

Cervical Cerclage

Surgical reinforcement for cervical insufficiency

OB / MATERNITY

ANTEPARTUM

PRETERM BIRTH PREVENTION

SURGICAL

PLACED

12–14 wk

REMOVED

36–37 wk

<25

MM CERVIX
= SHORT

<24

WKS MAX
FOR PLACEMENT

3

CERCLAGE
TYPES

85%

SUCCESS
TO TERM

01 Definition & Overview

WHAT IT IS • WHY IT MATTERS

A purse-string suture placed around the cervix to mechanically reinforce it and keep it closed during pregnancy.

Indicated for **cervical insufficiency** — painless, premature cervical dilation in the 2nd trimester without contractions, which leads to membrane prolapse, PROM, and 2nd-trimester pregnancy loss or preterm birth.

Cerclage acts as a **structural barrier**, holding the cervix closed until late in pregnancy, then is removed prior to labor (or left in place for planned cesarean / abdominal cerclage).

AKA

Cervical Stitch • Cervical Suture • McDonald Procedure

GOAL

Prevent 2nd-trimester loss & preterm birth

ANESTHESIA

Spinal (preferred) • Epidural • General

02 Pathophysiology

MECHANISM • STEP-BY-STEP

Weak / Incompetent Cervix
(congenital • trauma • LEEP • cone bx)



Painless Cervical Shortening
& Dilation
(2nd trimester)



Membranes Bulge into Cervix
(hourglass membranes)

PROM / Chorioamnionitis



2nd-Trimester Loss
or Preterm Birth



CERCLAGE blocks this cascade

Cervical insufficiency = a **mechanical** problem; cerclage provides a **mechanical** solution by physically holding the cervix closed.

" Cervical insufficiency is painless dilation — this is the key NCLEX distinction from preterm labor, which has contractions.

2B Types of Cerclage

SURGICAL APPROACHES • KNOW McDONALD

★ MOST COMMON

McDonald

Purse-string suture placed transvaginally at the cervicovaginal junction. Simpler, easier to remove. **Removed at 36–37 wk.**

TRANSVAGINAL

Shirodkar

Higher placement, suture is **buried submucosally**. Used when McDonald has failed or cervix is very short.

LAST RESORT

Transabdominal

Placed via abdomen (laparoscopy/laparotomy) when vaginal cerclage has failed or cervix is absent. **Always delivery via C-section**; cerclage left in place.

03 Signs & Symptoms

INSUFFICIENCY FINDINGS • RED FLAGS POST-CERCLAGE

• Cervical Insufficiency — Early / Subtle

- Pelvic pressure or "heaviness" in vagina
- Dull low backache (continuous, not contractile)
- Mild abdominal cramping
- Change in vaginal discharge — increase in volume, pink/brown tinge
- Light spotting or bleeding
- U/S finding: cervical length < 25 mm before 24 wk
- U/S finding: funneling of internal os

🚨 Post-Cerclage RED FLAGS — Call Provider

- 🚨 Regular contractions or rhythmic cramping
- 🚨 Rupture of membranes — gush or leak of fluid
- 🚨 Vaginal bleeding (more than light spotting)
- 🚨 Fever $\geq 100.4^{\circ}\text{F}$ (38°C) → suspect chorioamnionitis
- 🚨 Foul-smelling vaginal discharge
- 🚨 Severe pelvic/perineal pain or pressure
- 🚨 Suture displacement or visible at introitus
- 🚨 Decreased fetal movement

! **NCLEX KEY:** If membranes have ruptured, infection is present, or labor is active — cerclage must be REMOVED. Do NOT attempt to maintain it.

04 Priority Nursing Interventions

ABCS • SAFETY • PRIORITIZATION

Pre-Operative

- 1 Confirm gestational age (typically 12–14 wk) & viability via U/S
- 2 Verify NO active labor, ROM, infection, or bleeding (all contraindications)
- 3 NPO after midnight; obtain consent
- 4 Type & screen, CBC, baseline vitals & FHR
- 5 Pre-op antibiotics if ordered; void before procedure
- 6 Assess for UTI/BV/STI — must treat before cerclage

Post-Operative

- 1 Monitor for contractions via tocodynamometer $\times 1+$ hr
- 2 Auscultate FHR before, during, & after procedure
- 3 Assess for vaginal bleeding & fluid leakage (ROM)
- 4 Monitor for signs of infection (fever, foul discharge)
- 5 Pain management — mild discharge of pink/brown spotting & cramps expected first 24–48 hr
- 6 Reinforce pelvic rest & activity restrictions
- 7 Schedule follow-up; plan removal at 36–37 wk

// **Priority Hierarchy:** Maternal stability → Fetal HR/well-being → Detect labor/PROM/infection → Comfort/education. ABCs first if anesthesia complication suspected.

05 Pharmacology

ADJUNCT MEDS • HOLD PARAMETERS

DRUG / CLASS	MECHANISM • PURPOSE	KEY SIDE EFFECTS	NURSING CONSIDERATIONS
Indomethacin NSAID TOCOLYTIC	Inhibits prostaglandin synthesis → suppresses uterine contractions. Given prophylactically peri-op.	GI upset, oligohydramnios with prolonged use, premature closure of fetal ductus arteriosus .	AVOID after 32 wk (ductal closure risk). Short courses only. Monitor amniotic fluid index.
Vaginal Progesterone HORMONAL ADJUNCT	Quiets myometrium; supports pregnancy maintenance. Often continued with cerclage in short-cervix patients.	Vaginal irritation, drowsiness, headache, breast tenderness.	Educate on nightly insertion at bedtime . Continue until ~36 wk. Do not abruptly stop.
Prophylactic Antibiotics VARIABLE	Reduce risk of infection peri-operatively, esp. with emergent/rescue cerclage.	GI upset, allergic reaction, candidiasis.	Verify no allergies . Assess for signs of yeast infection. Complete full course.
Betamethasone CORTICOSTEROID	Accelerates fetal lung maturation if delivery before 34 wk is anticipated.	Maternal hyperglycemia, transient leukocytosis, fluid retention.	Two IM doses 24 hr apart . Monitor glucose (esp. GDM). Peak benefit 24 hr after 2nd dose.
Nifedipine / Mag Sulfate TOCOLYTIC	Used if preterm contractions develop. Nifedipine = CCB; MgSO_4 = neuroprotection < 32 wk.	Hypotension (nifedipine); resp. depression, ↓ DTRs, ↓ urine output (Mg).	MgSO_4 : hold for RR < 12, absent DTRs, UO < 30 mL/hr. Antidote = calcium gluconate .

06 NCLEX Test Traps

DISTRACTORS • PRIORITY PITFALLS

! "Painless dilation" ≠ Preterm labor
Cervical insufficiency is **painless**. If the question says *painful contractions* → think preterm labor, not insufficiency. Different management entirely.

! Cerclage placement timing
Placed in **early 2nd trimester (12–14 wk)**, NOT 1st trimester. Done after first-trimester loss risk passes. Emergent cerclage may go up to 24 wk.

! When to REMOVE the cerclage
Routine removal at **36–37 weeks BEFORE labor begins**. Also remove emergently if: ROM, active labor, infection, or fetal demise — do **not** "wait and see."

! Absolute contraindications
Do **NOT** place cerclage with: active labor, ROM, chorioamnionitis, active bleeding, fetal demise, lethal anomaly, or cervix > 4 cm dilated.

! "Pelvic rest" — what it actually means
No intercourse • no tampons • no douching • nothing in the vagina. "Bed rest" is no longer routinely recommended — pelvic rest is the key term.

! First action: ROM after cerclage
If ROM is suspected post-cerclage: **notify provider immediately** & prepare for cerclage removal. Continued cerclage with ROM → severe infection / sepsis.

! Transabdominal = always C-section
Abdominal cerclage is **NOT removed** before delivery. The patient delivers via planned cesarean and the cerclage usually stays in place for future pregnancies.

! Mild spotting & cramping ≠ emergency
Light pink/brown spotting and mild cramping in the **first 24–48 hr post-op are EXPECTED**. Heavy bleeding, fluid gush, or fever are the red flags.

07 Patient Education

SELF-CARE • WHEN TO CALL

- ✓ Do — Pelvic Rest & Self-Care**
- ✓ **Pelvic rest:** no intercourse, no tampons, no douching
 - ✓ Avoid **heavy lifting** (> 10 lb) & strenuous activity
 - ✓ Limit prolonged standing; rest with feet elevated
 - ✓ Continue **prenatal vitamins & folic acid**
 - ✓ Maintain hydration & balanced nutrition
 - ✓ Attend **all follow-up appointments** & cervical length scans
 - ✓ Use **vaginal progesterone** as prescribed (bedtime)
 - ✓ Plan for **cerclage removal at 36–37 wk**
 - ✓ Use stool softeners to prevent straining
 - ✓ Empty bladder regularly (full bladder can stress cervix)

- ! Report Immediately — Call Provider**
- ! **Regular contractions** (> 4 in 1 hour)
 - ! **Gush or steady leak of fluid** from vagina (ROM)
 - ! **Heavy vaginal bleeding** (not light spotting)
 - ! **Fever ≥ 100.4°F (38°C)** or chills
 - ! **Foul-smelling vaginal discharge**
 - ! Severe pelvic / abdominal / back pain
 - ! **Feeling of pressure** as if something is "coming down"
 - ! Decreased fetal movement (after viability)
 - ! Suture coming loose or visible
 - ! Dysuria or urinary symptoms (UTI risk → preterm labor)

08 Memory Boosters

MNEMONICS • PATTERN RECOGNITION

"CERCLAGE" — Master Mnemonic

C CERVICAL INSUFFICIENCY	E EARLY 2ND TRI (12– 14 WK)	R REMOVE AT 36–37 WK	C CONTRAINDICATIONS: ROM, LABOR, INFECTION	L LIMIT ACTIVITY / PELVIC REST	A ANTIBIOTICS / PROGESTERONE	G GESTATIONAL AGE CONFIRMED	E EVALUATE FOR PRETERM LABOR
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"STITCH" — When to Worry After Placement

S SPOTTING (HEAVY)	T TEMPERATURE ↑	I INFECTION SIGNS	T TIGHTENING (CONTRACTIONS)	C CRAMPING (SEVERE)	H H ₂ O LEAK (ROM)
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QUICK ASSOCIATION

"Painless = Insufficient"

Painless cervical change = cervical **insufficiency**. **Painful** contractions = preterm **labor**. This is the #1 NCLEX differentiator.

PATTERN RECOGNITION

"12 – 24 – 36"

12 wk = earliest typical placement • **24 wk** = upper limit for placement (viability) • **36 wk** = remove before labor. Three numbers, whole pathway.

★ **Final NCLEX Pearl: When in doubt — assess maternal stability first (ABCs), then fetal HR, then look for the four "no's": no ROM, no labor, no infection, no bleeding. If any are present, the cerclage comes out.**