INFECTIOUS DISEASE · STI · REPRODUCTIVE HEALTH

Trichomoniasis *(Trich)*

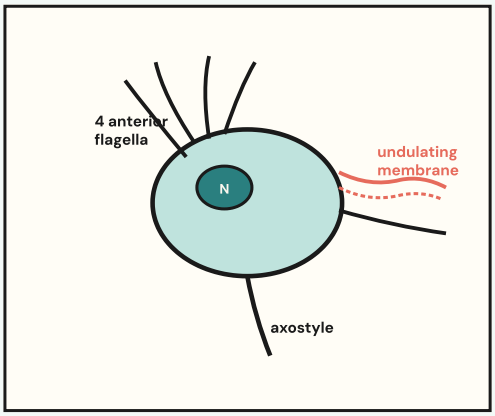
A flagellated protozoan STI caused by *Trichomonas vaginalis* — the most common non-viral, curable sexually transmitted infection worldwide. Frequently asymptomatic in males, classically presents with frothy yellow-green discharge and "strawberry cervix" in females.

NGN NCLEX 2026 | PHARM + HEALTH PROMOTION | REPORTABLE IN MANY STATES

1 DEFINITION
Overview & Why It Matters

- **Causative organism:** *Trichomonas vaginalis* — a single-celled, pear-shaped, flagellated protozoan parasite with whip-like flagella that propel its motility.
- **Transmission:** Vaginal-penile sex; rarely vulva-to-vulva contact, fomites (shared damp towels) survive briefly. **NOT** spread by toilet seats or casual contact.
- **Incubation:** 4–28 days. Up to **70–85% of cases are asymptomatic** — particularly in males, who serve as silent carriers.
- **Why it matters:** Linked to **preterm labor, PROM, low birth weight** in pregnancy and **increased HIV transmission/acquisition** risk.

THE PARASITE
Trichomonas vaginalis



Motile trophozoites on wet mount = diagnostic finding.

2 PATHOPHYSIOLOGY
How the Infection Develops

PATHOGENIC CASCADE

Sexual Contact
T. vaginalis enters urogenital tract via infected secretions
Incubation: 4–28 days

→

Adherence
Parasite uses flagella to attach to vaginal, urethral, paraurethral epithelium

→

Inflammation
Cytotoxic damage to epithelium → punctate hemorrhages, vaginal pH shifts > 4.5

→

Symptoms
Frothy yellow-green discharge, pruritus, "strawberry cervix" (or asymptomatic)

→

Complications
↑ HIV transmission, PID, preterm labor, PROM, LBW, infertility, cervical neoplasia risk

Without treatment: chronic infection, reinfection, transmission to partners continues indefinitely.

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CLINICAL PRESENTATION

Signs & Symptoms

♀ Females (Symptomatic ~30%)

- **Frothy, yellow-green, malodorous** vaginal discharge (classic)
- Vulvar & vaginal pruritus, erythema, edema
- Dysuria, urinary frequency
- Dyspareunia (painful intercourse)
- Postcoital bleeding
- **"Strawberry cervix"** — punctate hemorrhages on speculum exam (pathognomonic, seen in ~2–5%)
- Vaginal pH > 4.5
- Lower abdominal pain (less common)

♂ Males (Often Asymptomatic)

- Most are **silent carriers** — clears spontaneously in 10 days but transmissible
- Urethritis: dysuria, mild urethral discharge (clear/mucopurulent)
- Urethral pruritus or burning
- Mild penile irritation post-urination/ejaculation
- Rarely: epididymitis, prostatitis, infertility
- NCLEX tip: Asymptomatic male partners **must still be treated** to prevent reinfection

RED FLAG FINDINGS

Strawberry cervix on speculum exam · Frothy yellow-green discharge with malodor · Pregnancy + trich symptoms (preterm labor risk) · Coexisting STI symptoms (high co-infection rate with gonorrhea, chlamydia, HIV) · Persistent symptoms after single-dose treatment → suspect resistance or reinfection.

PRIORITY ACTIONS

4 Nursing Interventions

- ✓ **Assess** for symptoms, sexual history, pregnancy status, and last menstrual period (LMP) before medication administration.
- ✓ **Obtain specimens:** NAAT (most sensitive — gold standard), wet mount microscopy (motile trophozoites), vaginal pH, rapid antigen testing.
- ✓ **Administer** prescribed antiprotozoals (metronidazole or tinidazole) — verify pregnancy/lactation status first.
- ✓ **Educate** on the critical alcohol restriction — no alcohol during treatment and for 24 hrs (metronidazole) or 72 hrs (tinidazole) after last dose.
- ✓ **Coordinate** partner therapy: ALL sexual partners from the past 60 days must be notified and treated (Expedited Partner Therapy where legal).
- ✓ **Promote** abstinence from sexual contact until BOTH partners complete treatment AND are symptom-free (typically 7 days).
- ✓ **Screen** for co-occurring STIs: HIV, gonorrhea, chlamydia, syphilis, hepatitis B/C — high co-infection rates.
- ✓ **Report** to public health if required by state (varies; many states do not require reporting for trich).
- ✓ **Plan** re-testing at 3 months due to high reinfection rate (~17%).

PREGNANCY CONSIDERATIONS

Special Populations

- › **Pregnant:** Metronidazole is considered safe in all trimesters per CDC 2021 STI Guidelines. Treat symptomatic patients.
- › **Tinidazole:** AVOID in pregnancy (Category C; insufficient data).
- › **Lactation:** With single-dose metronidazole 2 g, pump & discard breast milk for 12–24 hrs.
- › **Neonatal trich:** Rare; can occur from passage through infected birth canal — typically self-resolves.
- › **HIV+ patients:** Use 7-day regimen (500 mg BID), not single dose — single-dose has higher failure rates in this group.
- › **Recurrent/resistant:** Higher-dose metronidazole 500 mg BID × 7 days; refer to specialist if persistent.

5 PHARMACOLOGY

Treatment Drugs

DRUG / CLASS	DOSE & ROUTE	MECHANISM	KEY SIDE EFFECTS	NURSING CONSIDERATIONS
Metronidazole (Flagyl) Nitroimidazole antiprotozoal/antibiotic — *first line*	**Females:** 500 mg PO BID × 7 days (preferred 2021 CDC update) **Males:** 2 g PO × 1 (single dose)	Enters parasite, disrupts DNA synthesis → cell death of anaerobes & protozoa	Metallic taste, N/V, headache, dark/red-brown urine (harmless), peripheral neuropathy (long-term)	🚫 **No alcohol** during & ×24h after (disulfiram-like reaction); take with food to ↓ GI upset; safe in pregnancy
Tinidazole (Tindamax) Nitroimidazole — *alternative*	2 g PO × 1 single dose	Same as metronidazole — DNA disruption in protozoa	Metallic taste, N/V, dizziness, weakness; longer half-life than metronidazole	🚫 **No alcohol** during & ×72h after; **AVOID in pregnancy**; take with food
Secnidazole (Solosec) Nitroimidazole — newer option	2 g PO × 1 (oral granules sprinkled on applesauce/yogurt)	Same nitroimidazole mechanism	Vulvovaginal candidiasis (yeast overgrowth), nausea, headache, metallic taste	🚫 No alcohol ×48h after; do not chew granules; not first line but useful for adherence

⚠ **DISULFIRAM-LIKE REACTION**

Mixing alcohol with nitroimidazoles → severe N/V, flushing, tachycardia, headache, chest pain, hypotension. Includes mouthwash with alcohol, cough syrups, vanilla extract, OTC cold meds. This is a top NCLEX teaching point.

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COMMON PITFALLS

NCLEX Test Traps ⚠️

✕ WRONG THINKING	→	✓ CORRECT ACTION
"He has no symptoms, so he doesn't need treatment."	→	**Treat ALL sexual partners** from the past 60 days — even if asymptomatic. Untreated male partners are the #1 cause of reinfection.
"It's okay to have a glass of wine — I finished the medication yesterday."	→	**No alcohol for 24 hrs after metronidazole** or **72 hrs after tinidazole**. Disulfiram-like reaction can be severe.
"Trich is just a female problem."	→	Males are **asymptomatic carriers** who transmit infection. Both sexes diagnosed, treated, and re-tested.
Mistaking trich for bacterial vaginosis (BV).	→	**Trich:** Frothy yellow-green, foul, pH>4.5, strawberry cervix. **BV:** Thin gray-white, fishy odor, clue cells, pH>4.5.
"Metronidazole is unsafe in pregnancy — I'll skip treatment."	→	**Metronidazole is safe in all trimesters** (CDC 2021). Untreated trich → preterm labor, PROM, LBW. **Tinidazole IS contraindicated** in pregnancy.
"Single-dose treatment works for everyone."	→	**Females:** 7-day regimen (500 mg BID) now preferred — higher cure rates. **HIV+ patients:** Always use 7-day regimen. Single-dose still acceptable for males.

7

TEACHING

Patient & Family Education

✓ DO

- ✓ Complete the **entire course** of medication even if symptoms resolve early.
- ✓ Notify **all sexual partners** from the past 60 days so they can be tested and treated.
- ✓ **Abstain from sex** until both partners complete treatment AND are asymptomatic (~7 days).
- ✓ Use **condoms consistently** to prevent reinfection and other STIs.
- ✓ Take medication **with food** to reduce GI upset.
- ✓ Return for **re-testing in 3 months** — high reinfection rate.
- ✓ Get screened for **HIV, gonorrhea, chlamydia, syphilis** — common co-infections.
- ✓ Report **persistent symptoms** within 1–2 weeks to provider.

✕ AVOID

- ✕ **NO ALCOHOL** during treatment + 24 hrs after (metronidazole) or 72 hrs (tinidazole).
- ✕ No alcohol-containing products: mouthwash, cough syrups, OTC cold meds, vanilla extract, kombucha.
- ✕ No sexual contact (including oral, vaginal, anal) until cleared.
- ✕ No douching — disrupts vaginal flora and can mask/worsen symptoms.
- ✕ Do not share towels, washcloths, or undergarments.
- ✕ Do not skip doses or stop early — leads to resistance and reinfection.
- ✕ Avoid sexual contact during pregnancy with infected partners until both treated.
- ✕ Do not assume cure without follow-up — recurrence is common.

💬 SENSITIVITY & COMMUNICATION

STIs carry social stigma. Approach teaching with non-judgmental, confidential, culturally sensitive language. Reassure patients that trichomoniasis is the most common curable STI and treatment is highly effective. Discuss partner notification scripts and offer Expedited Partner Therapy resources where legally available.

MEMORY BOOSTERS

8 Mnemonics

🍓 "Strawberry Cervix"

The **punctate hemorrhages** on the cervix look like strawberry seeds — pathognomonic of **Trich**. Strawberry = trich, every time.

"FFF" — Frothy, Foul, Fishy?

Trich = **F**rothy + yellow-green + foul.
BV = thin gray-white + **fishy** odor.
Yeast (candida) = cottage cheese, no odor.

"FLAG–YL = FLAG the alcohol"

Flagyl (metronidazole) — raise the **red flag** on alcohol. Disulfiram-like reaction = severe N/V, flushing, tachycardia.

"Treat the Pair"

Trich is the only STI where the asymptomatic male partner is the #1 cause of reinfection. **Always treat both partners** — no exceptions.

"Two-by-Two"

Wet mount shows **motile, pear-shaped** trophozoites with **2** pairs of flagella (4 anterior). pH > **4.5**. Re-test at **3** months. Single dose = **2 g**.

PATTERN RECOGNITION

⚡ Quick Comparisons

FEATURE	TRICHOMONIASIS	BV	CANDIDA
Discharge	Frothy, yellow-green	Thin, gray-white	Thick, cottag cheese
Odor	Foul / musty	Fishy	None
pH	> 4.5	> 4.5	< 4.5 (norma
Itch	Marked	Mild/none	Severe
Microscopy	Motile trophozoites	Clue cells	Pseudohyph
Treatment	Metronidazole / Tinidazole	Metronidazole / Clindamycin	Fluconazole azoles
Treat partner?	**YES — always**	No (not STI)	No (not STI)
STI?	**Yes**	No	No

⚡ *NCLEX favorite: distinguishing the three most common vaginitis presentations. Master this table.*

NEXT GENERATION NCLEX

9 NCJMM Clinical Judgment in Action

SCENARIO

A 28-year-old, G2 P1, pregnant female at 18 weeks gestation arrives at the women's health clinic complaining of a 5-day history of frothy yellow-green vaginal discharge, vulvar itching, and burning with urination. She reports a new sexual partner 3 weeks ago and inconsistent condom use. Vital signs: T 99.1°F (37.3°C), HR 88, BP 118/76, RR 16. Speculum exam reveals erythematous vaginal walls with punctate hemorrhages on the cervix. Vaginal pH = 5.5. Wet mount pending.

1 Recognize Cues

Relevant findings: Frothy yellow-green discharge · Vulvar pruritus · Dysuria · New sexual partner · Inconsistent condom use · Erythematous vagina · **Strawberry cervix (punctate hemorrhages)** · pH 5.5 (> 4.5) · Pregnancy at 18 weeks. Subtle but critical: low-grade temp may indicate inflammation; pregnancy adds urgency.

2 Analyze Cues

The constellation of **frothy yellow-green discharge + strawberry cervix + elevated pH** is highly specific for *Trichomonas vaginalis*. The new partner and inconsistent condom use support recent sexual transmission. Pregnancy at 18 weeks raises stakes due to risk of preterm labor, PROM, and low birth weight. Differential includes BV and gonorrhea/chlamydia, which require ruling out via co-testing.

3 Prioritize Hypotheses

#1 Trichomoniasis (highest probability — classic triad of cues). **#2 Co-infection** with gonorrhea, chlamydia, or BV (common in trich patients). **#3 HIV co-infection risk** — trich increases susceptibility. Priority: confirm diagnosis, prevent maternal-fetal complications, treat both patient and partner.

4 Generate Solutions

(1) Obtain wet mount + NAAT for trich, gonorrhea, chlamydia. (2) Offer HIV, syphilis, hepatitis screening. (3) Administer **metronidazole 500 mg PO BID × 7 days** (safe in pregnancy per CDC 2021). (4) Counsel on **alcohol avoidance** during + 24h after. (5) Notify and treat sexual partner(s) — Expedited Partner Therapy if available. (6) Abstinence until both treated & asymptomatic. (7) Patient education on condom use, follow-up. (8) Re-test in 3 months.

5 Take Action

Collect specimens before treatment. Provide metronidazole prescription with detailed teaching: *"Take 500 mg twice daily for 7 days with food. No alcohol — including mouthwash and cough syrup — during treatment and for 24 hours after your last dose. Avoid sex until you and your partner finish treatment and feel better."* Counsel on partner notification using non-stigmatizing language. Schedule follow-up at 1 week + 3-month re-test. Provide written education materials. Document teaching, patient verbalization of understanding, and partner notification plan.

6 Evaluate Outcomes

Expected: Symptoms resolve within 7 days · No GI/CNS adverse effects · Patient verbalizes alcohol restriction · Partner(s) treated · No reinfection at 3-month re-test · Pregnancy continues without preterm labor or PROM · No co-infection identified or co-infections treated · Patient demonstrates correct condom use. **Unexpected (escalate):** Persistent symptoms → suspect resistance, reinfection, or alternate diagnosis · Severe N/V with alcohol exposure · Preterm contractions · Positive HIV/syphilis screen.

NGN NCLEX 2026 · TRICHOMONIASIS REFERENCE INFOGRAPHIC · SOURCES: CDC 2021 STI TREATMENT GUIDELINES, SAUNDERS COMPREHENSIVE REVIEW, ATI MED-SURG, LIPPINCOTT MANUAL OF NURSING PRACTICE · FOR EXAM PREPARATION USE