction

When you choose labor induction and you and your fetus are healthy, it is called elective induction. For example, labor may be induced at your request for reasons such as physical discomfort, a history of quick labor, or living far away from the hospital.

Labor induction may also be considered for healthy women at 39 weeks of pregnancy to reduce the chance of *cesarean birth*. Read the box “Induction at 39 Weeks.”

If you are thinking about elective induction, your ob-gyn should review your records to be reasonably sure that you have reached 39 weeks of pregnancy. Most hospitals also require documentation showing you have reached 39 weeks. When you and your fetus are healthy, induction should not be done before 39 weeks.

Induction at 39 Weeks

New research suggests that induction for healthy women at 39 weeks may reduce the chance of cesarean birth. It may also reduce the risk of preeclampsia or *gestational hypertension*. These findings apply only if:

- This is your first pregnancy.
- You are carrying only one fetus.
- You and your fetus are both healthy.

Early labor is the time when your contractions start and your *cervix* begins to open. If you have induction at 39 weeks, you should be allowed up to 24 hours or longer for the early phase of labor. You should also be given *oxytocin* at least 12 to 18 hours after stripping or sweeping of the membranes.

If labor does not progress, you may go home and can try induction again later. Or a cesarean birth may be needed.

When Labor Is Not Induced

Some conditions may make a vaginal delivery unsafe for you or your fetus. Some of these conditions include the following:

- **Placenta previa** (the placenta covers the opening of the uterus)
- The fetus is lying sideways in the uterus or is in a **breech presentation**
- Prolapsed **umbilical cord** (the cord has dropped down in the vagina ahead of the fetus)
- Active **genital herpes** infection

- Some types of previous uterine surgery, such as certain types of cesarean birth or surgery to remove **fibroids**

In these situations, you may need a cesarean birth to protect the health of you and your fetus.

How Labor Is Induced

There are several ways to start labor if it has not started naturally. The choice depends on several factors. These factors include your condition and the experience of your ob-gyn. Several of these methods may be used together.

Ripening the Cervix

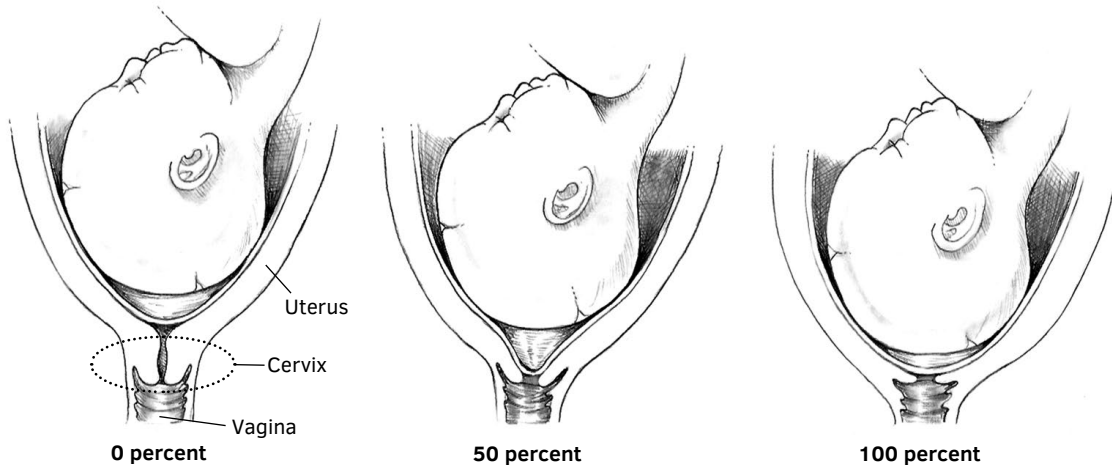
Ripening the cervix is a process that helps the cervix soften and thin out in preparation for labor. Sometimes when labor is going to be induced, the cervix is not yet “ripe” or soft. This means that labor cannot progress (read the box “Cervical Changes”).

Your ob-gyn will check to see if your cervix has started this change. The Bishop score may be used to rate the readiness of the cervix for labor. With this scoring system, a number ranging from 0 to 13 is given to rate the condition of the cervix. A Bishop score of less than 6 means that your cervix may not be ready for labor. Medications or devices may be used to soften the cervix so it will stretch (dilate) for labor.

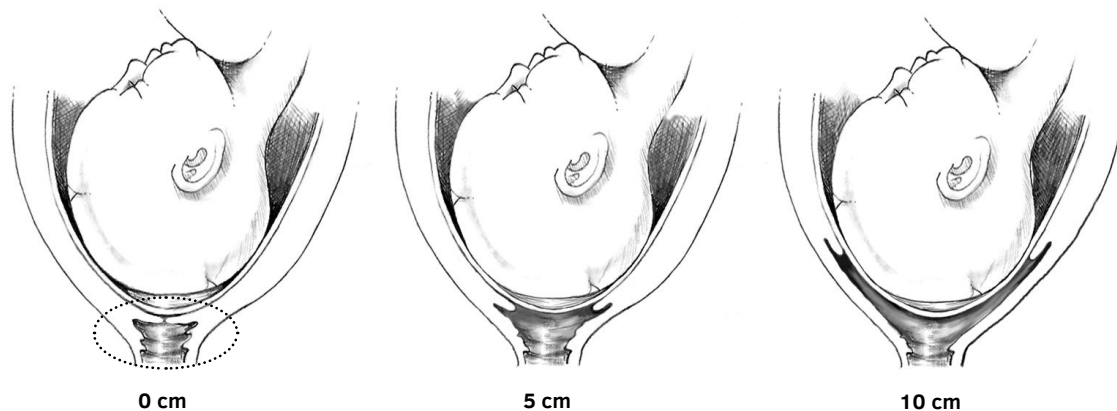
Cervical Changes

To prepare for labor and delivery, the cervix begins to soften, thin out, and open. These changes usually start a few weeks before labor begins.

1. **Ripening**—the softening of the cervix so that it becomes able to stretch for labor.
2. **Effacement**—the thinning out of the cervix. Before effacement, the cervix looks like a narrow tube about 4 centimeters long that is connected to the uterus. As the cervix becomes thinner, it shortens and pulls up toward the uterus. When effacement is complete, the cervix is part of the lower uterine wall. Effacement is measured in percentages, from 0 percent (no effacement) to 100 percent (full effacement).



3. **Dilation**—the amount that the cervix has opened. Dilation is measured in centimeters, from 0 centimeters (no dilation) to 10 centimeters (fully dilated).



Prostaglandins are medications that can be used to ripen the cervix. They are forms of chemicals made naturally by the body. These medications can be inserted into the vagina or taken by mouth. Some prostaglandins are not used if you have had a previous cesarean birth or other uterine surgery to avoid increasing the possible risk of uterine rupture (tearing).

The cervix can also be widened with special dilators. For example, inserting **laminaria** (thin rods made of a substance that absorbs water) expands the cervix. A catheter (small tube) with an inflatable balloon on the end can also be inserted to widen the cervix. The balloon expands, which helps open the cervix.

These ways of ripening the cervix may be used together or one after another. You and your ob-gyn should talk about which approaches may work best for you and your cervix.

“Stripping the Membranes”

“Stripping the membranes,” also called “sweeping the membranes,” is another common way to start labor. It can be done in your ob-gyn’s office or in the hospital. The ob-gyn sweeps a gloved finger between the **amniotic sac** and the wall of your uterus, separating the fetal membranes from the cervix.

This action is done when the cervix is partially dilated. It may cause your body to release natural prostaglandins, which soften the cervix more and may start contractions.

Oxytocin

Oxytocin is a **hormone** that causes contractions of the uterus. It can be used to start labor or to speed up labor that began on its own. Oxytocin is given through an **intravenous (IV) line** in the arm. A pump hooked up to the IV tube controls the amount given.

Contractions usually start in about 30 minutes. Your condition, your contractions, and the fetus’s heart rate will be monitored when you are given this medication.

Rupturing the Amniotic Sac

When your water breaks, the fluid-filled amniotic sac that surrounds the baby has ruptured (burst). Most women go into labor within hours after their water breaks. If the sac hasn’t burst already, breaking it can start contractions. Or if the contractions have already started, breaking the sac can make them stronger or more frequent.

To rupture the amniotic sac, an ob-gyn makes a hole in the sac with a special device. This procedure, called an **amniotomy**, may be done before or after you have been given oxytocin. Amniotomy can be done to start labor when the cervix is dilated and the baby’s head has moved down into the pelvis. Most women go into labor within a few hours after the amniotic sac breaks, but sometimes oxytocin may be needed.

Risks

There are risks with labor induction. One risk is that when oxytocin is used, the uterus may be overstimulated. This may cause the uterus to contract too often. Too many contractions may lead to changes in the fetal heart rate. If there are problems with the fetal heart rate, oxytocin may be reduced or stopped. Other treatments may be needed to steady the fetal heart rate.

Other risks of labor induction may include

- **chorioamnionitis**, an infection of the amniotic fluid, placenta, or membranes
- infection in the baby
- rupture of the uterus (rare)

Medical problems that were present before pregnancy or occurred during pregnancy may contribute to these complications. To help prevent these complications, the fetal heart rate and force of contractions may be electronically monitored during labor induction.

Sometimes labor induction doesn’t work. If you and your pregnancy are doing well and the amniotic sac has not ruptured, you may be given the option to go home. You can schedule another appointment to try induction again. If your labor starts, you should go back to the hospital.

If you or your baby are not doing well during or after attempting induction, a cesarean birth may be needed. Although most cesarean births are safe, there may be additional risks for you, including

- infection
- **hemorrhage** (heavy bleeding)
- complications from **anesthesia**

The recovery time after a cesarean birth is usually longer than for a vaginal birth.

There are also considerations for future pregnancies. With each cesarean birth, the risk of serious placenta problems in future pregnancies goes up. In addition, the number of cesarean births you have had is a major factor in how you will give birth to any future babies.

Finally...

Labor induction sometimes is necessary to protect the health of both you and your pregnancy. You and your ob-gyn should weigh the risks and benefits of labor induction compared with the risks and benefits of continuing the pregnancy. Understanding the risks and benefits allows you and your ob-gyn to make the best choice for you and your pregnancy.

Glossary

Amniotic Fluid: Fluid in the sac that holds the fetus.

Amniotic Sac: Fluid-filled sac in a woman’s uterus. The fetus develops in this sac.

Amniotomy: Artificial rupture (bursting) of the amniotic sac.

Anesthesia: Relief of pain by loss of sensation.

Breech Presentation: A position in which the feet or buttocks of the fetus appear first during birth.

Cervix: The lower, narrow end of the uterus at the top of the vagina.

Cesarean Birth: Birth of a fetus from the uterus through an incision (cut) made in the woman’s abdomen.

Chorioamnionitis: A condition during pregnancy that can cause unexplained fever with uterine tenderness, a high white blood cell count, rapid heart rate in the fetus, rapid heart rate in the woman, and/or foul-smelling vaginal discharge.

Diabetes Mellitus: A condition in which the levels of sugar in the blood are too high.

Dilation: Widening the opening of the cervix.

Eclampsia: Seizures occurring in pregnancy or after pregnancy that are linked to high blood pressure.

Effacement: Thinning out of the cervix.

Fetus: The stage of human development beyond 8 completed weeks after fertilization.

Fibroids: Growths that form in the muscle of the uterus. Fibroids usually are noncancerous.

Gestational Diabetes: Diabetes that starts during pregnancy.

Gestational Hypertension: High blood pressure that is diagnosed after 20 weeks of pregnancy.

Genital Herpes: A sexually transmitted infection (STI) caused by a virus. Herpes causes painful, highly infectious sores on or around the vulva and penis.

Gestational Age: How far along a woman is in her pregnancy, usually reported in weeks and days.

Hemorrhage: Heavy bleeding.

Hormone: A substance made in the body that controls the function of cells or organs.

Hypertension: High blood pressure.

Intravenous (IV) Line: A tube inserted into a vein and used to deliver medication or fluids.

Kidneys: Organs that filter the blood to remove waste that becomes urine.

Laminaria: Slender rods made of natural or synthetic material that expand when they absorb water. Laminaria are inserted into the opening of the cervix to widen it.

Obstetrician–Gynecologist (Ob-Gyn): A doctor with special training and education in women’s health.

Oxytocin: A hormone made in the body that can cause contractions of the uterus and release of milk from the breast.

Placenta: An organ that provides nutrients to and takes waste away from the fetus.

Placenta Previa: A condition in which the placenta covers the opening of the uterus.

Preeclampsia: A disorder that can occur during pregnancy or after childbirth in which there is high blood pressure and other signs of organ injury. These signs include an abnormal amount of protein in the urine, a low number of platelets, abnormal kidney or liver function, pain over the upper abdomen, fluid in the lungs, or a severe headache or changes in vision.

Prelabor Rupture of Membranes (PROM): Rupture of the amniotic membranes that happens before labor begins. Also called premature rupture of membranes.

Prostaglandins: Chemicals that are made by the body that have many effects, including causing the muscles of the uterus to contract, usually causing cramps.

Umbilical Cord: A cord-like structure containing blood vessels. It connects the fetus to the placenta.

Uterus: A muscular organ in the female pelvis. During pregnancy, this organ holds and nourishes the fetus. Also called the womb.

This information is designed as an educational aid for the public. It offers current information and opinions related to women’s health. It is not intended as a statement of the standard of care. It does not explain all of the proper treatments or methods of care. It is not a substitute for the advice of a physician. For ACOG’s complete disclaimer, visit www.acog.org/WomensHealth-Disclaimer.

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