



There are certain factors that can predispose a mother towards having a premature birth. These factors are detectable via proper prenatal care and screening. One of these factors is called 'cervical insufficiency' (previously known as 'incompetent cervix').

The cervix is a structure that separates the uterus from the vagina. At the beginning of pregnancy it is closed and rigid but it tends to soften as the pregnancy progresses. With a cervical insufficiency, it begins to soften and open up too soon. When this happens, the membranes surrounding the baby bulge through the opening and eventually break, leading to an early water breaking (premature rupture of membranes). This early rupture leads to increased contractions, which, if not halted, can lead to premature birth or miscarriage.

Certain women can benefit from a procedure called a cervical cerclage, a method of support that involves the placement of a stitch into the cervix. This helps keep the cervix closed throughout the pregnancy until it is removed between 36-38 weeks to avoid problems related to labor. For a cerclage to be effective, however, it must be placed fairly early in the pregnancy (typically before 14 weeks of pregnancy). In other situations, it can be placed between 14 weeks and 16 weeks, but the absolute latest it can be placed is at 24 weeks.

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When Might a Cerclage Be Placed?

Certain risk factors can predispose a mother to a weak cervix. In these cases, doctors should consider placing a cerclage. Procedures and events that can cause a weak cervix include:

- If the mother had an insufficient cervix before
- If the mother has had a prior preterm birth
- If the mother has had a prior second-trimester stillbirth
- If the mother's water broke early before (Preterm premature rupture of membranes/PPROM)
- If the mother has had a cervical biopsy for diagnostic purposes (cone biopsy/cervical conization) or a LEEP (loop electrosurgical excision procedure)
- If the mother's cervix was torn in a previous birth
- If the mother has had prior repeat or late-term abortions
- If the mother has uterine abnormalities/anomalies
- If the mother was environmental exposure to DES
- If the mother has had a D&C procedure

It is critical that a woman's obstetrician take a full medical history to identify risk factors for cervical insufficiency. In many cases, cervical insufficiency produces only mild symptoms between weeks 15-20 (such as mild discomfort, pelvic pressure, backache, mild cramps, or light vaginal bleeding); between 16-28 weeks, cervical dilation (opening) may show no signs at all. Once they see a doctor regarding discomfort or concern, they may have significant dilation (2cm+). Usually a dilation of 4 cm or more triggers contractions or rupture of membranes.

In addition to taking a mother's medical history, prenatal screening can identify cervical insufficiency. During prenatal care exams, OB/GYNs typically do a pelvic exam during the



second or third trimester. Cervical insufficiency is sometimes revealed during these exams, when (between 16-24 weeks) a mother shows signs of a dilated cervix.

If a woman has a prior history of cervical insufficiency, a cerclage should be placed and the pregnancy should be monitored more closely using transvaginal ultrasounds (TVS) after 16 weeks. TVS helps monitor cervical length and can help identify if preterm birth is likely – if the cervical length is less than 25mm between 14-24 weeks. To reduce the risk of preterm birth, the mother is also typically given [progesterone](#), which helps prolong pregnancy.

What Are The Benefits of Cervical Cerclage?

A cervical cerclage is performed in order to help with cervical insufficiency and prevent preterm birth. When the diagnosis of cervical insufficiency is made, and a cerclage is placed in a timely manner, the procedure can:

- Reinforce the cervix
- Lengthen the cervix
- Prevent miscarriage
- Prevent premature labor

How Is a Cervical Cerclage Performed?

Most often, a cervical cerclage is performed under general or local anesthesia. Once the anesthesia is administered, the surgeon begins the suture placement. When placing the



stitch, the surgeon often reaches the cervix through the vagina. The stitch can also be placed through the abdomen through a method known as the *transabdominal cervical cerclage*.

Oftentimes, in order to maximize the chances that a cervical cerclage will be successful in preventing preterm birth, mothers are also given [progesterone therapy](#). Progesterone therapy helps to prolong pregnancy and prevent preterm labor.

When Should A Cervical Cerclage Not Be Performed?

Cervical cerclages aren't always indicated, however. Even if a pregnant woman does have a cervical insufficiency, she should not have a cerclage when:

- Active labor has begun
- Placental abruption is present
- The mother has an infection
- Water broke early (PPROM)
- The mother has active bleeding

What Are The Risks of A Cervical Cerclage?

The risk associated with the placement of a cervical cerclage is very low – especially when considering the significant benefit of a timely labor and delivery. Most professionals agree that the benefits of the procedure greatly outweigh the risks. Nevertheless, there are a few risks associated with the procedure. These include:



- Premature contractions
- Premature rupture of the membranes (PROM)
- Cervical infection
- Vaginal bleeding
- Preterm labor
- Miscarriage

It is important to note that, in many cases, these risks may be present solely due to cervical insufficiency or weakness. Patients may experience these issues even if they do not undergo the cervical cerclage procedure.

Citations

- Brown R, et al. [Cervical Insufficiency and Cervical Cerclage](#). J Obstet Gynaecol Can. 2013 Dec;35(12):1115-27.
- Berghella V et al. Cervical Insufficiency. UptoDate. Available at <https://www.uptodate.com/contents/cervical-insufficiency>.