
Your Clinical Edge: Lexidrug in Action

Transform knowledge
into confident
prescribing decisions
with **Lexidrug**.

Pear Thanwanan W.
Senior Customer Success
Specialist, WK - Health



Wolters Kluwer



What we will cover today...

Objectives:

Understand the core features and benefits of Lexidrug.

Discover how Lexidrug enhances medication safety and supports informed clinical decision-making.

Learn practical workflows through a live demo for everyday clinical use.

Engage in Q&A to clarify questions and share best practices.



Agenda:

- ✓ Lexidrug Introduction
- ✓ Mobile Access
- ✓ Key Value Proposition
- ✓ Demo
- ✓ UpToDate Refresher
- Q&A

Harmonized Clinical Decision Support Solutions



UpToDate®

Physician-authored clinical decision support resource associated with improved patient outcomes

Referential Solutions



UpToDate® Lexidrug™

Evidence-based and comprehensive referential drug information

Medication Decision Support Solutions



Medi-Span®

The leading automated clinical drug screening solution

Complete
End-to-End
Clinical
Decision
Support

Drug Information in UpToDate Suite

Now that you have Lexidrug!
Make it your go-to point-of-care tool
for confident, medication-related decisions.

Features	UpToDate	Lexidrug
Content Sets		
Lexi Drugs (<i>North America drugs only</i>)	✓	✓
Lexi-Drugs Multinational	-	✓
Pediatric and Neonatal Lexi Drugs	✓	✓
Class Monographs (from Drug Facts & Comparisons)	-	✓
Geriatric Lexi-Drugs	✓	✓
Lexi Drugs International Concise	✓	✓
AHFS Essentials & DI	-	✓
		✓
		✓
		✓
		✓
		✓
Toxicology	-	✓
Patient Education (4 Languages)	✓	✓
Patient Education Multinational (20 Languages)	-	✓
Facts and Comparisons (A to Z, REMS, Off-Label)	-	✓
Formulary Monograph Service	-	✓
Martindale (Optional Add-on)	-	✓
Tools		
Interactions	✓*	✓
Trissel's IV Compatibility	-	✓
Drug Identification	-	✓



Lexidrug Online & Mobile App Registration and Download

Lexidrug – Mobile registration

Step 1 - Create UpToDate Lexidrug Mobile Account and Activate Subscription

1. Visit <https://www.lexi.com/account/create/>.

- Enter your registration information and click **Create Account**.
- Click the link and fill the blanks or scan the below QR code
- *You must register with your organizational e-mail address.*
- *Remember your chosen email address and password used to create this account as you will need these during step 2.*



Create Account

Fill out the fields below to create an account. Please note that all fields are required.

Account Details

FIRST NAME

LAST NAME

OCCUPATION

PRACTICE SETTING

HOW DID YOU HEAR ABOUT UP-TO-DATE® LEXIDRUG™?

COUNTRY OR REGION

Create Your Login

EMAIL ADDRESS (THIS IS YOUR LOGIN)

PASSWORD

CONFIRM PASSWORD

Create Account

Already have an account? [Login here.](#)

Lexidrug – Mobile registration

Mobile App Account Management

Use these links to manage your UpToDate® Lexidrug™ mobile subscriptions, manage your devices, or update your profile information.

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EMAIL ADDRESS

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reCAPTCHA 서비스 약관이 변경되었습니다.
[조치 필요하기](#)


reCAPTCHA
개인정보 보호 - 약관

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kim kim [Edit Information](#)

Your ID

Occupation: *Dental - Academia*

Practice Setting: *Academic Institution*

Country or Region: *United States*

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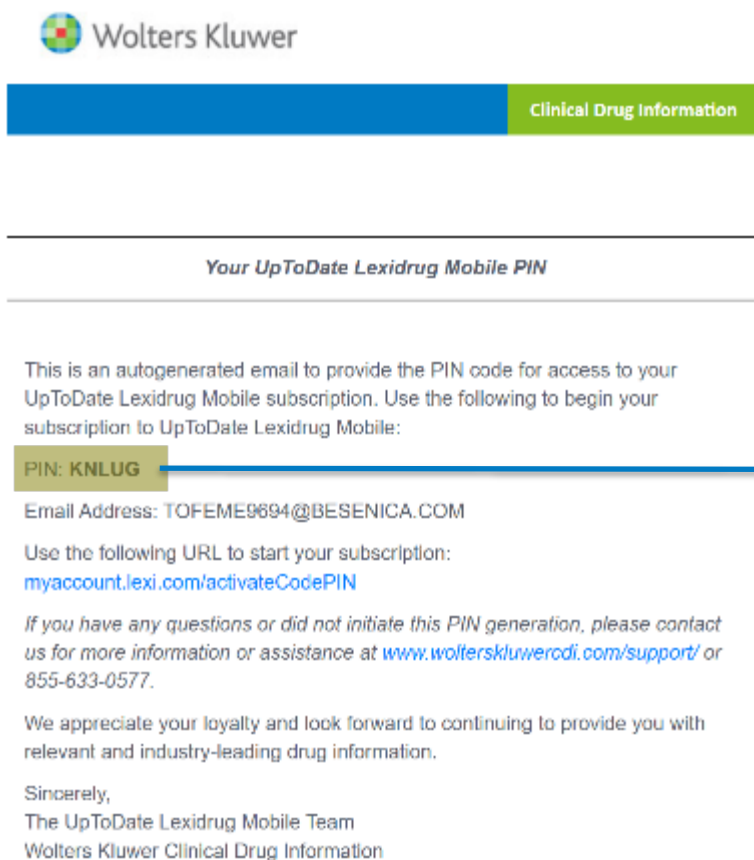
- Sign-in with Created account
- Put copied code into AUTHORIZATION CODE section
- click on the

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Lexidrug – Mobile registration

• NoReply@wolterskluwer.com Your UpToDate Lexidrug Mobile Activation
noreply@wolterskluwer.com PIN

- You will get an E-mail from **NoReply@Wolterskluwer.com**



- Copy a **PIN** from the E-mail

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Practice Setting: Academic Institution

Country or Region: United States

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To complete activation, we must verify your email address. A PIN has been sent to **tofeme9694@besenica.com**. Please check that email and enter the PIN into the box below to complete activation. **Your PIN will expire in 30 minutes.**

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PIN

KNLUG

Verify

Success

The subscription has successfully been added to your account. You may need to refresh or re-download the databases on your device.

Finish

- Paste the code into <PIN> section under Verify PIN
- Click Verify and it's done

Lexidrug – Mobile registration

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Status	Product	Expiration	
Active	Lexi SELECT (Multinational)	12/31/2026	Renew

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AUTHORIZATION CODE

KNVUS5MRYMJC

Add Subscription

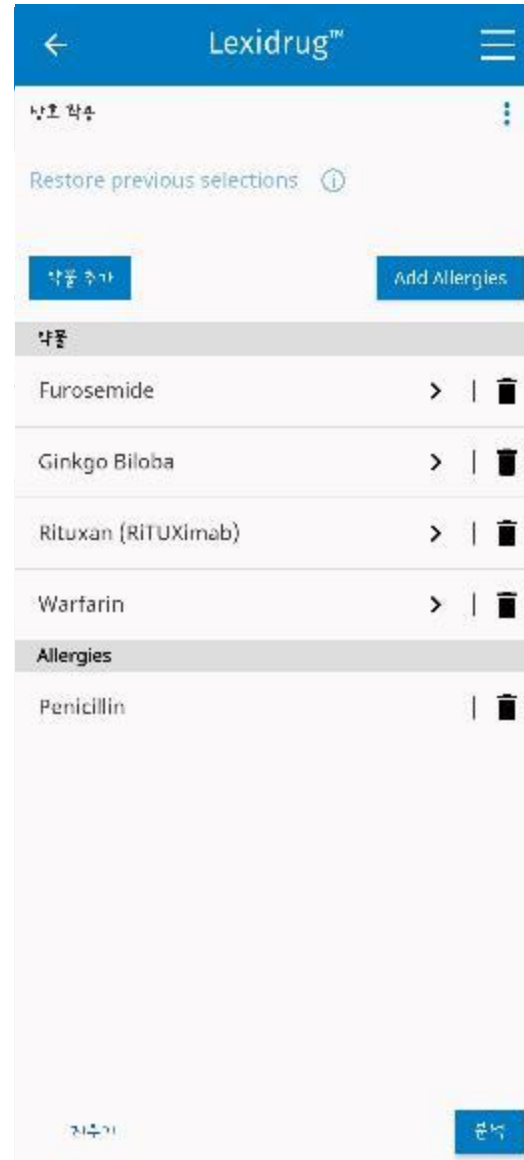
The product code is not valid or has already been applied to this account. If it is valid, check your email for the PIN code.

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Status	Product	Expiration	
Active	Lexi-SELECT (Multinational)	12/31/2026	Renew

- You can check that your subscription has been activated at the bottom of the page.
- You may see <Add a Subscription by code>
- You don't need to enter anything there.
- The account is already registered and can be used to log in.

Lexidrug – Mobile registration



- You can log in to the Lexidrug Mobile app using the ID you just created.
- You can access with up to 2 mobile devices.
- After signing in, download the necessary databases within the app. You will have access to the same full database set as the PC version.
- The content is identical to the PC version, but presented in a mobile-optimized interface.
- No 3months re-verification is required, unlike UpToDate.
- When your institution renews its subscription, you can add the subscription into your account through the account creation page.



Let's explore what Lexidrug offers!
Showcasing features and tools.

Introducing Lexidrug

UpToDate[®] Lexidrug[™] Standard

Trissel's IV Compatibility

Interactions

Drug I.D.

Patient Education

Calculators

Kidney Dosing Tool

More Clinical Tools

Help

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New FDA Drug Approvals

Sibeprenlimab

Sevelamerib

Piizasiran

Ziftornenib

Doxecitline and Doxibthimine

More new FDA drug approvals:

Lexi-Drugs

Special Alerts

> Estradiol and Levonorgestrel: Menopausal Hormone Therapy Products Update

> Estradiol and Norethindrone: Menopausal Hormone Therapy Products Update

> Estradiol and Norgestimate: Menopausal Hormone Therapy Products Update

> Estrogens (Conjugated/Equine) and Medroxyprogesterone: Menopausal

Help and Training Resources

Training Videos

Quick Reference Guide

Searching

Search Results for "Alvanco"

DRUG SEARCH RESULTS - 2 RESULTS

☒ Display International Brand Names ([show table](#))

Hospital Formulary [Demo]

No occurrences

Brand Names: International

Lexi-Drugs Multinational

Alvanco (CO) International Brand Name for Vancomycin

[Dosing](#) | [Administration](#) | [Adverse Reactions](#)

Find brand name(s) by country (for United States and Canada see separate Brand Names sections)

Pediatric and Neonatal Lexi-Drugs

Alvanco (CO) International Brand Name for Vancomycin

[Dosing](#) | [Administration](#) | [Adverse Reactions](#)

(KR) Korea, Republic of

Allvanco; Auskovancomycin; Bc vancomycin hcl; Daewoong vancomycin;
 Dong a vacomycin hydrochloride; Dongkwang vancomycin; Hanomycin;
 Inno.n vancomycin hcl; Kukje vancomycin hcl; Medica vancomycin
 hydrochloride; Pfizer vancomycin; Samsung vancomycin hci; Union
 vancomycin; Vanco kit; Vancocin; Vancocin cp; Vancoled; Vancomycin;
 Vancomycin hcl korea united; Vancomycin hcl myungmoon; Vancostacin;
 Vancotreacin; Vancotrin; Vancozin; Varicin; Yooyoung vancomycin hcl

- Product-name search support

Enables direct drug search by brand name, reducing search time and effort.

- International brand name by country

Displays brand names marketed in a selected country within the drug monograph.

Lexidrug Multinational & Pediatric / Neonatal Lexidrug

Vancomycin (Lexi-Drugs Multinational)

Outline Alphabetical Expand All

- ALERT: US Boxed Warning
- Drug Shortages: US
- Brand Names: International
- International Nonproprietary Names (INN)
- Brazilian Nonproprietary Names (DCB)
- Japanese Accepted Name (JAN)
- Anatomic Therapeutic Chemical (ATC) Classification
- Pharmacologic Category
- > Dosages
- > Uses
- > Administration and Storage Issues
- Medication Safety Issues
- > Warnings & Precautions
- > Reproduction, Pregnancy, & Lactation
- > Adverse Reactions
- > Interactions
- > Patient & Therapy Management
- > Preparations
- > Pharmacology & Pharmacokinetics
- > Dental Information
- > Pearls & Related Information
- Index Terms

Monograph Images Adult Patient Education Pediatric Patient Education Pediatric and Neonatal Lexi-Drugs

ALERT: US Boxed Warning

Risk of embryo-fetal toxicity due to excipients:

A formulation of vancomycin injection contains the excipients polyethylene glycol (PEG 400) and N-acetyl D-alanine (NADA), which resulted in fetal malformations in a exposures approximately 8 and 32 times, respectively, higher than the exposures at the human equivalent dose. If use of vancomycin is needed during the first c other available formulations of vancomycin.

Drug Shortages: US

One or more forms of this drug may

ASHP: <https://www.ashp.org/Drugs>

Brand Names: International

Find brand name(s) by country (for Un

Enter a Country or Country Co

For country code abbreviations (

International Nonproprietary

Vancomicina [Spanish]; Vancomycin [En

Brazilian Nonproprietary Nan

Vancomicina

Japanese Accepted Name (JAN)

バンコマイシン塩酸塩

Anatomic Therapeutic Chemi

A07AA09

J01XA01

Vancomycin (Pediatric and Neonatal Lexi-Drugs)

Outline Alphabetical Expand All

ALERT: US Boxed Warning

Drug Shortages

Pronunciation

Brand Names: US

Brand Names: Canada

Therapeutic Category

> Dosages: Neonatal

> Dosages: Pediatric

> Dosages: Adult

Use

Preparation for Administration: Pediatric

Administration: Pediatric

Preparation for Administration: Adult

Administration: Adult

Administration: Injectable (Detail)

Warnings/Precautions: Risk

Dietary Considerations

Storage/Stability

IV Compatibility

Extemporaneous Preparations

Monograph Images Adult Patient Education Pediatric Patient Education Lexi-Drugs

Postmenstrual Age	Dose
<29 weeks	15 mg/kg/dose every 24 hours
29 to 35 weeks	15 mg/kg/dose every 12 hours
>35 weeks	15 mg/kg/dose every 8 hours

"Optimized regimen": **Note:** Optimized regimen was associated with more ototoxicity and similar or worse efficacy; however, a pharmacokinetic model showed the optimized regimen is more likely than the standard regimen to achieve the pharmacodynamic target ($AUC_{24} \geq 400$ mg·hour/L) desired for treatment of *S. aureus* infections (^{R41}).

IV:

Postmenstrual Age	Loading Dose	Dose
<29 weeks	25 mg/kg	15 mg/kg/dose every 12 hours
29 to 35 weeks	25 mg/kg	15 mg/kg/dose every 12 hours
>35 weeks	25 mg/kg	15 mg/kg/dose every 8 hours

Kidney function-based dosing (^{R41}): **Note:** Serum creatinine fluctuates and may be influenced by maternal concentrations during the first week of life; use caution and frequently reassess renal function in neonates <7 days old receiving vancomycin (^{R41}). Dosing regimen was designed for a target trough concentration of 5 to 10 mg/L, though this may not be the optimal target based on newer data (^{R41}).

Preterm and term neonates:

Loading dose: All patients: IV: 20 mg/kg once, followed by maintenance dose.

Maintenance dose: IV:

Detailed drug dosing for vulnerable patients

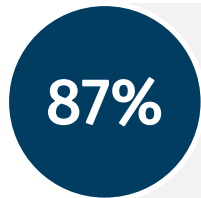
Lexidrug is only resource to provide this depth of specific dosing recommendations



of adults have chronic kidney disease¹



of hospitalized patients will develop acute kidney injury¹



of most-viewed kidney dosing sections in UpToDate include expanded dosing

*A cross-sectional study evaluated the incidence of adverse drug reactions in 400 patients with cirrhosis who were admitted to the hospital and identified that **30% experienced an ADR and 78% of these were deemed preventable.***

1. The Ministry of Public Health and the Nephrology Society of Thailand as of 2024-2025

Dosing

•Dosing (Common adult case)

•Dosing by Route & Formulation

•Dosing by Indications

Dosing: Adult

Dosing: Adult

Dosage guidance:

Safety: Risk of toxicity (eg, acute kidney injury) increases as a function of trough concentration, especially when trough is maintained above 15 to 20 mg/L; recent data suggest risk increases along the vancomycin AUC continuum, especially when daily AUC exceeds 650 to 1,300 mg•h/L ^(Ref).

Dosing: Initial IV dosing in patients without obesity should be based on actual body weight; subsequent dosing should generally be adjusted based on therapeutic monitoring.

Clinical considerations: The oral route is ineffective for treating systemic infections; the IV route is ineffective for treating *C. difficile* infection. Trough monitoring has traditionally been used for therapeutic monitoring; however, for serious methicillin-resistant *S. aureus* (MRSA) infections (eg, bacteremia, infective endocarditis, meningitis, osteomyelitis, pneumonia, sepsis), AUC monitoring is preferred ^(Ref). For patients with uncomplicated skin and soft tissue infections who are not obese and have normal renal function, therapeutic monitoring is generally not needed ^(Ref).

Usual dosage range:

Oral: 125 to 500 mg 4 times daily.

IV:

Intermittent infusion: 15 to 20 mg/kg/dose (rounded to the nearest 250 mg) every 8 to 12 hours initially; for serious MRSA infections (eg, bacteremia, infective endocarditis, meningitis, osteomyelitis, pneumonia, sepsis), adjust based on therapeutic monitoring to achieve a target AUC/minimum inhibitory concentration (MIC) determined by broth microdilution (MIC_{BRD}) ratio of 400 to 600 (assuming a vancomycin MIC_{AMB} of 1 mg/L). Trough-only monitoring (target trough: 15 to 20 mg/L) is no longer recommended in patients with serious MRSA infections ^(Ref), but may be needed in nonserious MRSA or non-MRSA infections. Early and frequent monitoring for dosage adjustments is recommended, especially when empiric doses exceed 4 g/day ^(Ref).

Loading dose: Seriously ill patients with documented/suspected MRSA infection: A loading dose of 20 to 35 mg/kg (based on actual body weight; maximum: 3 g/dose) may be considered to rapidly achieve target concentrations. After administration of the loading dose, the initiation of the maintenance dose should occur at the next dosing interval (eg, for a prescribed interval of every 8 hours, initiate the maintenance dose 8 hours after the start of the loading dose) ^(Ref).

Continuous infusion: **Note:** May be considered for critically ill patients who are unable to achieve AUC target with intermittent infusion dosing. Loading dose: 15 to 20 mg/kg, followed by a maintenance continuous infusion dose of 30 to 40 mg/kg/day (up to 60 mg/kg/day) to achieve a target steady state concentration of 20 to 25 mg/L ^(Ref).

Bloodstream Infection

Bloodstream infection:

Empiric therapy or pathogen-specific therapy for methicillin-resistant *S. aureus*: **IV:** 15 to 20 mg/kg/dose every 8 to 12 hours initially; adjust based on therapeutic monitoring ^(Ref). A loading dose may be considered in seriously ill patients ^(Ref). Treat uncomplicated *S. aureus* infection for ≥14 days from first negative blood culture, with longer courses warranted for endocarditis or metastatic sites of infection ^(Ref).

Empiric therapy or pathogen-specific therapy for methicillin-resistant coagulase-negative staphylococci: **IV:** 15 to 20 mg/kg/dose every 8 to 12 hours initially; adjust based on therapeutic monitoring. Treat uncomplicated bacteremia for 5 to 7 days from day of first negative blood culture, with longer courses warranted for endocarditis or metastatic sites of infection ^(Ref). For catheter-related bloodstream infections, consider antibiotic lock therapy for catheter salvage, in addition to systemic therapy ^(Ref).

Antibiotic lock technique (catheter-salvage strategy) (off-label use): **Note:** For infections caused by susceptible organisms when the catheter cannot be removed; use in addition to systemic antibiotics. Catheter salvage is **not** recommended for *S. aureus* ^(Ref).

Intracatheter: Prepare lock solution to final concentration of vancomycin 2.5 to 5 mg/mL; may be combined with heparin. Instill into each lumen of the catheter access port using a volume sufficient to fill the catheter (2 to 5 mL) with a dwell time of up to 72 hours, depending on frequency of catheter use. Withdraw lock solution prior to catheter use; replace with fresh vancomycin lock solution after catheter use. Antibiotic lock therapy is given for the same duration as systemic antibiotics ^(Ref).

Intracranial access or spinal epidural access

Dosing – Complex Cases

Dosing: Older Adult

Oral, IV: Initial: 20 mg/day; increase slowly to desired response.

SUBQ: Refer to adult dosing.

•Geriatric Patient dosing

Dosing: Obesity: Adult

The recommendations for dosing in patients with obesity are based upon the best available evidence and clinical expertise. Senior Editorial Team: Jeffrey F. Barletta, PharmD, FCCM; Manjunath P. Pai, PharmD, FCP; Jason A. Roberts, PhD, BPharm (Hons), B App Sc, FSHP, FISAC.

Example of dosing regimen:

Class 1, 2, or 3 obesity (BMI ≥ 30 kg/m²):

Loading dose: **Note:** Consider utilizing a loading dose when rapid attainment of target concentrations is necessary (eg, sepsis, documented/suspected methicillin-resistant *S. aureus* infection) (^{Ref}).

Initial: IV: 20 to 25 mg/kg using **actual body weight**; maximum loading dose: 3 g. After administration of the loading dose, initiate maintenance dose at the next dosing interval (^{Ref}).
In critically ill patients, may consider loading doses of 20 to 35 mg/kg using **actual body weight**; maximum loading dose: 3 g (^{Ref}).

Maintenance dose: IV: Use **actual body weight** and the following clearance (CL) equations to calculate a maintenance dose; empiric maintenance doses >4.5 g/day are unlikely to be necessary (^{Ref}). **Note:** If vancomycin therapy is continued, individualize vancomycin dose using early Bayesian approach (ie, 2 serum concentrations within first 24 to 48 hours) to achieve target AUC (^{Ref}).

1. Calculate estimated vancomycin CL (^{Ref}).

Estimate CL (L/hour): $9.656 - [0.078 \times \text{age}] - [2.009 \times \text{SCr}] + [0.04 \times \text{actual body weight}^{0.75}] + [1.09 \times \text{sex}]$.

Where adult age is in years; SCr is serum creatinine in mg/dL; actual body weight in kg scaled to an exponent of 0.75; and sex is 1 if male and 0 if female.

2. Calculate empiric vancomycin maintenance regimen (^{Ref}).

Estimate daily dose (rounded to nearest 250 mg): Estimated CL (L/hour) $\times$ 500 mg $\cdot$ hour/L.

Where 500 mg $\cdot$ hour/L is the mid-range AUC target selected for a minimum inhibitory concentration (MIC) of 1 mg/L. When the vancomycin CL is estimated to be ≤ 3 L/hour, administer the dose every 24 hours or divide the daily dose every 12 hours. If CL is estimated to be >3 L/hour, divide the daily dose and administer every 6 to 12 hours (^{Ref}).

•Obese Patient dosing

Dosing – Complex Cases

- Renal Dosing

- Dosing in Patients Undergoing KRT

- Augmented Renal Clearance dosing

- Hepatic Dosing

Augmented renal clearance (measured urinary CrCl ≥ 130 mL/minute/1.73 m²): Augmented renal clearance (ARC) is a condition that occurs in certain critically ill patients without organ dysfunction and with normal serum creatinine concentrations. Young patients (<55 years of age) admitted post-trauma or major surgery are at highest risk for ARC, as well as those with sepsis, burns, or hematologic malignancies. An 8- to 24-hour measured urinary CrCl is necessary to identify these patients ([Ref](#)).

Liver impairment prior to treatment initiation

Initial or dose adjustment in patients with preexisting liver cirrhosis:

Oral:

Child-Turcotte-Pugh class A to C: Initial: No dosage adjustment necessary due to low systemic absorption ([Ref](#)).

IV:

Child-Turcotte-Pugh class A: Initial: No dosage adjustment necessary ([Ref](#)).

Child-Turcotte-Pugh class B and C: Initial: No dosage adjustment necessary ([Ref](#)). Use caution as creatinine-based equations may overestimate kidney function in these patients; consider a conservative starting dose. If concurrent kidney dysfunction exists, an empiric reduction in dose or frequency (in addition to kidney impairment dosing adjustments) may be necessary to achieve clinical goals ([Ref](#)).

Liver impairment developing in patient *already receiving vancomycin*:

Acute worsening of liver function (eg, requiring hospitalization):

Child-Turcotte-Pugh class A to C: No dosage adjustment necessary; intensify therapeutic drug monitoring to guide dosing ([Ref](#)).

“ICU physicians’ attitudes regarding antibiotic dosing adjustments in patients with ARC. Only 15% of the respondents would modify the dose of beta-lactam antibiotics and vancomycin ”

Dunning, J., & Roberts, J. (2015). Assessment of renal function in dosing antibiotics in septic patients: a survey of current practice within critical care units in England: 22. *Anaesthesia*, 70, 21.

Clinical Support Information

- Storage / Stability
- Test Interactions
- Nursing Practice Points
- Monitoring Parameters
- Reference Range
- Vesicant/Extravasation risk
- Dietary considerations
- Hazardous Drug Handling Considerations

M	Vesicant/Extravasation Risk Vesicant (concentrations >0.4 mg/mL); Irritant (concentrations ≤0.4 mg/mL).	A excipients, serial
IV	Dietary Considerations Some products may contain sodium.	rations in select nephrotoxins,
	Hazardous Drugs Handling Considerations Hazardous agent (NIOSH 2024 [table 1]).	onitoring may be e once-weekly
	Use appropriate precautions for receiving, handling, storage, preparation, dispensing, transporting, and disposal (NIOSH 2024; USP-NF 2020).	rybak 2009]].
	NIOSH and USP 800 recommendations and institution-specific policies/procedures for appropriate handling (NIOSH 2024; USP-NF 2020).	daily
	<i>Prolonged courses (>3 to 5 days):</i> Draw at least one steady-state trough concentration; repeat as clinically appropriate	

Reference Range

IV:

Timing of serum samples:

First-order pharmacokinetic analytic equations or Bayesian software to estimate AUC: Requires collection of 2 serum concentrations, postdistributional peak concentration (C_{max}) drawn 1 to 2 hours after infusion and trough concentration (C_{min}) drawn at the end of the dosing interval. It is preferable that a near steady-state postdistributional peak and trough concentration within the same dosing interval (if possible) are used with the equation-based method. Bayesian-derived AUC monitoring does not require steady-state serum concentrations (ASHP/IDSA/PIDS/SIDP [Rybak 2020]).

Trough monitoring: Draw trough concentration just before the administration of a dose at steady-state conditions. Steady-state conditions generally occur approximately after the third dose; therefore, may begin monitoring vancomycin trough concentrations before the fourth dose (usually within 1 hour of administration). More specific recommendations for timing of serum samples may be found in "Monitoring Parameters" (Alvarez 2016; ASHP/IDSA/SIDP [Rybak 2009]).

Reproduction, pregnancy & Lactation Considerations

- **Pregnancy & Reproductive Considerations**
- **Breastfeeding Considerations**
- **Briggs' Drugs in Pregnancy & Lactation**

Reproductive Considerations

Pregnancy status should be evaluated in patients who may become pregnant prior to using the IV formulation containing the excipients polyethylene glycol (PEG 400) and N-acetyl D-alanine (NADA).

Pregnancy Considerations

Vancomycin crosses the placenta and can be detected in fetal serum, amniotic fluid, and cord blood (Bourget 1991; Reyes 1989). Adverse fetal effects, including sensorineural hearing loss or nephrotoxicity, have not been reported following maternal use during the second or third trimesters of pregnancy.

The pharmacokinetics of vancomycin may be altered during pregnancy and pregnant patients may need a higher dose of vancomycin. Maternal half-life is unchanged, but the volume of distribution and the total plasma clearance may be increased (Bourget 1991). Individualization of therapy through serum concentration monitoring may be warranted.

Vancomycin is recommended for the treatment of *Clostridioides difficile* infections in pregnant patients (ACG [Kelly 2021]).

Breastfeeding Considerations

Vancomycin is present in breast milk following IV administration.

Data related to the presence of vancomycin in breast milk are available from a mother who received vancomycin 1 g IV every 12 hours during pregnancy and for at least 1 week prior to sampling. Vancomycin 12.7 mcg/mL was detected in breast milk 4 hours after a maternal dose (Reyes 1989).

Vancomycin exhibits minimal oral absorption; therefore, the amount available to pass into the milk would be limited following oral administration and unlikely to provide clinically relevant exposure to an infant exposed via breast milk.

In general, antibiotics that are present in breast milk may cause non-dose-related modification of bowel flora. Monitor infants for GI disturbances, such as thrush or diarrhea (WHO 2002).

Briggs' Drugs in Pregnancy & Lactation

- [Vancomycin](#)



Clinical tools in Lexidrug!

Trissel's IV Compatibility (Y-Site, Admixture, Syringe)

UpToDate® Lexicomp® Standard

Search:

Results: [Kompatibilitas IV Trissel](#) [Interaksi](#) [ID Obat](#) [Pencatikan Pasien](#) [Kalkulator](#) [Aparat Infus Solusi](#)

Trissel's™ 2 Clinical Pharmacology Database (created by Lawrence A. Trissel)

Indications Key: ❗ Incompatible ⚠ Uncertain or variable results see details ✅ Compatible ❓ No Data Available N/A Not Applicable

[Chart View](#) [List View](#)

IV Drugs

	Furosemide	Meropenem	Metoclopramide hydrochloride	Vancomycin hydrochloride
Furosemide	N/A	✅ Y-Site ✅ Admixture	⚠ Y-Site ❗ Admixture ❗ Syringe	❗ Y-Site
Meropenem	✅ Y-Site ✅ Admixture	N/A	✅ Y-Site ✅ Admixture	✅ Y-Site ✅ Admixture
Metoclopramide hydrochloride	⚠ Y-Site ❗ Admixture ❗ Syringe	✅ Y-Site ✅ Admixture	N/A	✅ Y-Site
Vancomycin hydrochloride	❗ Y-Site	✅ Y-Site ✅ Admixture	✅ Y-Site	N/A

IV Solutions

	Furosemide	Meropenem	Metoclopramide hydrochloride	Vancomycin hydrochloride
TNA (3 In 1) Total Nutrient Admixture (TPN (3-In-1))	⚠ Y-Site	⚠ Y-Site	✅ Y-Site	⚠ Y-Site

Informasi Produk Penting

Study	Drug 1	Vehicle 1	Drug 2	Vehicle 2	Solution	Finding
Study 1	Furosemide 10 mg/mL	Infusion	Vancomycin hydrochloride 10 mg/mL	D5W (Dextrose 5% In Water)		❗
Study 2	Furosemide 5 mg/mL	D5W (Dextrose 5% In Water)	Vancomycin hydrochloride 20 mg/mL	D5W (Dextrose 5% In Water)		❗
Study 3	Furosemide 5 mg/mL	Dextrose 5% in sodium chloride 0.45%	Vancomycin hydrochloride 20 mg/mL	Dextrose 5% in sodium chloride 0.45%		❗
Study 4	Furosemide 5 mg/mL	Dextrose 5% in sodium chloride 0.9%	Vancomycin hydrochloride 20 mg/mL	Dextrose 5% in sodium chloride 0.9%		❗
Study 5	Furosemide 5 mg/mL	NS (Normal Saline) - Sodium Chloride 0.9%	Vancomycin hydrochloride 20 mg/mL	NS (Normal Saline) - Sodium Chloride 0.9%		❗

Furosemide + Vancomycin hydrochloride - Y-Site compatibility / Study 1

Drug 1	Drug 2	Solution	Finding
Furosemide 10 mg/mL (Infusion or Syringe)	Vancomycin hydrochloride 10 mg/mL (Infusion or Syringe)	Vehicle: D5W (Dextrose 5% In Water)	❗

Study Period: One hour
Containers: Glass vials
Physical compatibility: Physically compatible. Precipitation and turbidity observed.
Storage Conditions: Stored at 20°C, contents suspending the infusion flow.
Warnings: Visual observation.
Chemical Stability: No information available.
Studies: Kowalsky W, Auer E, Hecub B, et al. Stability and compatibility of vancomycin administration by continuous infusion. <i>Antimicrob Pharmacol Ther</i> . 2015.
❓ No information available.

- Analyzes compatibility of IV medications, fluids, and TPN within the same line, providing evidence-based stability data.
- Offers validated study findings on drug–drug and drug–diluent compatibility to support safe administration across diverse clinical settings.

Trissel's IV Compatibility (Trissel's Monograph)

Trissel's™ 2 IV Compatibility (created by Lawrence A. Trissel)

Selected Items

IV Drug(s)

X

Piperacillin sodium-tazobactam sodium

Trissel's Monograph

X

Potassium chloride

Trissel's Monograph

Piperacillin sodium-tazobactam sodium - Trissel's monograph

[Print](#)

...may vary depending on product used; these may include sodium chloride and sodium chloride ampules (200 mg/mL) or sodium chloride injection (0.9%) to produce isotonic for details.^(Ref)

Preparation for Administration: Adult

Note: Premixed solutions are also available; see manufacturer's labeling.

Vials:

Single-dose vial: After initial reconstitution, further dilute in D5W or NS to a volume of 50 to 150 mL.

2.25 g vial: Reconstitute 2.25 g vial with 10 mL of diluent (eg, D5W, NS, SWFI), resulting in a final concentration of **piperacillin** 180 mg/mL and tazobactam 22.5 mg/mL (total piperacillin/tazobactam concentration: 202.5 mg/mL) (US labeling) or **piperacillin** 172 mg/mL and tazobactam 22 mg/mL (total piperacillin/tazobactam concentration: 194 mg/mL) (Canadian labeling).

Piperacillin sodium-tazobactam sodium - Trissel's monograph

[Print](#)

A study by Moon et al. reported that piperacillin-tazobactam (total piperacillin/tazobactam) and **200 mg/mL of piperacillin** in polypropylene syringes (Becton Dickinson) was stable for 7 days refrigerated.^(Ref)

Light Effects

A study by Donnelly found little or no loss of either piperacillin or tazobactam when piperacillin sodium-tazobactam sodium was stored in glass and plastic containers for 7 days at room temperature.

Piperacillin sodium-tazobactam sodium - Trissel's monograph

[Print](#)

Sorption

[Also see Piperacillin sodium.]

The manufacturer indicates that piperacillin-tazobactam is unaffected by contact with glass and various plastic materials used in infusion solution bags, administration set tubing, and plastic syringes.

In addition, a study by Xu et al. reported no sorption occurred to a polyurethane central catheter from Arrow International as well as no leaching of the chlorhexidine antimicrobial in it.

A study by Picard et al. reported that piperacillin sodium 40 mg/mL in D5W and in NS did not exhibit substantial sorption to a three layer infusion solution container (Bieffe Medital) composed of polyethylene, polyamide, and polypropylene. HPLC analysis found little or no loss of piperacillin during 2 hours of contact with the bag and also after simulated infusion.

n of **piperacillin** 180 mg/mL and **cillin** 172 mg/mL and tazobactam 22

Multimodal Interaction Risk Checker

The screenshot displays the 'Interactions' application interface. On the left, under 'Selected Items', a list of drugs is shown with checkboxes and links to 'Single Drug Analysis': Apixaban, Caffeine, Digoxin, Gabapentin, Ginkgo (Ginkgo Biloba), Lisinopril, and Vancomycin HCl (Vancomycin). Below this is an 'Allergies' section with a text input and an 'Add' button, and a checked checkbox for 'Duplicate Drug Therapy'. The main panel has two tabs: 'Interaction Checking' and 'Interaction Analysis' (which is active). It features filters for 'Jump to Section', 'Filter Item' (set to 'All Items'), and 'Filter Risk Ratings' (set to 'All Risk Ratings'), with a 'Reset Filters' link. A legend defines risk ratings: A (No known interaction), B (No action needed), C (Monitor therapy), D (Consider therapy modification), and X (Avoid combination). The 'Drugs in this analysis' list includes Apixaban, Caffeine, Digoxin, Gabapentin, Ginkgo (Ginkgo Biloba), Lisinopril, and Vancomycin HCl (Vancomycin). The analysis results are categorized into three sections: 'Drug-Allergy Interactions' (no interactions identified), 'Drug-Drug Interactions' (listing two interactions: C for Apixaban with Ginkgo and B for Apixaban with Digoxin), and 'Duplicate Therapy Interactions' (no interactions identified).

- A comprehensive interaction checker across drugs, dietary components, herbal products, and allergy risks.
- Provides graded interaction severity, patient management guidance, and deeper clinical details with authoritative references.
- Enhances clinicians' decision-making and supports safer patient management.

Calculators

Adult
Conversions

Vancomycin: Dosing by Peak and Trough Levels

Customize Calculator

DISCLAIMER: INFORMATION YOU RECORD ON THIS PAGE IS NOT SAVED OR STORED. PRINT OR SEND BEFORE YOU ENTER.

ONLY DIGITS 0 TO 9 AND A SINGLE DECIMAL POINT "." ARE ACCEPTABLE AS NUMERIC INPUTS. ATTEMPTING TO ENTER ANY OTHER CHARACTERS WILL LEAD TO AN INCORRECT RESULT.

Measured Peak level (Cp) mcg/mL

Hrs after start of dose (Tp) hrs

Measured Trough level (Ctr) mcg/mL

Hrs after start of dose (Ttr)

Infusion Time (T)

1 hrs

Current Dosing Interval (tau)

Current Dose (MD)

Desired Peak (Cdp) ?

Desired Trough (Cdtr) ?

Calculator Lookup

Search

Browse Category

Emergency Drugs

Show All

Browse Results

Advanced Life Support: Adult

Advanced Life Support: Neonatal

Advanced Life Support: Pediatric

Rapid Sequence Intubation (Outside of the Operating Room): Adult

Rapid Sequence Intubation (Outside of the Operating Room): Pediatric

Reset

Time: 2026/1/2 下午4:34:30

Weight: 60 kg

Anesthetic Agents

Note: Consider reducing the dose or using the lower end of the recommended dosage range in older, frail, and/or hemodynamically unstable patients.

Etomidate IV (2 mg/mL)

Dose	Volume	Administration Notes
Initial: 12 to 18 mg (0.2 to 0.3 mg/kg)	8 to 9 mL (2 mg/mL)	- Typical initial dose: 0.3 mg/kg - Administer IV push over 30 to 60 seconds - Provides no analgesic effects

Ketamine IV/IO (10 mg/mL)

Dose	Volume	Administration Notes
Initial: 60 to 120 mg (1 to 2 mg/kg)	8 to 12 mL (10 mg/mL)	- In hemodynamically stable patients, use an initial dose of 1 to 2 mg/kg - In hemodynamically unstable patients, may consider an initial dose of 0.5 to 1 mg/kg - Intraosseous route: use only if IV access is not available; initial dose: 100 mg once - Consider in patients with bronchospasm and/or hemodynamic compromise - Administer IV/IO push over 1 minute

Drug MSDS



HOME ABOUT THIS DATABASE RELATED RESOURCES CONTACT LOGOUT



Why this database?

The Occupational Safety & Health Administration (OSHA) of the U.S. Department of Labor requires all employers that formulate, stock or use products that contain hazardous chemicals in their workplaces to provide employees with access to Safety Data Sheets (SDS). If employees could potentially be exposed to hazardous chemicals contained in those products, this database was initiated in September 2014 by Delina Associates of Natick, Virginia (DA) in response to a need for a database of safety data sheets for FDA-approved drugs. While OSHA requires SDS to be provided by manufacturers for all FDA-approved drugs, there are some exceptions based on form of drug and potential administration of drug.

The format and content of Material Safety Data Sheets (MSDS) are based on OSHA Hazard Communication Standards of 1994. However, as of June 15, 2015, manufacturers were required to provide "Safety Data Sheets" (SDS) with format and content to be consistent with the United Nations Globally Harmonized System of Classification and Labeling of Chemicals (GHS). The deadline for providing GHS-compliant SDS was June 15, 2015. We will replace MSDS in this database with SDS as soon as drug manufacturers develop new safety data sheets for their products.

The database was launched with over 450 safety data sheets for 275 Principal Ingredients contained in drugs produced by over 60 manufacturers. The database currently contains over 2,550 safety data sheets for over 1,000 Principal Ingredients contained in products produced by over 250 manufacturers. Authorized users may search for Safety Data Sheets by drug trade name, principal ingredient or manufacturer name.

This database of Material Safety Data Sheets (MSDS) for FDA-approved drugs is maintained by Delina Associates of Natick, Virginia, for access by approved users including registered subscribers of select Lialcomp Drug and Clinical Information products.

FIND SAFETY DATA SHEETS

Search Alphabetically

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

MSDS Drug Trade Name Search

OR

☐ Drug Name starting with ☐ Drug Name containing

You may also Search

- Provided to offer OSHA-compliant Safety Data Sheets for FDA-approved drugs.
- Delivers standardized 16-section SDS documents covering chemical hazards, safe handling, first aid, PPE, and storage requirements.
- Supports institutional safety and regulatory compliance when drugs are reconstituted, crushed, or compounded.
- Helps pharmacy and clinical staff quickly access essential hazard information as part of routine medication preparation workflows.

Sagent Pharmaceuticals, Inc.				
Carboplatin Injection			Safety Data Sheet (SDS)	
SDS Issue Date: Jan. 27, 2015	SDS No.: SDS-017	SDS Version No.: 2.0	Form No.: R-SOP-009-1001	Page: 6 of 10
	conditions warrant a respirator.			
Eye Protection:	Safety glasses or goggles. Depending on conditions of use, a face shield may be necessary.			
Skin Protection:	Use latex, nitrile, or rubber glove. Check gloves for leaks. Wash hands before and after using gloves.			
Other Protective Equipment:	No special body protection required for routine, medical administration of this product. Wear lab coat, gown, or smock, as appropriate for procedure.			
Additional Exposure Precautions:	Wash hands following use. No eating, drinking or smoking when handling this product.			

Section 7 - Handling and Storage

General Handling:

CARBOPLATIN IS A CYTOTOXIC AGENT. ALL WORK PRACTICES MUST BE DESIGNED TO REDUCE HUMAN EXPOSURE TO THE LOWEST LEVEL. As with all chemicals, avoid getting this product ON YOU or IN YOU. Do not eat, drink, smoke or apply cosmetics while handling this product. Wash hands thoroughly after handling. Particular care in working with this product must be practiced in pharmacies and other preparation areas, during manufacture of this product, and during patient

Lexi – Tox

- Comprehensive toxicology guidance for drug/chemical intoxication
- Structured info: **mechanism, metabolism, onset, severity, treatment**
- Ex) Benzodiazepine overdose example: flumazenil precautions + mixed-intoxication management
- Population & Route-Specific Insights
- Immediate decision support for **ED, ICU, and pharmacy teams**

Acetaminophen (Lexi-Tox)

[Outline](#) [Alphabetical](#) [Expand All](#)

Clinical Presentation

Mechanism of Toxicity

Diagnosis

▼ Treatment

- Treatment: Stabilization
- Treatment: Decontamination
- Treatment: Antidote(s)
- Treatment: Pharmacologic Supportive Therapy
- Treatment: Nonpharmacologic Supportive Therapy

[Monograph](#) [Images](#) [Adult Patient Education](#)

Pain/Fever [OTC]; Max Relief Junior [OTC]; Non-Aspirin Extra Strength [OTC]; Pain and Fever Relief Kids [OTC]; Pain Relief Childrens [OTC]; F Pain Relief [OTC]; Panadol Childrens [OTC]; Panadol Extra Strength [OTC]; Pharbetol [OTC]; Triaminic Fever Reducer [OTC]; Tylenol 8 Hour Arthri [OTC]; Tylenol Childrens Pain + Fever [OTC]; Tylenol Childrens [OTC]; for Children + Adults [OTC]; Tylenol Infants Pain+Fever [OTC]; Tyleno

Pharmacologic Category

[Analgesic, Nonopioid](#)

CAS Registration

- 103-90-2

Background

Used for the relief of mild to moderate pain and as an antipyreti

Patient Disposition

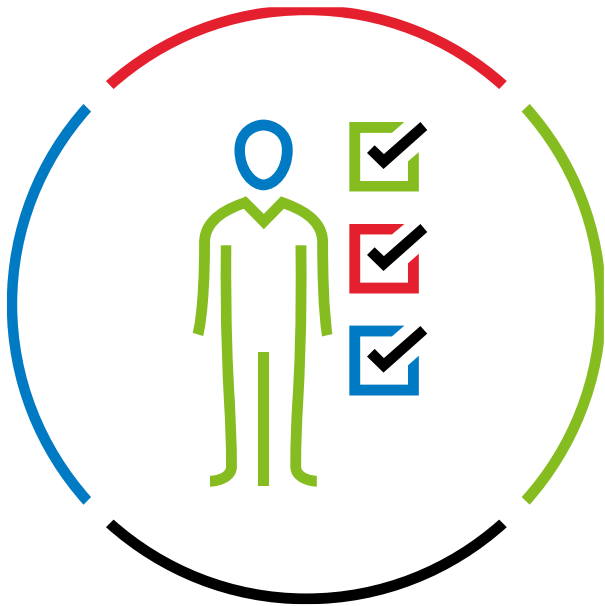
Initial evaluation:

The following individuals need to be evaluated in the emergency department (ED) (Dart 2006). **Note:** Since the toxic dose may differ between and among individuals and various pathological conditions, consult with a poison control center or clinical toxicologist for advice regarding what constitutes a toxic dose. The following recommendations also pertain to patients who have ingested an extended-release formulation of acetaminophen.

- Patients who expose themselves to acetaminophen with the intent of self-harm or intentional abuse
- Victims of abuse or neglect who were exposed to acetaminophen with malicious intent
- All patients experiencing signs and symptoms of acetaminophen toxicity (eg, repeated vomiting, jaundice, right upper abdomen tenderness, mental changes)
- All patients **<6 years old** following an **ingestion with an unknown or unreliable history** or following a potentially toxic **acute ingestion when the time of ingestion is known** (≥ 200 mg/kg during 24 hours). In addition, consultation with a poison control center or a clinical toxicologist is recommended in patients <6 years of age who have ingested a cumulative dose of >150 mg/kg during a 24-hour period (Dart 2023).

Clinical scenario

Managing the Complex Septic Patient



Managing the Complex Septic Patient

- ➔ **Patient Profile:** An 82-year-old male admitted with Sepsis

- ➔ **Clinical Complications:** Chronic Kidney Disease (CKD), Obesity, and Polypharmacy.

- ➔ **Situation:**
 - The physician orders Vancomycin to treat the infection.
 - The patient is already on multiple home medications (Polypharmacy)
 - The nurse needs to prepare and administer the IV infusion.

- ➔ **The Challenge:** Standard FDA labels are often too generic for a geriatric patient who is both obese and renally impaired.

- ➔ **Medications prior to admission:**
 - Enalapril 5 mg once daily
 - Atorvastatin 20 mg once daily
 - Vitamin B Complex once daily

=UpToDate account=
How to register?

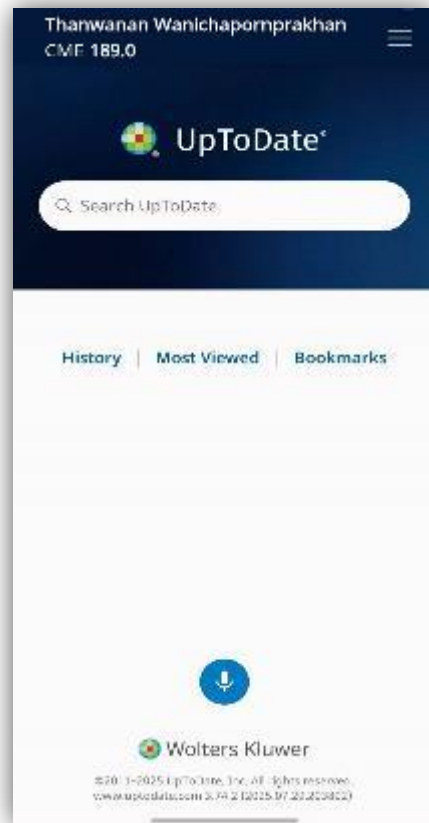


UpToDate can be accessed in 2 convenient ways:

1.UpToDate Online (Web Browser) – Registration is required. Connect through your hospital's internet network to access directly.

- ✓ You can use the Mobile app (Accessing UpToDate remotely)
- ✓ Collect CME

www.uptodate.com -->connect through your hospital's internet network



2.UpToDate Mobile App – general internet access is sufficient.

not necessary to use the hospital's internet for the mobile app at all.

Easy registration process

The screenshot displays the UpToDate website's login and registration interface. At the top, the browser address bar shows 'uptodate.com/login'. The UpToDate logo and a search bar are on the left. On the right, a red box highlights the 'Department of Medical Services' link, and a green box highlights the 'Register' button. Below the navigation bar, the 'Sign in' section includes a 'Username' input field, a 'Forgot username' link, a 'Remember me' checkbox, and a 'Need help signing in' link. A blue 'Continue' button is positioned below these options. Below the 'Continue' button is a horizontal line with the word 'or' in the center. Underneath the line are two sign-in options: 'Sign in with Microsoft' and 'Sign in with Open Athens'. At the bottom of the sign-in section is a 'Sign in Another Way' button with a dropdown arrow. Below the sign-in section is a 'Register Now' section with a green 'Register Now' button.

Sign in - UpToDate

uptodate.com/login

UpToDate® Search UpToDate

Department of Medical Services

Register

Sign in

Sign in

Username

Forgot username

☐ Remember me

Need help signing in

Continue

or

Sign in with Microsoft

Sign in with Open Athens

Sign in Another Way

Register Now

Register Now

Easy registration process

UpToDate®

Contents Calculators Drug Interactions

Register for an UpToDate account

Make the most of your UpToDate experience. Register for an account and benefit from mobile access to our trusted clinical content. Plus, earn and redeem CME/CE/CPO credits while you work.

Already registered? Please [log in](#) with your UpToDate username and password.

First Name

Last Name

Email

Country ▼

ZIP/Postal Code (optional)

City

Speciality ▼

Role ▼

Create your username and password

Username

Password

Password rules:

- 8 to 24 characters
- at least 1 uppercase letter
- correct match username
- at least 1 number, or special character from the following set: `! " # $ % & ' ( ) * + - . / : ;`

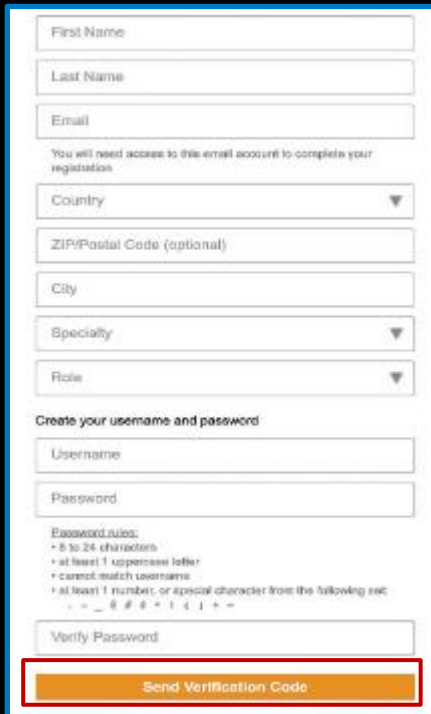
Verify Password

Submit Registration

Complete registration form to create new account

Registration Form

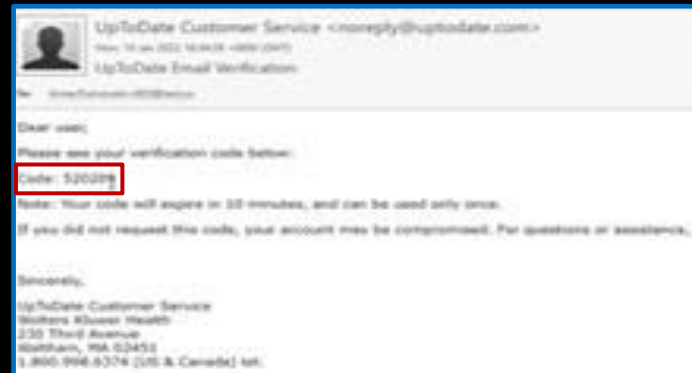
Fill in the form and click on Send Verification Code.



A screenshot of a registration form. It includes fields for First Name, Last Name, Email, Country (dropdown), ZIP/Postal Code (optional), City, Specialty (dropdown), and Role (dropdown). Below these is a section 'Create your username and password' with fields for Username, Password, and Verify Password. A red box highlights the 'Send Verification Code' button at the bottom.

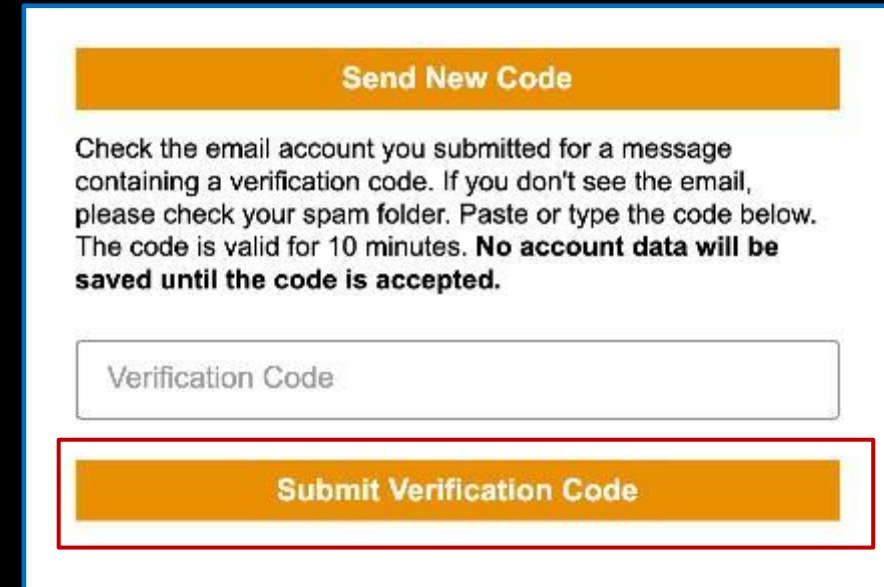
Email Check

Check your email for the Verification Code. Email is sent from noreply@uptodate.com



Input Form

Enter the Code (again from the input form), Submit and go next.



A screenshot of an input form. It has an orange header 'Send New Code'. Below it, text says 'Check the email account you submitted for a message containing a verification code. If you don't see the email, please check your spam folder. Paste or type the code below. The code is valid for 10 minutes. **No account data will be saved until the code is accepted.**'. There is a text input field labeled 'Verification Code'. At the bottom, there is a red-bordered box containing an orange button labeled 'Submit Verification Code'.

Finished Re-verify



[Help](#)  [Thanwanan Wanichapornprakhan](#) [CME 188.5](#) [Sign out](#)

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Practice Changing Updates [View All](#)

PULMONARY AND CRITICAL CARE MEDICINE: [Methotrexate as initial therapy for symptomatic, moderate-to-severe pulmonary sarcoidosis](#) (June 2025)

INFECTIOUS DISEASES: [Tecovirimat not effective for mpox](#) (May 2025)

NEUROLOGY: [No benefit of mechanical thrombectomy for acute stroke due to medium vessel occlusion](#) (May 2025)

What's New [View All](#)

Select a Specialty 

 Drug Interactions

 Patient Education

 Calculators

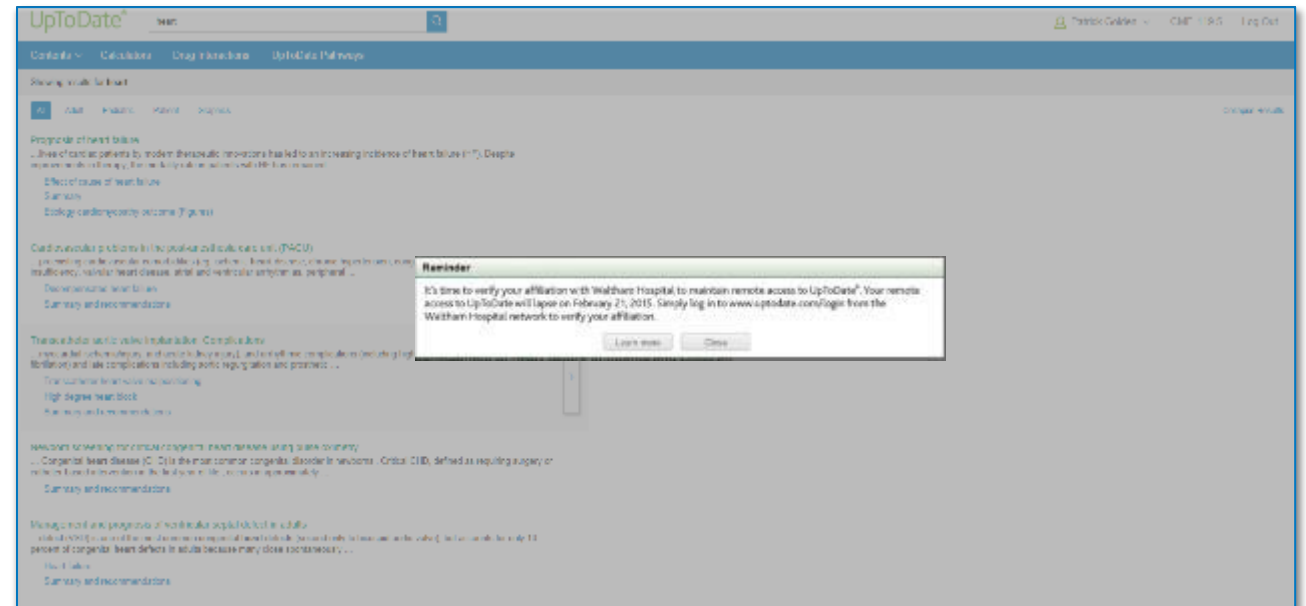
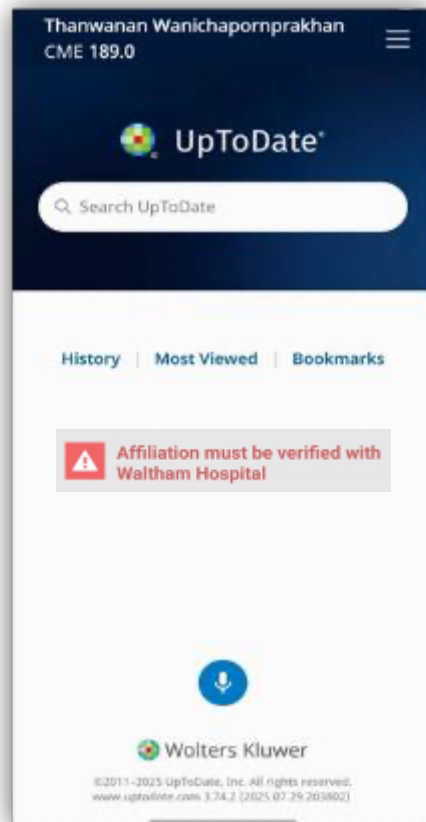
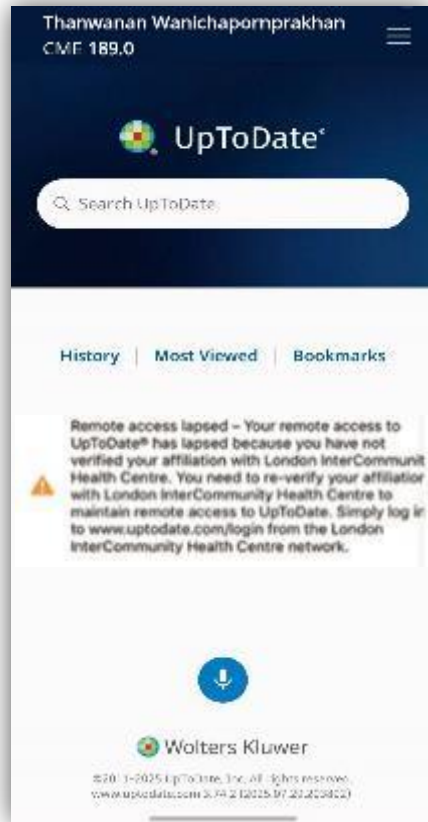
Contact Us

Language

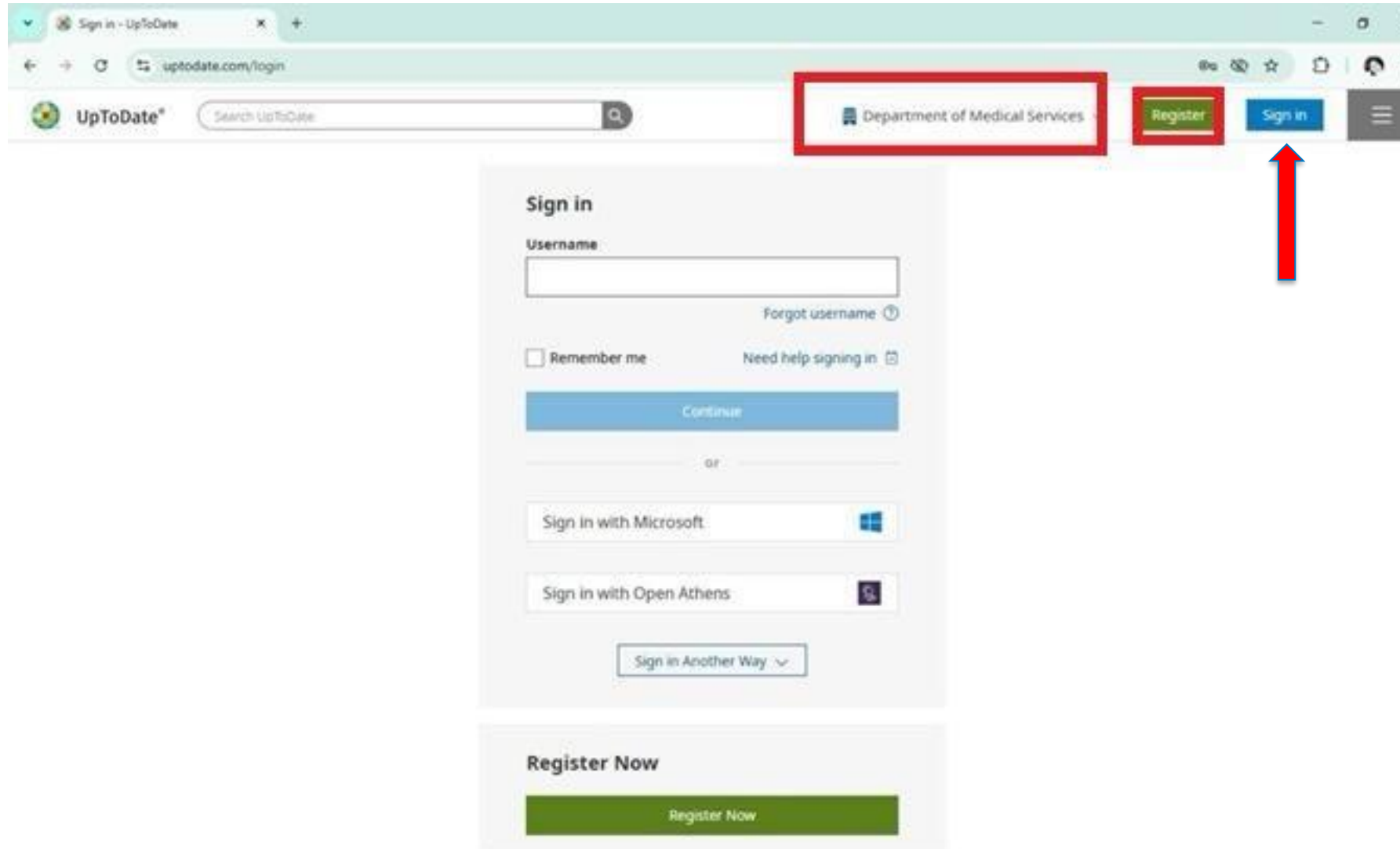
UpToDate News

90 Day Re-Verification

In-application & email messaging reminds clinicians to verify their affiliation with the organization to maintain remote access rights.



Reverify=Log in within the institution=extend remote access
90days



The screenshot shows the UpToDate login page in a web browser. The browser's address bar displays 'uptodate.com/login'. The page header includes the UpToDate logo, a search bar, and navigation links. A red box highlights the 'Department of Medical Services' link. Another red box highlights the 'Register' button, and a red arrow points to the 'Sign in' button. The main content area features a 'Sign in' section with a 'Username' input field, a 'Forgot username' link, a 'Remember me' checkbox, and a 'Need help signing in' link. Below these are 'Continue', 'Sign in with Microsoft', 'Sign in with Open Athens', and 'Sign in Another Way' options. At the bottom, there is a 'Register Now' section with a 'Register Now' button.

Sign in - UpToDate

uptodate.com/login

UpToDate®

Department of Medical Services

Register

Sign in

Sign in

Username

Forgot username

☐ Remember me

Need help signing in

Continue

or

Sign in with Microsoft

Sign in with Open Athens

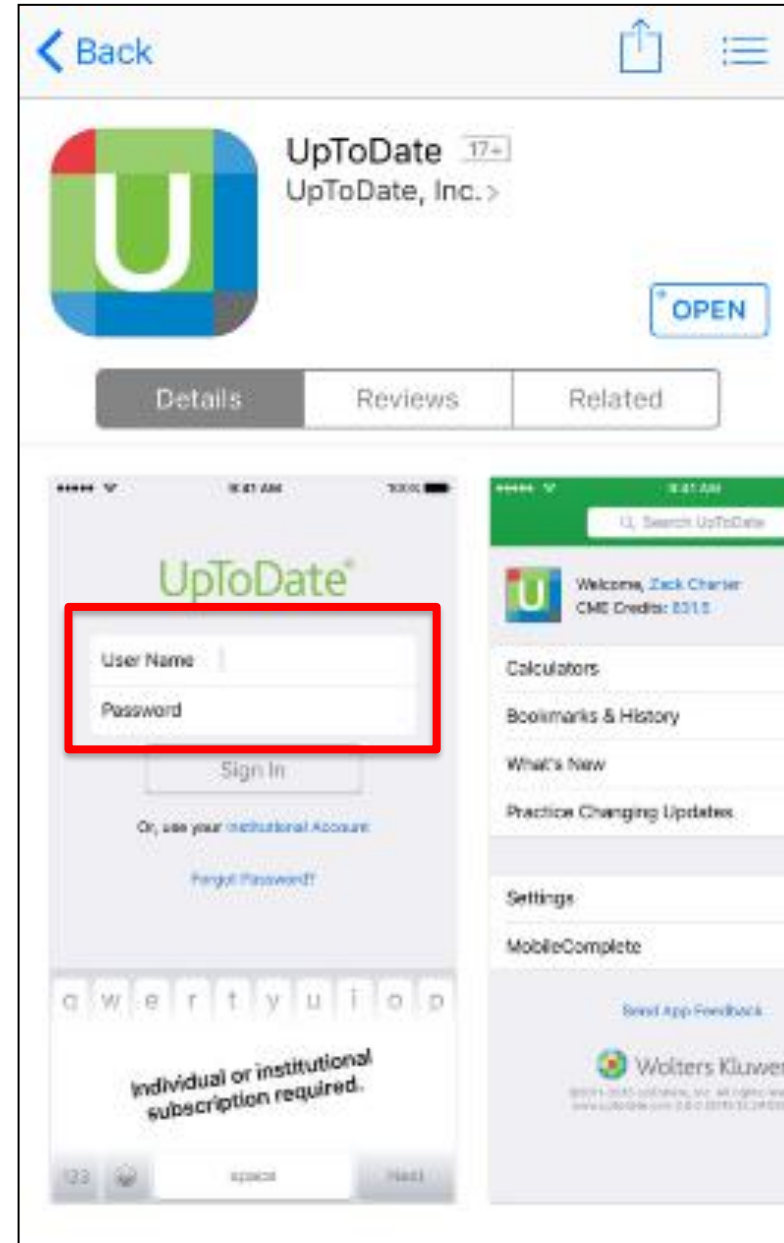
Sign in Another Way

Register Now

Register Now

Download the Mobile App

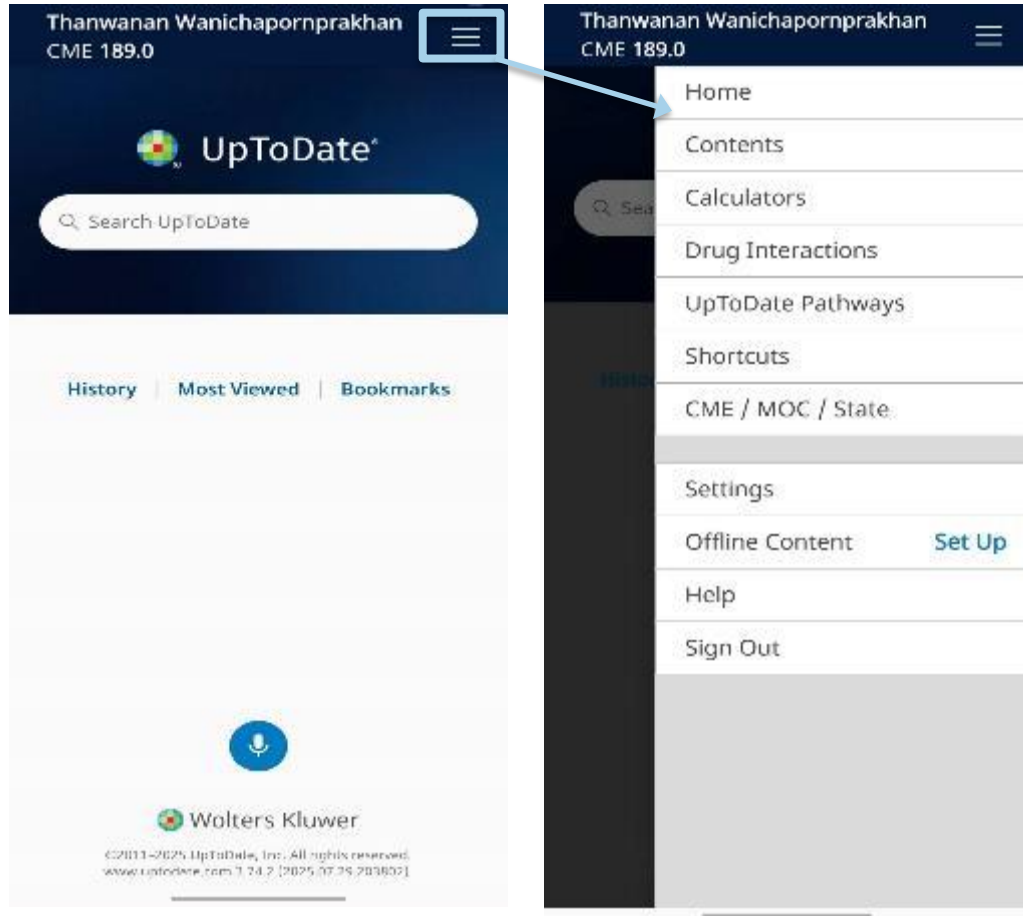
- Go to your **App Store/ Play Store**
- Search: UpToDate
- Click on the UpToDate icon
- Download App
- Enter your UN/PW the first time you access the App



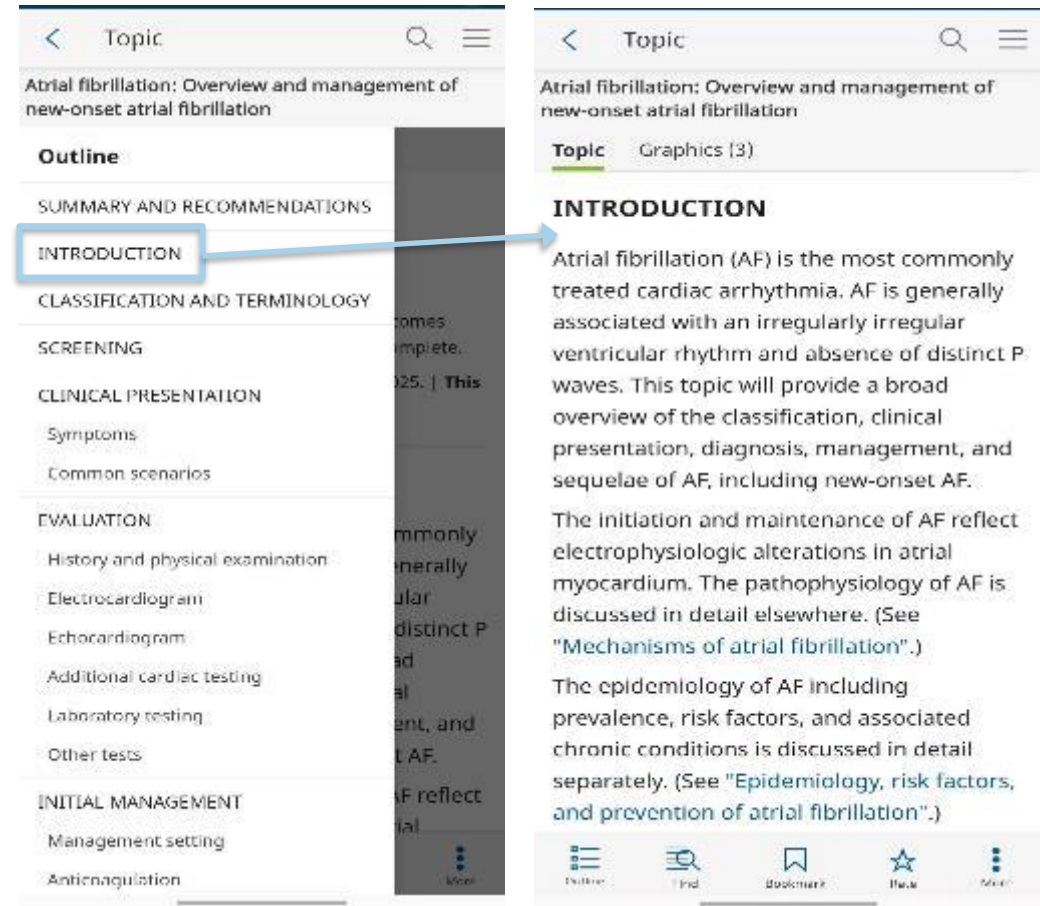
Consistent user experience across all devices

Mobile version provides same look at feel as desktop version

Home screen view



Topic view



The New Feature!

- AI Enhanced Search
- Key Point Panel

Introducing AI-Enhanced Search:

Search efficiency without hallucination risks.
Accelerates speed-to-guidance for point-of-care clinical questions.

- understands **natural language** questions and directs users to unaltered clinical guidance, **sourced directly and exclusively from UpToDate content**.
- Accelerates **speed-to-answer** while eliminating the **risk of hallucinations** associated with generative AI solutions

UpToDate

When should an adult with CAP be hospitalized?

Help Health Demo CME 0.0 Sign out

Back All Adult Pediatric Patient Graphics Collapse Results

Showing results for when should an adult with **cap** (community-acquired pneumonia) be hospitalized

AI Suggested Results BETA

These are the most relevant verbatim UpToDate passage(s) addressing your search. Click on the passage to view the full text.

... Need for hospital admission depends on severity of illness, ...

SOURCE: Community-acquired pneumonia in adults: Assessing severity and determining the appropriate site of care > SUMMARY AND RECOMMENDATIONS

... Hospital admission rates in the United States for adults with CAP vary widely and are often not directly related to local disease severity. This suggests that clinicians use inconsistent criteria when making the initial decision about the appropriate site of care. In addition, clinicians often overestimate patient risk of short-term mortality, even among low-risk patients [1]. ...

SOURCE: Community-acquired pneumonia in adults: Assessing severity and determining the appropriate site of care > INTRODUCTION

... Community-acquired pneumonia (CAP) is defined as an acute infection of the pulmonary parenchyma in a patient who has acquired the infection in the community, as distinguished from hospital-acquired (nosocomial) pneumonia (HAP). ...

SOURCE: Treatment of community-acquired pneumonia in adults who require hospitalization > INTRODUCTION

Treatment of community-acquired pneumonia in adults who require hospitalization

... illustrated by the following observations: In a prospective multicenter cohort study of 686 adults hospitalized with CAP, the median time to becoming afebrile was two days when fever was defined as 38.3°C ...

Initial empiric therapy

Duration of therapy

Summary and recommendations

Rx CAP ward

CAP risk factors for MRSA and Pseudomonas (adults)

Overview of community-acquired pneumonia in adults

... encounters, CAP is the second most common cause of hospitalization and the most common infectious cause of death. Approximately 650 adults are hospitalized with CAP every year per 100,000 population in the ...

More examples for AI-enhanced search:

1. When should an adult with CAP be hospitalized?
2. What are the indications for the new RSV vaccine?
3. When should single versus combination therapy be given for the initial treatment of hypertension?
4. How long does a typical migraine last?

Key point Panel

Immediately actionable clinical information

- Provides concise, at-a-glance key information for the most frequently searched topics in UpToDate.
- Extracts and summarizes essential content from topics related to the search term, enabling quick and convenient review.
- Provides direct links beneath the summary for users who require deeper exploration of the full topic.

The screenshot shows the UpToDate interface for a search on "Hypothyroidism". At the top, there's a search bar with "Hypothyroidism" and an "Expert AI" button. Below the search bar, there are tabs for "All", "Adult", "Pediatric", "Patient", and "Graphics". The main content area shows "Showing results for Hypothyroidism" and a list of related terms: "Central hypothyroidism, Congenital hypothyroidism, Subclinical hypothyroidism, Myxedema coma".

The "KEY POINTS:" section is highlighted with a red box. It contains the text "Primary hypothyroidism in nonpregnant adults" and a set of tabs: "Epidemiology", "Clinical features", "Diagnosis", and "Treatment". A red dashed arrow points from this section to a black callout box on the right that says: "Allows users to immediately review key information on Epidemiology, Clinical features, Diagnosis, and Treatment within the panel."

Below the key points, there's a section titled "Indications, overt hypothyroidism" which is also highlighted with a red box. It contains the text: "All patients with overt hypothyroidism require treatment regardless of symptoms, unless the hypothyroidism is:" followed by a bulleted list: "• Transient (as after painless thyroiditis or subacute thyroiditis), or" and "• Reversible (due to a drug that can be discontinued)". Below this, it says "In these settings, the need for treatment is individualized." and "(See 'Treatment of primary hypothyroidism in adults', section on 'Defining hypothyroidism' and 'Disorders that cause hypothyroidism', section on 'Transient hypothyroidism'.)".

Below the "Indications, overt hypothyroidism" section, there's a list of expandable sections, each with a downward arrow: "Indications, subclinical hypothyroidism", "Goals of therapy", "Initial thyroid hormone replacement", "Monitoring and dose adjustments", "Persistent symptoms", and "Is there a role for combination T4 and T3 therapy?". A red dashed arrow points from this list to a black callout box on the right that says: "Offers categorized information based on commonly encountered clinical cases."

On the right side of the main content area, there's a diagram titled "Initial management of primary hypothyroidism in adults". At the bottom right, there's a "Feedback" link.

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slides



We're clinicians too!

If you need insights on
product integration or
medication safety
strategies, we're just a
message away.