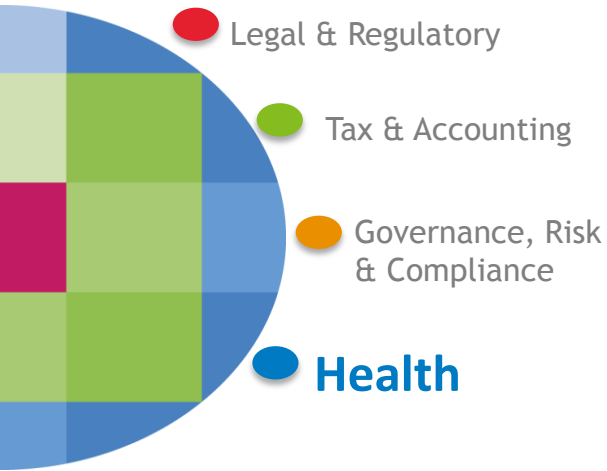




Clinical Drug Information

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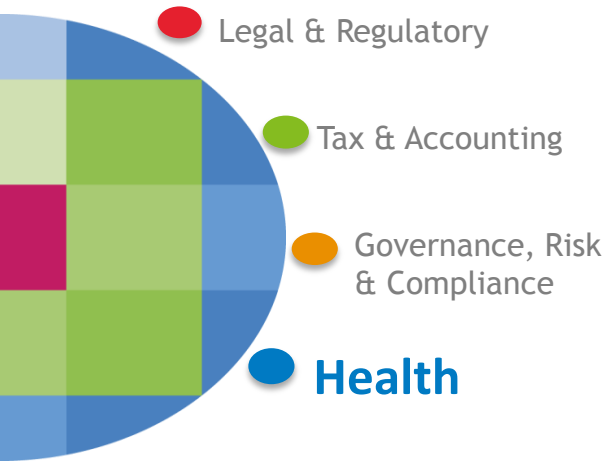
Overview: Wolters Kluwer Global



- Offices in 40+ Countries
- 19,000 Employees Worldwide
- €4.2 Billion Annual Revenue



Overview: Wolters Kluwer Health



- Lippincott Solutions
- Ovid®

Clinical Software Solutions

- ProVation Medical
- Health Language Engine
- Senti7

Clinical Effectiveness

- UpToDate®
- Medi-Span®
- Lexicomp®
- Facts & Comparisons®
- Emmi®

Clinical Drug Information

Overview: ACDS(Advanced Clinical Decision Support)

Medi-Span

- 180,000+ National Drug Codes(NDCs)
- 750K+ price points and 4.8M+ drug attributes
- 35,000+ Pricing updates per year and added 12,000+ NDCs per year
- 5M+ clinical screening records maintained for US and International drugs over 16 Content areas
- 60+ Databases and APIs delivering the content

Lexicomp / Facts&Comparisons

- 41,000+ Drug Information topics
- 7,200+ International Drug Information topics
- 3,500+ In-depth monographs
- 16,700+ Toxicology-related topics
- 520+ Natural Product monographs
- 6,900+ Additional Patient Education topics on drugs (19 languages)

UpToDate

- 24 Specialties
- 10,500+ Clinical topics
- 1,500+ Patient topics
- 6,300+ Physician Authors and Editors
- 5,600+ Drug entries
- 30,000+ Graphics
- 425,000 Links to evidence

Emmi

- 300+ Multimedia programs
- 1,500+ Articles
- 250+ IVR calls
- 15+ Multimodal series
- 200 Programs in multiple languages
- 1,000+ Medical illustrations and animations
- 5,000+ Non-medical illustrations and animations

What is Lexicomp?

Drug database to obtain point of care advice with high quality, 100% evidence-based drug information

Decide Drug Therapy

Optimize Drug efficacy - reduce errors

Promote communication –consistency Info



Lexicomp®



Promotes
consistency

1 content team

**A single unified
development process**



Better
communication



Improved
efficiency



Enhanced
patient care

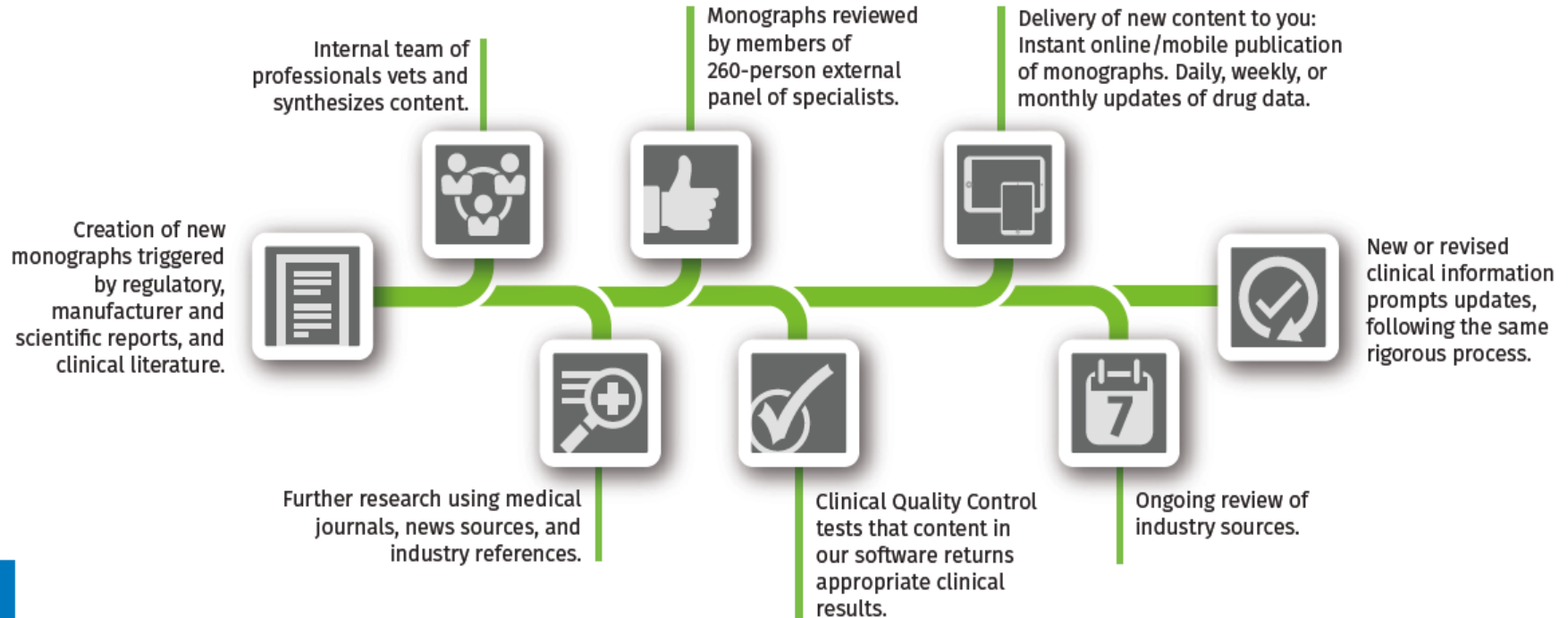
Editorial Processes

Two process

- External pharmacist review > validate and qualify the information
- Internal clinical team
 - ✓ Team of pharmacists (+200 specialized pharmacists)
 - ✓ Team of UTD editors, peer reviewers, authors (+6500 world renowned physicians/pharmacists editorial team)
 - ✓ Advanced clinical training (PharmD or PhD)
 - ✓ Typically +10 years of extensive clinical experience
 - ✓ DAILY monitoring & Update
 - Manufacturer announcements, Top Med Journal Publications
 - Regulatory agencies (FDA, Health Canada, etc)
 - ✓ Data Consistency across WK Clinical Effectiveness solutions.

Rigorous Editorial Processes to Ensure Data Accuracy, Reliability, and Consistency

Clinical Drug Information Editorial Process





Launching New Monographs

- FDA or Health Canada approvals, regulatory, manufacturer, and scientific reports launch the development of new drug monographs.
- Development begins with aggregate sources:
 - Product labeling
 - Base pharmacology studies
 - Clinical trials
- New referential monographs are developed first and then used to synthesize integrated drug data content.
- Medication patient education leaflets and drug interaction information are updated concurrently with core drug information and monographs.



Developing Content

- Data acquisition professionals conduct daily surveillance of industry activity and primary literature so that our information reflects contemporary medical practices and promotes relevance and clarity of content.
- Content synthesized, managed, and reviewed by a team of nearly 150 advanced-degree clinicians:
 - Full-time, in-house clinical teams include more than 70 pharmacists, as well as physicians, nurses, and medical technologists
- Internal and external contributors discuss unique drug properties.



Ongoing Research

- Further research and regular review of information helps identify relevant medical information (e.g., adverse drug reaction reports, clinical practice guidelines):
 - Medical Journals
 - News sources
 - International sites
 - Industry websites (e.g., CDC, pharmaceutical manufacturers)



External Review

- Monographs are reviewed by members of a diverse board of more than 260 external contributors who are specialists and practicing experts in their own therapeutic area, including physicians, nurses, dental professionals, and dieticians.



Clinical Quality Control

- Clinical Quality Control review tests that content works correctly within our software and returns appropriate clinical results.
- Cross-functional team representing content, technology, product management, and implementation employs complex “edge test cases” for which a clinician must verify the results.



Delivery

- Delivery of new content to you:
 - Instant online and mobile publication of newly completed reference monographs
 - Daily, weekly, or monthly updates of new drug data content



Continuous Updating

- Review of clinical literature, regulatory agency reports, and clinical feedback on an ongoing basis to identify new or updated drug information.
- Research conducted at least once weekly to update information pertaining to medication guides, Risk Evaluation and Mitigation Strategies (REMS), and U.S. drug shortages.



Continuous Updating *(continued)*

- Ongoing review of pharmaceutical manufacturer announcements and publications to find information on:
 - New drug availability
 - New dosage forms
 - Revisions to contraindications, warnings, drug interactions
 - Other labeling changes
- Internal clinical team also monitors available information from the medical science arena:
 - Routine review of published literature within key therapeutic areas
 - Coordinating input related to clinical guidelines and clinical practice based upon contributors’ subject matter expertise
- New or revised clinical information discovered during ongoing review prompts updates to existing content, following the same rigorous vetting process.

Lexicomp vs UpToDate Differentiation (More Content)

- Drug Shortages (drug-shortages)
- Medication Patient Education with HCAHPS Considerations (pai)
- REMS Components (remcmp)
- Dosing: Combination Regimens (cbr)
- Calculations (calclist)
- Anatomic Therapeutic Chemical (ATC) Classification (atclist)
- Administration: IV (aiv)
- Administration: Injectable Detail (ivd)
- Administration: Oral (aor)
- Administration: Topical (ato)
- Administration: Subcutaneous (asq)
- Administration: Inhalation (ain)
- Administration: Other (aot)
- Administration: Endotracheal (aet)
- Administration: Intra-arterial (aia)
- Administration: Intracavernous (aic)
- Administration: Intradermal (aidrm)
- Administration: Intraosseous (aio)
- Administration: Intrathecal (ait)
- Administration: Intravaginal (avg)
- Administration: Intravitreal (avt)
- Administration: Ophthalmic (aop)
- Clinical Practice Guidelines (cpg)
- Vesicant/Extravasation Risk (ves)
- Extemporaneously Prepared (exp)
- Level of Evidence Definitions (use-lvl-evidence)
- Use: Unsupported (unsupported-uses-nested)
- Drug of Choice or Alternative for Disease/Syndrome(s) (dcdlist-ext)
- Drug of Choice or Alternative for Organism(s) (dcolist-ext)
- Regimen Use (regimen-use)
- Comparative Efficacy: Powered by Facts & Comparisons (add-comparative-efficacy)
- Class Monographs
- Clinical Practice Guidelines (cpg)
- Allergy and Idiosyncratic Reactions (prrlist)
- Oncology: Emetic Potential (emp)
- Geriatric Considerations (spg)
- Test Interactions (tia)
- Gene Testing Required (genereqlist)
- Gene Testing Recommended (generecmdlist)
- Gene Testing May Be Considered (geneconsdrlist)
- Genes of Interest (goilist-ext)
- Lexicomp Pregnancy & Lactation, In-Depth (add-preg-lac)
- Briggs' Drugs in Pregnancy & Lactation (briggs-list)
- Storage/Stability (sts)
- Preparation for Administration (str)
- Index Terms (synlist)
- Allergy and Idiosyncratic Reactions (prrlist)
- Oncology: Emetic Potential (emp)
- Geriatric Considerations (spg)
- Test Interactions (tia)
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- Drug of Choice or Alternative for Disease/Syndrome(s) (dcdlist-ext)
- Drug of Choice or Alternative for Organism(s) (dcolist-ext)
- Dental Health Professional Considerations (dcf)
- Effects on Dental Treatment (edt)
- Effects on Bleeding (eob)
- Dental Usual Dosing (dud)
- Related Information (rftlist)
- Regimen (reg)
- Nursing: Physical Assessment/Monitoring (mpa)
- Dental Use (uso)
- Regimen Use (regimen-use)
- Pharmacotherapy Pearls (adi)
- Administration: Otic (aoc)
- Administration: Rectal (arct)
- Vesicant/Extravasation Risk (ves)
- Nursing: Physical Assessment/Monitoring (mpa)
- Dental Use (uso)
- Local Anesthetic/Vasoconstrictor Precautions (vap)
- Class Monographs

Lexicomp vs UpToDate Differentiation (More depth)

藥物內容深度: From Drug Monograph, many in-depth content are not covered in UpToDate. For example: Cisplatin, If you refer to the drug monograph of CISplatin in Lexicomp (see screenshot below), you can see the whole section of Dosing: Combination Regimens is NOT included in UpToDate

Dosing: Combination Regimens

Biliary adenocarcinoma: [Gemcitabine-Cisplatin \(Biliary Cancer\)](#)

Bladder cancer:

[Cisplatin-Docetaxel-Gemcitabine \(Bladder\)](#)

[Cisplatin-Fluorouracil \(Bladder Cancer\)](#)

[Cisplatin-Gemcitabine \(Bladder\)](#)

[CMV \(Bladder\)](#)

[Dose Dense MVAC \(Bladder Cancer\)](#)

[MVAC \(Bladder\)](#)

[PCG \(Bladder\)](#)

Bone sarcoma (osteosarcoma):

[Ifosfamide-Cisplatin-Epirubicin \(Osteosarcoma\)](#)

[MAP \(Osteosarcoma\)](#)

Brain tumors:

[CDDP/MV-16](#)

[COPE](#)

Cervical cancer:

[Bevacizumab-Cisplatin-Paclitaxel \(Cervical\)](#)

[Cisplatin-Fluorouracil \(Cervical Cancer\)](#)

[Cisplatin-Gemcitabine \(Cervical\)](#)

[Cisplatin-Paclitaxel \(Cervical Cancer\)](#)

[Cisplatin-Topotecan \(Cervical Cancer\)](#)

[Cisplatin-Vinorelbine \(Cervical Cancer\)](#)

Endometrial cancer:

[Cisplatin-Doxorubicin \(Endometrial\)](#)

[Cisplatin-Doxorubicin-Paclitaxel \(Endometrial\)](#)

Esophageal cancer:

[Cisplatin-Capecitabine \(Esophageal Cancer\)](#)

[Cisplatin-Fluorouracil \(Esophageal Cancer\)](#)

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- Laboratório
- Medicamentos Internacionais

Special Alerts

- Chlorhexidine Gluconate: Chlorhexidine Safety Review
- Asparaginase (*Erwinia*): Erwinase Safety Alert
- Enoxaparin: Low Molecular Weight Heparins Safety Alert
- Dalteparin: Low Molecular Weight Heparins Safety Alert

- Training Videos
- Quick Reference Guide
- Product Updates

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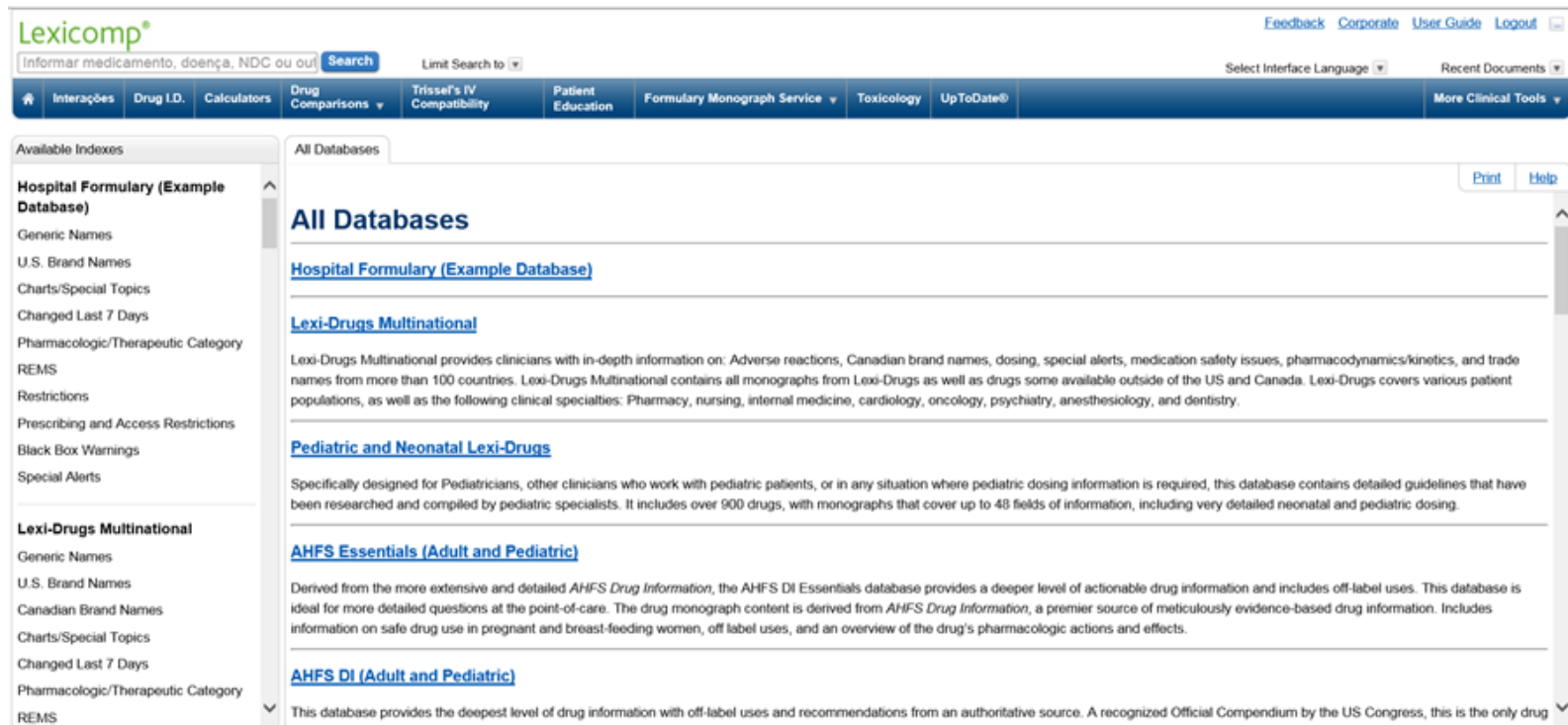
Wolters Kluwer

http://online.lexi.com/ico/action/index/type/all

Lexicomp Drug Information Databases

- Lexicomp Adult Drug Information
- Lexicomp Neonatal Drug Information
- FACTS & COMPARISONS
- OFF-LABEL DATABASE
- COMPARATIVE EFFICACY AND ROLE IN THERAPY
- AHFS DI® ESSENTIALS™
- AHFS DRUG INFORMATION®
- MARTINDALE: THE COMPLETE DRUG REFERENCE™
- BRIGGS' DRUGS IN PREGNANCY AND LACTATION
- THE 5-MINUTE CLINICAL CONSULT
- NURSING DRUG INFORMATION
- NATURAL PRODUCTS
- INFECTIOUS DISEASE
- LABORATORY TESTS AND DIAGNOSTIC PROCEDURES
- PHARMACOGENOMICS
- DENTAL DRUG INFORMATION
- GERIATRIC DRUG INFORMATION
- GLOBAL DRUG INFORMATION
- PREGNANCY AND LACTATION INFORMATION
- DRUG ALLERGY AND IDIOSYNCRATIC REACTIONS
- VISUALDX®

Indexes



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- Hospital Formulary (Example Database)
 - Generic Names
 - U.S. Brand Names
 - Charts/Special Topics
 - Changed Last 7 Days
 - Pharmacologic/Therapeutic Category
 - REMS
 - Restrictions
 - Prescribing and Access Restrictions
 - Black Box Warnings
 - Special Alerts
- Lexi-Drugs Multinational
 - Generic Names
 - U.S. Brand Names
 - Canadian Brand Names
 - Charts/Special Topics
 - Changed Last 7 Days
 - Pharmacologic/Therapeutic Category
 - REMS

All Databases

All Databases

[Hospital Formulary \(Example Database\)](#)

[Lexi-Drugs Multinational](#)

Lexi-Drugs Multinational provides clinicians with in-depth information on: Adverse reactions, Canadian brand names, dosing, special alerts, medication safety issues, pharmacodynamics/kinetics, and trade names from more than 100 countries. Lexi-Drugs Multinational contains all monographs from Lexi-Drugs as well as drugs some available outside of the US and Canada. Lexi-Drugs covers various patient populations, as well as the following clinical specialties: Pharmacy, nursing, internal medicine, cardiology, oncology, psychiatry, anesthesiology, and dentistry.

[Pediatric and Neonatal Lexi-Drugs](#)

Specifically designed for Pediatricians, other clinicians who work with pediatric patients, or in any situation where pediatric dosing information is required, this database contains detailed guidelines that have been researched and compiled by pediatric specialists. It includes over 900 drugs, with monographs that cover up to 48 fields of information, including very detailed neonatal and pediatric dosing.

[AHFS Essentials \(Adult and Pediatric\)](#)

Derived from the more extensive and detailed *AHFS Drug Information*, the AHFS DI Essentials database provides a deeper level of actionable drug information and includes off-label uses. This database is ideal for more detailed questions at the point-of-care. The drug monograph content is derived from *AHFS Drug Information*, a premier source of meticulously evidence-based drug information. Includes information on safe drug use in pregnant and breast-feeding women, off label uses, and an overview of the drug's pharmacologic actions and effects.

[AHFS DI \(Adult and Pediatric\)](#)

This database provides the deepest level of drug information with off-label uses and recommendations from an authoritative source. A recognized Official Compendium by the US Congress, this is the only drug

Lexicomp Online

Limit Search to

- Warfarin
- Warfarin Diet
- Warfarin Gene Mutations
- Warfarin Level
- Warfarin Management
- Warfarin Precautions
- Warfarin Sodium
- Warfarin [English]

Patient Education

Laboratory

International Drugs

Special Alerts

- Sodium Glycerophosphate Pentahydrate: Phosphate Injection Shortage and Import of Glycophos (Sodium Glycerophosphate Pentahydrate): Updated
- Promethazine and Codeine: Opioid-Containing Cough and Cold Medicines Safety Alert
- Promethazine, Phenylephrine, and Codeine: Opioid-Containing Cough and Cold Medicines Safety Alert
- Influenza Virus Vaccine (Inactivated): Influenza Update
- Influenza Virus Vaccine (Live/Attenuated): Influenza Update

More special alerts

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Search Results : Monograph name beginning with "warfarin"

All Results Filter Results [Print](#) [Help](#)

Hospital Formulary
[Warfarin \[Restricted\]](#) Updated 1/16/18

Lexi-Drugs Multinational
[Warfarin](#) Updated 1/16/18
[Warfarin](#) Applies to Oral Anticoagulant Comparison Chart Updated 12/19/17
[Warfarin](#) Applies to Treatment of Elevated INR Due to Warfarin

Pediatric and Neonatal Lexi-Drugs
[Warfarin](#) Updated 1/16/18

AHFS Essentials (Adult and Pediatric)
[Warfarin Sodium](#) Updated 12/14/17

AHFS DI (Adult and Pediatric)
[Warfarin Sodium](#) Updated 12/14/17

Martindale: The Complete Drug Reference
[Warfarin](#)
[Warfarin Oral Suspension BP 2016](#)
[Warfarin Potassium](#)

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- [Breast-Feeding Considerations](#)
- [Briggs' Drugs in Pregnancy & Lactation](#)
- [Clinical Practice Guidelines](#)
- [Compatibility](#)
- [Contraindications](#)
- [Dental Health Professional Considerations](#)

已經將所有下列Databases(AHFS, Martindale, Briggs, etc)資料整合進Lexicomp Multinational ,

使用
Navigation
 直接跳到相關部分，節省在診療過程中節省寶貴的時間。

Warfarin (Lexi-Drugs Multinational)

Navigation Tree

[Expand All](#)

ALERT: US Boxed Warning

▶ Brand Names

International Nonproprietary Names (INN)

Brazilian Nonproprietary Names (DCB)

Anatomic Therapeutic Chemical (ATC) Classification

Pharmacologic Category

▼ Dosages

Dosing: Adult

Dosing: Geriatric

Dosing: Pediatric

Dosing: Renal Impairment

Dosing: Hepatic Impairment

Monograph

Images

Adult Patient Education

Pediatric Patient Education

Find in document

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Warfarin (Lexi-Drugs Multinational)

ALERT: US Boxed Warning

▶ **Bleeding risk:**

Brand Names: International Aldocumar (ES); Azwar (LK); Befarin (TH); Circuvit (AR); Cofarin (TW); Coumadan (AR); Coumadin (AE, AU, BF, BH, BJ, CI, CL, CY, DE, EC, EG, ET, GH, GM, GN, IL, IQ, IR, IT, JO, KE, KR, KW, LB, LR, LY, MA, ML, MR, MU, MW, MX, NE, NG, NZ, OM, PH, PK, QA, SA, SC, SD, SL, SN, SY, TN, TR, TZ, UG, VE, YE, ZM, ZW); Coumadine (FR, VN); Dagonal (UY); Farin (BD); Lawarin (CZ); Lennon-Warfarin (ZA); Mafarin (TW); Maforan (TH); Marevan (AE, AU, BE, BR, CN, DK, EE, FI, GB, IE, LU, MT, NO, NZ, SG); Marfarin (HN); Marivarin (HR); Martefarin (HR); Morfarin (TH); Oldin (PY); Orfarin (JO, LV, MY, TH, TW); Panwarfin (GR); Rilaquin (PY); Simarc-2 (ID); UniWarfin (IN); Varfareks (UA); Varfarin (HR); Varfine (PT); Waran (SE); Warf (LK); Warfant (IE, TR); Warfar (CO, KR); Warfarina (PE); Warfil 5 (DO); Warfin (PL); Warik (PH); Warin (BD); Win (BD); Zofarin (LK); Zydarin (TH)

Brand Names: US Coumadin; Jantoven

Brand Names: Canada Apo-Warfarin; Coumadin; Mylan-Warfarin; Novo-Warfarin; Taro-Warfarin

International Nonproprietary Names (INN) Warfarin [English]; Warfarina [Spanish]; Warfarine [French]; Warfarinum [Latin]; Варфарин [Russian]; وارفارين [Arabic]; 华法林 [Chinese]

Brazilian Nonproprietary Names (DCB) Varfarina

Anatomic Therapeutic Chemical (ATC) Classification

• B01AA03

Pharmacologic Category [Anticoagulant](#); [Anticoagulant, Vitamin K Antagonist](#)

Monograph: Dosing

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Warfarin (Lexi-Drugs Mult

跟UpToDate一樣, Lexicomp 藥物專題的內容編排方式的目的是最快讓臨床工作者找到需要的答案或用藥建議, 內容分成2個層, 第一層能給您70-80%需要的資訊, 如需要更深一層的資訊, 可以直接點擊鏈接以進入第二層來獲得更多的資訊. Ex) [Dosage and Administration in AHFS Essentials](#) for additional information.

Navigation Tree

- ALERT: US Boxed Warning
- Brand Names
- International Nonproprietary Names (INN)
- Brazilian Nonproprietary Names (DCB)
- Anatomic Therapeutic Chemical (ATC) Classification
- Pharmacologic Category
- Dosages**
 - Dosing: Adult
 - Dosing: Geriatric
 - Dosing: Pediatric
 - Dosing: Renal Impairment
 - Dosing: Hepatic Impairment
- Uses

Dosing根據不同受眾群體來表示, 更快速找到答案

Monograph

Dosing: Adult Note: Coumadin injection has been discontinued in the US for more than 1 year.

Note: Labeling identifies genetic factors which may increase patient sensitivity to warfarin. Specifically, genetic variations in the proteins CYP2C9 and VKORC1, responsible for warfarin's primary metabolism and pharmacodynamic activity, respectively, have been identified as predisposing factors associated with decreased dose requirement and increased bleeding risk. Genotyping tests are available, and may provide guidance on initiation of anticoagulant therapy. The American College of Chest Physicians recommends against the use of routine pharmacogenomic testing to guide dosing (Guyatt 2012). For management of elevated INRs as a result of warfarin therapy, see Additional Information/Pharmacotherapy Pearls for guidance.

Thromboembolic complications (prophylaxis/treatment) or myocardial infarction (risk reduction):

IV (administer as a slow bolus injection): 2 to 5 mg/day



用最精簡的文字呈現臨床醫師藥師所需的Dosage數據和資訊。

Oral: Initial dosing must be individualized. Consider the patient (hepatic function, cardiac function, age, nutritional status, concurrent therapy, risk of bleeding) in addition to prior dose response (if available) and the clinical situation. Start 2 to 5 mg once daily or for healthy individuals, 10 mg once daily for 2 days; lower doses (eg, 5 mg once daily) recommended for patients with confirmed HIT once platelet recovery has occurred (Guyatt 2012). In patients with acute venous thromboembolism, initiation may begin on the first or second day of low molecular weight heparin or unfractionated heparin therapy (Guyatt 2012). Adjust dose according to INR results; usual maintenance dose ranges from 2 to 10 mg daily (individual patients may require loading and maintenance doses outside these general guidelines).

Note: Lower starting doses may be required for patients with hepatic impairment, poor nutrition, CHF, elderly, high risk of bleeding, or patients who are debilitated, or those with reduced function genomic variants of the catabolic enzymes CYP2C9 (*2 or *3 alleles) or VKORC1 (-1639 polymorphism); see table. Higher initial doses may be reasonable in selected patients (ie, receiving enzyme-inducing agents and with low risk of bleeding). Overlapping a parenteral anticoagulant and warfarin therapy by at least 5 days is necessary in treatment of DVT/PE even if the INR is therapeutic earlier. Although an elevation in INR (due to factor VII depletion) may be seen early (within the first 24 to 48 hours) in warfarin therapy, it does not represent adequate anticoagulation. Factors II and X must also be depleted which takes considerably longer (ACCP [Guyatt 2012]).

Range¹ of Expected Therapeutic Maintenance Dose Based on CYP2C9² and VKORC1³ Genotypes

VKORC1	CYP2C9

Monograph: Dosing

Warfarin (Lexi-Drugs Multinational)

- Navigation Tree
- [Expand All](#)
- ALERT: US Boxed Warning
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 - Dosing: Hepatic Impairment
- Uses
- Clinical Practice Guidelines

Monograph Images Adult Patient Education Pediatric Patient Education

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Duration of therapy:

Warfarin Duration of Therapy by Indication

Indication	Duration of therapy
AF (including AF and mitral stenosis, AF and stable coronary artery disease) (January 2014)	Indefinite ¹
Bioprosthetic valves in the mitral position (Whitlock 2012)	3 months after valve insertion
Mechanical prosthetic cardiac valves (Whitlock 2012)	Indefinite
Anterior MI with LV thrombus or at high risk for LV thrombus (Vandvik 2012)	3 months after MI
<i>VTE (Kearon 2012; Kearon 2016)</i>	
First episode, provoked or unprovoked DVT of the leg or PE (<i>without</i> cancer)	3 months minimum or extended therapy ¹ may be considered in patients who do not have a high risk of bleeding
Unprovoked second DVT of the leg or PE	Extended therapy ¹ is recommended in patients who do not have a high risk of bleeding
In patients with DVT of the leg or PE and <i>with</i> cancer	Extended therapy ¹ is recommended, although high bleeding risk confers a lower grade of recommendation.



¹Extended therapy is defined as after first 3 months of treatment and with no scheduled stop date. All patients receiving extended or indefinite therapy should be reassessed at periodic intervals for

Monograph: Hazardous Drugs Handling

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Warfarin (Lexi-Drugs Multinational)

Navigation Tree

- ▼ Dosages
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Monograph Images Adult Patient Education Pediatric Patient Education

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Hazardous Drugs Handling Considerations

Hazardous agent (NIOSH 2016 [group 3]).


Use appropriate precautions for receiving, handling, administration, and disposal. Gloves (single) should be worn during receiving, unpacking, and placing in storage. NIOSH recommends single gloving for administration of intact tablets or capsules (NIOSH 2016). Assess risk to determine appropriate containment strategy (USP-NF 2017).

Storage/Stability

Injection: Prior to reconstitution, store at 15°C to 30°C (59°F to 86°F). Following reconstitution with 2.7 mL of sterile water (yields 2 mg/mL solution), stable for 4 hours at 15°C to 30°C (59°F to 86°F). Single-use vial. Protect from light.

Tablet: Store at 15°C to 30°C (59°F to 86°F). Protect from light.

Preparation for Administration

 Reconstitute with 2.7 mL of sterile water for injection (yields 2 mg/mL solution).  説明如何準備IV藥物

Compatibility

 See Trissel's IV Compatibility Database

Medication Safety Issues

- Sound-alike/look-alike issues:
- High alert medication:
- National Patient Safety Goals:

Medication Guide and/or Vaccine Information Statement (VIS)

 An FDA-approved patient medication guide, which is available with the product information and at https://www.accessdata.fda.gov/drugsatfda_docs/label/2017/009218s017lb.pdf#page=31 (Coumadin), must be dispensed with this medication.

Monograph: Pregnancy Considerations

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Warfarin (Lexi-Drugs Multinational)

Highlight 對於懷孕婦女用藥需要考量的事情: 藥物是否且如何進入胎盤, 對於胎兒的影響, 對於懷孕婦女自身的影響等。

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 - Pregnancy Risk Factor: US
 - Pregnancy Considerations**
 - Breast-Feeding Considerations
 - Briggs' Drugs in Pregnancy & Lactation
- Adverse Reactions
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Pregnancy Considerations Warfarin crosses the placenta; concentrations in the fetal plasma are similar to maternal values. Teratogenic effects have been reported following first trimester exposure and may include coumarin embryopathy (nasal hypoplasia and/or stippled epiphyses; limb hypoplasia may also be present). Adverse CNS events to the fetus have also been observed following exposure during any trimester and may include CNS abnormalities (including ventral midline dysplasia, dorsal midline dysplasia). Spontaneous abortion, fetal hemorrhage, and fetal death may also occur. Use is contraindicated during pregnancy (or in women of reproductive potential) except in women with mechanical heart valves who are at high risk for thromboembolism; use is also contraindicated in women with threatened abortion, eclampsia, or preeclampsia. Frequent pregnancy tests are recommended for women who are planning to become pregnant and adjusted-dose heparin or low molecular weight heparin (LMWH) should be substituted as soon as pregnancy is confirmed or adjusted-dose heparin or LMWH should be used instead of warfarin prior to conception.

In pregnant women with high-risk mechanical heart valves, the benefits of warfarin therapy should be discussed with the risks of available treatments (ACCP [Bates, 2012], AHA/ACC [Nishimura, 2014]); when possible avoid warfarin use during the first trimester (ACCP [Bates, 2012]) and close to delivery (ACCP [Bates, 2012], AHA/ACC [Nishimura, 2014]). Use of warfarin during the first trimester may be considered if the therapeutic INR can be achieved with a dose ≤5 mg/day (AHA/ACC [Nishimura, 2014]). Adjusted-dose LMWH or adjusted-dose heparin may be used throughout pregnancy or until week 13 of gestation when therapy can be changed to warfarin. LMWH or heparin should be resumed close to delivery. In women who are at a very high risk for thromboembolism (older generation mechanical prosthesis in mitral position or history of thromboembolism), warfarin can be used throughout pregnancy and replaced with LMWH or heparin near term; the use of low-dose aspirin is also recommended (ACCP [Bates, 2012] AHA/ACC [Nishimura, 2014]). Women who require long-term anticoagulation with warfarin and who are considering pregnancy, LMWH substitution should be done prior to conception when possible. If anti-Xa monitoring cannot be done, do not use LMWH therapy in pregnant patients with a mechanical prosthetic valve (AHA/ACC [Nishimura, 2014]). When choosing therapy, fetal outcomes (ie, pregnancy loss, malformations), maternal outcomes (ie, VTE, hemorrhage), burden of therapy, and maternal preference should be considered (ACCP [Bates, 2012]).

Breast-Feeding Considerations Breast-feeding women may be treated with warfarin. Based on available data, warfarin does not pass into breast milk. Women who are breast-feeding should be carefully monitored to avoid excessive anticoagulation. According to the American College of Chest Physicians (ACCP), warfarin may be used in lactating women who wish to breast-feed their infants (Bates, 2012). Monitor nursing infants for bruising or bleeding (per manufacturer).

Briggs' Drugs in Pregnancy & Lactation

http://online.lexi.com/ico/action/doc/retrieve/docid/multinat_1/4668998#pni

Monograph: Nursing Considerations



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Warfarin (Lexi-Drugs Multinational)

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months of age. Healthy prematures, however, do not develop spontaneous hemorrhage or thrombotic complications because of a balance between procoagulants and inhibitors.

Advanced Practitioners Physical Assessment/Monitoring Assess for signs and symptoms of bleeding. Obtain prothrombin time, hematocrit, and INR. Consider genotyping of CYP2C9 and VKORC1 prior to initiation of therapy, if available.

Nursing Physical Assessment/Monitoring Check ordered labs and report abnormalities. Monitor for and instruct patient to report signs and symptoms of bleeding. Educate patient on importance of a consistent diet and following up with lab work.

Product Availability (US) Coumadin injection has been discontinued in the US for more than 1 year.

Dosage Forms Excipient information presented when available (limited, particularly for generics); consult specific product labeling. [DSC] = Discontinued product

Solution Reconstituted, Intravenous, as sodium:

Coumadin: 5 mg (1 ea [DSC])

Tablet, Oral, as sodium:

Coumadin: 1 mg [scored]

Coumadin: 2 mg [scored; contains fd&c blue #2 aluminum lake, fd&c red #40 aluminum lake]

Coumadin: 2.5 mg [scored; contains fd&c blue #1 aluminum lake, fd&c yellow #10 aluminum lake]

Coumadin: 3 mg [scored; contains fd&c blue #2 aluminum lake, fd&c red #40 aluminum lake, fd&c yellow #6 aluminum lake]

Coumadin: 4 mg [scored; contains fd&c blue #1 aluminum lake]



Monograph: Patient Education (in Chinese)

Noradrenaline [Norepinephrine] (Lexi-Drugs Multinational)

Navigation Tree

[Expand All](#)

- What is this drug used for?
- What do I need to tell my doctor BEFORE I take this drug?
- What are some things I need to know or do while I take this drug?
- What are some side effects that I need to call my doctor about right away?
- What are some other side effects of this drug?
- How is this drug best taken?
- What do I do if I miss a dose?
- How do I store and/or throw out this drug?
- General drug facts
- Last Reviewed Date

Monograph **Images** **Adult Patient Education** **Pediatric Patient Education**

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Noradrenaline [Norepinephrine] (Patient Education Multinational - Adult Medication)

You must carefully read the "Consumer Information Use and Disclaimer" below in order to understand and correctly use this information

What is this drug used for?

- It is used to treat low blood pressure.

What do I need to tell my doctor BEFORE I take this drug?

- If you have an allergy to norepinephrine or any other part of this drug.
- If you are allergic to any drugs like this one, any other drugs, foods, or other substances. Tell your doctor about the allergy and what signs you had, like rash; hives; itchy skin; wheezing; cough; swelling of face, lips, tongue, or throat; or any other signs.

This drug may interact with other drugs or health problems.

Tell your doctor and pharmacist about all of your drugs (prescription or OTC, natural products, vitamins) and health problems. You must check to make sure that it is safe to take with all of your other drugs and health problems. Do not start, stop, or change the dose of any drug without checking with your doctor.

What are some things I need to know or do while I take this drug?

- Tell all of your health care providers that you take this drug. This includes your doctors, nurses, pharmacists, and dentists.
- Have your blood pressure checked often. Talk with your doctor.
- If you have a sulfite allergy, talk with your doctor.
- Tell your doctor if you are pregnant or plan on getting pregnant. You will need to talk about the benefits and risks of using this drug while you are pregnant.

Monograph: Patient Education (in Chinese)

Noradrenaline [Norepinephrine] (Lexi-Drugs Multinational)

Navigation Tree

- [Expand All](#)
- 此藥有哪些作用?
- 我服用此藥「前」需告知醫生什麼?
- 使用此藥必須注意哪些事項?
- 立即告知醫務人員的原因
- 此藥物的其他副作用為何?
- 最佳的用藥方法為何?
- 如果我忘記(錯過)一次用藥,該怎麼辦?
- 我應該如何儲存此藥?
- 一般聲明

Monograph Images Adult Patient Education Pediatric Patient Education

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Customize

Noradrenaline [Norepinephrine] (Patient Education Multinational - Adult Medication (Chinese))

You must carefully read the "Consumer Information Use and Disclaimer" below in order to understand and correctly use this information

此藥有哪些作用?

- 此藥用於治療低血壓。

我服用此藥「前」需告知醫生什麼?

- 若您對去甲腎上腺素或該藥物的任何其他成分過敏。
- 若您對此類藥物、任何藥物、食物或其他物質過敏。告訴醫師您的過敏情況與症狀,例如出疹;蕁麻疹;發癢;呼吸短促;喘鳴;咳嗽;臉部、嘴唇、舌頭或喉嚨腫脹;或其他過敏現象。

此藥可能會與其他藥物或健康問題交互影響。

告知您的醫師與藥劑師有關您的所有用藥(處方藥或非處方藥、天然滋補品、維他命劑)與健康問題。務必確認在您的用藥與健康問題下服用此藥是安全的。諮詢您的醫師前,請勿開始服藥、停藥或改變用藥劑量。

使用此藥必須注意哪些事項?

- 告知所有醫療照護提供者您正在服用此藥。這包括您的醫師、護理師、藥劑師和牙醫師。
- 請經常檢查您的血壓。請向您的醫師洽詢。
- 若您對亞硫酸鹽過敏,請洽詢醫師。
- 若您已懷孕或計畫懷孕,請告知醫師。您將必須討論在懷孕期間服用此藥對您帶來的益處與風險。
- 若您正以母乳哺育幼兒,請告知醫師。您將必須討論對嬰兒造成的風險。

用問答的方式,列出6-7個病人最常問的問題/或須知,並用簡單的文字回答

Drug Interactions

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Interactions

可搜尋藥物vs食物，藥物vs藥物，藥物vs草藥等的交互作用
Lexicomp有收錄超過550種草藥的 monograph

Selected Items

Drugs
None

Allergies
None

Duplicate Drug Therapy

Search [Help](#)

Search Drugs ←

←

Search Allergies

←

Important Product Information

Interactions DOES NOT address chemical compatibility related to I.V. drug preparation or administration. Information regarding the compatibility of mixing two or more I.V. drugs together in the same container, or running them together through the same I.V. administration line is available through the I.V. Compatibility button. This is available to Institutional clients and others as an add-on from the main Lexicomp Online screen (button in upper left hand section).

Drug Interactions

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Interactions

Selected Items

Drugs

- Dabigatran Etexilate
- Ginger
- Tylenol (OTC)
- Warfarin

Allergies

None

Duplicate Drug Therapy

Search [Help](#)

Search Drugs

Search Allergies

- Acetaminophen
- Acetazolamide
- Acetic Acid
- Acetohexamide
- Acetohydroxamic Acid

Compatibility related to I.V. drug preparation or administration. Information regarding the compatibility of mixing two or more I.V. drugs together in the same same I.V. administration line is available through the I.V. Compatibility button. This is available to Institutional clients and others as an add-on from the main (and section).

Interactions

Selected Items

Drugs

- Dabigatran Etexilate
- Ginger
- Tylenol 8 HR [OTC] [DSC]
- Warfarin

Allergies

- Acetaminophen

Duplicate Drug Therapy

Search Interaction Analysis

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Lexicomp Interaction Analysis

A = No known interaction **C** = Monitor therapy **X** = Avoid combination
B = No action needed **D** = Consider therapy modification

View interaction detail by clicking on link.

Drugs in this analysis: Dabigatran Etexilate; Ginger; Tylenol 8 HR [OTC] [DSC]; Warfarin

- Drug-Allergy Interactions**
 - X** Tylenol 8 HR [OTC] [DSC] (Acetaminophen) – Acetaminophen
- Drug-Drug Interactions**
 - D** Dabigatran Etexilate (Anticoagulants) – Ginger (Herbs (Anticoagulant/Antiplatelet Properties))
 - D** Ginger (Herbs (Anticoagulant/Antiplatelet Properties)) – Warfarin (Anticoagulants)
 - C** Dabigatran Etexilate (Anticoagulants) – Warfarin (Vitamin K Antagonists) *Depends on Laboratory/D*
 - C** Tylenol 8 HR [OTC] [DSC] (Acetaminophen) – Warfarin (Vitamin K Antagonists) *Depends on Dose*
- Duplicate Therapy Interactions**
 - Dabigatran Etexilate – Warfarin

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Title: Anticoagulants / Herbs (Anticoagulant/Antiplatelet Properties)

Risk Rating: D. Consider therapy modification

Summary: Herbs (Anticoagulant/Antiplatelet Properties) may enhance the adverse/toxic effect of Anticoagulants. Bleeding may occur. **Severity:** Major **Reliability Rating:** Fair

Patient Management: The concomitant use of herbs possessing anticoagulant/antiplatelet properties with other herbs or drugs possessing similar properties should be avoided. If used concomitantly, increased diligence in monitoring for adverse effects (eg, bleeding, bruising, altered mental status due to CNS bleeds) must be employed. For patients scheduled for surgical, dental, or other invasive procedures, anticoagulant/antiplatelet herbs should be discontinued 2 weeks prior to the scheduled procedure.

Anticoagulants Interacting Members: Acenocoumarol, Acetaminophen, Apixaban, Argatroban, Bismarol, Bivalirudin, Dabigatran Etexilate, Dalteparin, Danaparol, Desirudin, Edoxaban, Enoxaparin, Fondaparinux, Heparin, Nadroparin, Phenindione, Protein C Concentrate (Human), Rivaroxaban, Tinzaparin, Warfarin

Herbs (Anticoagulant/Antiplatelet Properties) Interacting Members: Alfalfa, Anise, Bilberry, Bladderwrack, Bromelain, Cat's Claw, Celery, Chamomile, Coleus, Cordyceps, Dong Quai, Evening Primrose, Fenugreek, Feverfew, Garlic, Ginger, Ginkgo Biloba, Ginseng (American), Ginseng (Panax), Ginseng (Siberian), Grape Seed, Green Tea, Guggul, Horse Chestnuts, Horseadish, Licorice, Prickly Ash, Red Clover, Resh, S-Adenosylmethionine, Sweet Clover, Turmeric, Turmeric, White Willow

Discussion: Many herb products possess the ability to cause bleeding (inhibit clotting/coagulation or primary hemostasis) by one of several mechanisms (e.g., herb contains a coumarin-like constituent or one that is able to inhibit the production/function of platelets).^{1,2,3,4} The concomitant use of such herbs with other herbs or drugs possessing a similar pharmacologic potential may increase the risk of bleeding. Caution is advised.

Footnotes:

- Morris SA. "Antithrombotic Effects of Naturally Derived Products on Coagulation and Platelet Function." *J Methods Mol Biol*. 2010; 663:229-40. [PubMed:20617421]
- Stanger MJ, Thompson LA, Young AJ, et al. "Anticoagulant Activity of Select Dietary Supplements." *Nutr Rev*. 2012; 70(2):107-17. [PubMed:2230592]
- Spolitch AE, Andrews L. "An Examination of the Bleeding Complications Associated with Herbal Supplements, Antiplatelet and Anticoagulant Medications." *J Dent Hyg*. 2007; 81(3):67. [PubMed:17908423]
- Alsharif F, Chan W, Costa P, et al. "Clinical Evidence of Herb-Drug Interactions: A Systematic Review for the Natural Standard Research Collaborators." *PLoS One*. 2009; 4(10):1971-75. [PubMed:19717515]

Drug Interactions

Interactions

Selected Items

- Dabigatran Etexilate
- Ginger
- Tylenol 8 HR [OTC],[DSC]
- Warfarin

Allergies

None

Duplicate Drug Therapy

Lexicomp Interaction Analysis

Legend:

- A** = No known interaction
- B** = No action needed
- C** = Monitor therapy
- D** = Consider therapy modification
- X** = Avoid combination

View interaction detail by clicking on link.

Drugs in this analysis: Dabigatran Etexilate; Ginger; Tylenol 8 HR [OTC] [DSC]; Warfarin

Drug-Drug Interactions

- D** Dabigatran Etexilate (Anticoagulants) – Ginger (Herbs (Anticoagulant/Antiplatelet Properties))
- D** Ginger (Herbs (Anticoagulant/Antiplatelet Properties)) – Warfarin (Anticoagulants)
- C** Dabigatran Etexilate (Anticoagulants) – Warfarin (Vitamin K Antagonists) *Depends on Laboratory/Diagnostic Result*
- C** Tylenol 8 HR [OTC] [DSC] (Acetaminophen) – Warfarin (Vitamin K Antagonists) *Depends on Dose*

Duplicate Therapy Interactions

- Dabigatran Etexilate – Warfarin

圖一
點擊單獨藥物，
可進入所有會
此藥物產生交
互作用的藥物/
草藥/食物
monograph，
如下圖二



圖二

Interacting Drug Categories

Legend:

- A** = No known interaction
- B** = No action needed
- C** = Monitor therapy
- D** = Consider therapy modification
- X** = Avoid combination

- Hemin
- MifepriStone *Depends on Indication*
- Omacetaxine *Depends on Laboratory/Diagnostic Result*
- Oxatamide
- Streptokinase
- Tamoxifen *Depends on International Labeling*
- Urokinase *Depends on Indication and Dose*
- Vorapaxar
- Allopurinol
- Amiodarone
- Androgens
- Antithyroid Agents
- Barbiturates
- Capecitabine

Warfarin Monograph Details:

Title: Anticoagulants / Vorapaxar

Risk Rating: X: Avoid combination

Summary: Vorapaxar may enhance the adverse/toxic effect of Anticoagulants. More specifically, this combination is expected to increase the risk of bleeding. **Severity** Major **Reliability Rating** Fair

Patient Management: Avoid the use of vorapaxar in combination with anticoagulants.

Anticoagulants Interacting Members: Acenocoumarol, Antithrombin; Apixaban; Argatroban; Bempiparin; Betrixaban; Bivalirudin; Dabigatran Etexilate; Dalteparin; Danaparoid; Desirudin; Edoxaban Concentrate (Human); Rivaroxaban; Tinzaparin; Warfarin

Discussion: Vorapaxar US prescribing information states that its use in combination with anticoagulants should be avoided.¹ Use of anticoagulants is one of several factors expected to increase the risk of bleeding, which may include older age, low body weight, reduced renal function, reduced hepatic function, a history of bleeding disorders, and use of other antiplatelet agents.¹



點擊可再進入Warfarin
跟Vorapaxar的交互作
用monograph



Drug Interactions

Lexicomp也有收錄3種藥物同時用藥會產生的交互作用，如下：

Interactions

The screenshot displays the Lexicomp Interaction Analysis interface. On the left, a sidebar shows 'Selected Items' with 'Lisinopril' and 'Valsartan' listed under 'Drugs'. Below this, 'Allergies' are listed as 'None', and a checkbox for 'Duplicate Drug Therapy' is checked. The main content area is titled 'Lexicomp Interaction Analysis' and includes a legend for interaction ratings: A (No known interaction), B (No action needed), C (Monitor therapy), D (Consider therapy modification), and X (Avoid combination). Below the legend, it states 'View interaction detail by clicking on link.' and 'Drugs in this analysis: Lisinopril; Valsartan'. There are two main sections: 'Drug-Drug Interactions' and 'Duplicate Therapy Interactions'. The 'Drug-Drug Interactions' section shows a result for Lisinopril (Angiotensin-Converting Enzyme Inhibitors) and Valsartan (Angiotensin II Receptor Blockers) with a rating of 'D' and the note 'Depends on Additional drug/group'. The 'Duplicate Therapy Interactions' section shows a result for Lisinopril and Valsartan. At the bottom, it indicates the analysis was 'Created on May 14, 2018 5:15:20 PM PDT'. A red arrow points from the 'Drug-Drug Interactions' section to the text '點擊進入3種藥物同時用藥的交互作用詳細說明，請參閱下一張投影片！'. Another red arrow points from the 'Created on' date to the text '更新日期: 當有新的臨床藥學發現，Lexicomp會及時更新'.

點擊進入3種藥物同時用藥的交互作用
詳細說明，請參閱下一張投影片！

更新日期: 當有新的臨床藥學
發現，Lexicomp會及時更新

Drug Interactions

Search

Interaction Analysis

Interaction Monograph

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Title Angiotensin-Converting Enzyme Inhibitors / Angiotensin II Receptor Blockers

Dependencies:

- **Additional drug/group:** Routine combined use of an angiotensin converting enzyme inhibitor, angiotensin II blocker, and aldosterone antagonist is not recommended for patients with heart failure with reduced ejection fraction.

Risk Rating D: Consider therapy modification

Summary Angiotensin II Receptor Blockers may enhance the adverse/toxic effect of Angiotensin-Converting Enzyme Inhibitors. Angiotensin II Receptor Blockers may increase the serum concentration of Angiotensin-Converting Enzyme Inhibitors. **Severity** Moderate **Reliability Rating** Fair

Patient Management US labeling states that concurrent use of telmisartan and ramipril is specifically not recommended and Canadian labeling states that irbesartan and eprosartan are contraindicated for use with ACE Inhibitors in patients with diabetic nephropathy. It is not clear if any other combination of an ACE inhibitor and an ARB would be any safer. If such a combination must be used, monitor patients extra closely for a greater-than-expected response to the combination, including monitoring of blood pressure, renal function, and potassium concentrations.

Angiotensin-Converting Enzyme Inhibitors Interacting Members Alacepril; Benazepril; Captopril; Cilazapril; Enalapril; Enalaprilat; Fosinopril; Imidapril; Lisinopril; Moexipril; Perindopril; Quinapril; Ramipril; Trandolapril; Zofenopril

Angiotensin II Receptor Blockers Interacting Members Azilsartan; Candesartan; Eprosartan; Fimasartan; Irbesartan; Losartan; Olmesartan; Telmisartan; Valsartan

Discussion The risk of developing hyperkalemia or acute kidney injury were both significantly increased among subjects randomized to combined therapy with losartan (100 mg/day) and lisinopril (10 mg to 40 mg daily) as compared to subjects randomized to losartan monotherapy in a clinical trial of 1448 subjects with type 2 diabetes and nephropathy.¹ Hyperkalemia was present at a frequency of 6.3 events per 100 person-years with combination therapy versus 2.6 events per 100 person-years with losartan monotherapy, and acute kidney injury was present at a frequency of 12.2 events per 100 person-years versus 6.7 events per 100 person-years with losartan monotherapy.

Subject randomly assigned to the combination of ramipril and telmisartan (n=8502) as part of the large ONTARGET clinical trial were more likely to discontinue study drug, experienced more signs/symptoms of hypotension, experienced hyperkalemia, or had a worsening of renal function impairment as compared to subjects assigned to either ramipril or telmisartan alone (n=8576 and n=8542, respectively).² Additionally, as described in the telmisartan prescribing information, the average ramipril AUC and maximum serum concentration (C_{max}) were increased 2.1-fold and 2.3-fold, respectively, when ramipril (10 mg daily) and telmisartan (80 mg daily) were administered concurrently in healthy volunteers.³ Concentrations of the active metabolite ramiprilat were similarly increased with concurrent telmisartan (by an average of 1.5- and 2.4-fold for AUC and C_{max}). Telmisartan AUC and C_{max} were slightly decreased (by 16% and 31%) with the combination.

Drug Comparisons

Compared to Micromedex, Lexicomp Drug Comparison can compare 4 drugs at the same time, and also can customize the field of comparisons. Except clinical use of comparing drugs, also very useful when evaluating new drugs for management purpose.

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Data View

Selected Drugs

Drugs
None

Available Sections

- Adverse Effects
- Indications
- Drug-Pregnancy
- Drug-Lactation
- Contraindications/Precautions
- Drug-Drug Interactions
- Drug-Food Interactions
- Drug-Alcohol Interactions

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Search

Search

Enter up to 4 drugs for comparison

Product Description

The Data Compare tool allows the user to compare up to 4 drugs using the data available from the Medi-Span drug databases.

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Can choose the fields being compared

Drug Comparison

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Data View

Selected Drugs

Drugs

- Dabigatran Etexilate Mesylate Oral
- Warfarin Sodium Oral

Available Sections

- Adverse Effects
- Indications
- Drug-Pregnancy
- Drug-Lactation
- Contraindications/Precautions
- Drug-Drug Interactions
- Drug-Food Interactions
- Drug-Alcohol Interactions

Drug-Pregnancy

Description	Dabigatran Etexilate Mesylate Oral	Warfarin Sodium Oral
Pregnancy	Not recommended	Contraindicated

Drug Comparisons (Monograph View)

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Side By Side Comparisons

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Dabigatran Etexilate	Warfarin
Pregnancy Considerations (Top of page)	
<p>Adverse events were observed in some animal reproduction studies. An ex vivo human placenta dual perfusion model illustrated that dabigatran crossed the placenta at term; dabigatran etexilate mesylate (prodrug) had limited placental transfer (Bapat 2014). Data are insufficient to evaluate the safety of direct thrombin inhibitors during pregnancy; use of oral agents during pregnancy should be avoided (Guyatt 2012). Consider the risks of bleeding and stroke if used during pregnancy.</p>	<p>Warfarin crosses the placenta; concentrations in the fetal plasma are similar to maternal values. Teratogenic effects have been reported following first trimester exposure and may include coumarin embryopathy (nasal hypoplasia and/or stippled epiphyses; limb hypoplasia may also be present). Adverse CNS events to the fetus have also been observed following exposure during any trimester and may include CNS abnormalities (including ventral midline dysplasia, dorsal midline dysplasia). Spontaneous abortion, fetal hemorrhage, and fetal death may also occur. Use is contraindicated during pregnancy (or in women of reproductive potential) except in women with mechanical heart valves who are at high risk for thromboembolism; use is also contraindicated in women with threatened abortion, eclampsia, or preeclampsia. Frequent pregnancy tests are recommended for women who are planning to become pregnant and adjusted-dose heparin or low molecular weight heparin (LMWH) should be substituted as soon as pregnancy is confirmed or adjusted-dose heparin or LMWH should be used instead of warfarin prior to conception.</p> <p>In pregnant women with high-risk mechanical heart valves, the benefits of warfarin therapy should be discussed with the risks of available treatments (ACCP [Bates, 2012]; AHA/ACC [Nishimura, 2014]); when possible avoid warfarin use during the first trimester (ACCP [Bates, 2012]) and close to delivery (ACCP [Bates, 2012]; AHA/ACC [Nishimura, 2014]). Use of warfarin during the first trimester may be considered if the therapeutic INR can be achieved with a dose 55 mg/day (AHA/ACC [Nishimura, 2014]). Adjusted-dose LMWH or adjusted-dose heparin may be used throughout pregnancy or until week 13 of gestation when therapy can be changed to warfarin. LMWH or heparin should be resumed close to delivery. In women who are at a very high risk for thromboembolism (older generation mechanical prosthesis in mitral position or history of thromboembolism), warfarin can be used throughout pregnancy and replaced with LMWH or heparin near term; the use of low-dose aspirin is also recommended (ACCP [Bates, 2012] AHA/ACC [Nishimura, 2014]). Women who require</p>

Drug Comparisons (Data View)

Give clear presentation of comparison, if need to know more detail, just click into the hyperlink; for example, if I want to know more about one of the adverse effects of Rosuvastatin – Arthralgia, just simply click it. See next slide!!!

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Enter drug, disease, NDC/UPC or other key

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Data View
Monograph View

Data View

Selected Drugs Search Results

Drugs

- Acetaminophen ER Oral
- Aspirin 81 Oral
- Rosuvastatin Calcium Oral
- Warfarin Sodium Oral

Available Sections

- Adverse Effects
- Indications
- Drug-Pregnancy
- Drug-Lactation
- Contraindications/Precautions
- Drug-Drug Interactions
- Drug-Food Interactions
- Drug-Alcohol Interactions

Adverse Effects

Description	Acetaminophen ER Oral	Aspirin 81 Oral	Rosuvastatin Calcium Oral	Warfarin Sodium Oral
Common (> 10%)			Arthralgia Myalgia	
More Frequent (4%-10%)		Dyspepsia Epigastric Distress Heartburn Nausea	Asthenia Constipation Dizziness Headache Nausea	
Less Frequent (1%-4%)		Anorexia Gastrointestinal Hemorrhage Vomiting	Abdominal Pain Diabetes Mellitus Increased Creatine Phosphokinase Increased Serum Alanine Aminotransferase Increased Serum Transaminases	
Rare (< 1%)	Aggranulocytosis Allergic Dermatitis Anemia Azotemia Hepatitis Jaundice Leukopenia Pancytopenia	Iron Deficiency Anemia Prolonged Prothrombin Time	Amnesia Cognitive Dysfunction Confusion Congenital Anomalies Forgetfulness Hepatic Failure Memory Impairment	Gangrene of Skin and/or Subcutaneous Tissues Skin Necrosis Tracheobronchial Calcification

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Drug Comparisons (Data View)

Data View

Give the overall background of this particular adverse reaction of Rosuvastatin.

[Print](#)

Selected Drugs

Search Results Detail

Drugs

- Acetaminophen ER Oral
- Aspirin 81 Oral
- Rosuvastatin Calcium Oral
- Warfarin Sodium Oral

Available Sections

- Adverse Effects
- Indications
- Drug-Pregnancy
- Drug-Lactation
- Contraindications/Precautions
- Drug-Drug Interactions
- Drug-Food Interactions
- Drug-Alcohol Interactions

Adverse Effects: Rosuvastatin Calcium Oral: Arthralgia

Severity Level	Incidence	Side Effect Type	Onset	Documentation Level
<input type="checkbox"/> Major	<input checked="" type="checkbox"/> COMMON	<input type="checkbox"/> Allergic	<input type="checkbox"/> Delayed	<input type="checkbox"/> Established
<input checked="" type="checkbox"/> MODERATE	<input type="checkbox"/> More Frequent	<input type="checkbox"/> Carcinogenic	<input type="checkbox"/> Intermediate	<input type="checkbox"/> Probable
<input type="checkbox"/> Minor	<input type="checkbox"/> Less Frequent	<input type="checkbox"/> Long-Term Use	<input type="checkbox"/> Rapid	<input checked="" type="checkbox"/> POSSIBLE
	<input type="checkbox"/> Rare	<input checked="" type="checkbox"/> OTHER	<input checked="" type="checkbox"/> VARIED	<input type="checkbox"/> Doubtful
	<input type="checkbox"/> Not specified	<input type="checkbox"/> Overdose	<input type="checkbox"/> Not specified	
		<input type="checkbox"/> Teratogenic		
		<input type="checkbox"/> Toxic		
		<input type="checkbox"/> Withdrawal		

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Trissel's IV Compatibility

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

Selected Items

Click on the drug name to view compatibility results for a single drug or for a drug properties monograph.

Drugs

- Cefazolin [Cefazolin sodium]
- Ciprofloxacin
- Warfarin sodium

Solutions

- Lactated Ringers Intravenous [LR (Lactated Ringer's)]

Analyze Clear

Search Compatibility Chart Details

Compatibility Chart

Click on the drug/drug and/or drug/solution result to access supporting information from compatibility

- C** Indicates compatibility for this method
- U** Uncertain or variable for this method
- I** Indicates incompatibility for this method
- X** No data for administration methods chosen

	Cefazolin sodium	Ciprofloxacin	Warfarin sodium
Drugs			
Cefazolin sodium			C Y-Site
Ciprofloxacin	X		I Y-Site
Warfarin sodium	C Y-Site	I Y-Site	
Solutions			
LR (Lactated Ringer's)	C Solution C Y-Site	C Solution C Y-Site	U Solution

Details

You searched on the following parameters:

Administration Method: Y-Site

Drugs: Ciprofloxacin, Warfarin sodium

Vehicles: none

Solutions: none

Results: 2 incompatible study result(s). Click on a study to view details.

Study	Drug 1	Vehicle 1	Drug 2	Vehicle 2	Solution	Finding
Study 1	Ciprofloxacin 2 mg/mL	D5W (Dextrose 5% in Water)	Warfarin sodium 2 mg/mL	Reconstituted solution undiluted		I Incompatible
Study 2	Ciprofloxacin 2 mg/mL	D5W (Dextrose 5% in Water)	Warfarin sodium 2 mg/mL	Reconstituted solution undiluted		I Incompatible

Click to see more details

Trissel's IV Compatibility

You can analyze as many drugs as you like. See example below. Search for 6 drugs mixed in 2 solutions or even more !!!

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

Selected Items

Click on the drug name to view compatibility results for a single drug or for a drug properties monograph.

Drugs

- Amoxicillin sodium
- Cefazolin [Cefazolin sodium]
- Ciprofloxacin
- Digoxin
- Dopamine hydrochloride
- Gadobenate dimeglumine
- Warfarin sodium

Solutions

- Lactated Ringers Intravenous [LR (Lactated Ringer's)]
- Sodium Chloride [NS (Normal Saline) - Sodium Chloride 0.9%]

Search
Compatibility Chart
Details

Click on the drug/drug and/or drug/solution result to access supporting information from compatibility studies

	Amoxicillin sodium	Cefazolin sodium	Ciprofloxacin	Digoxin	Dopamine hydrochloride	Gadobenate dimeglumine	Warfarin sodium
<div style="border: 1px solid #ccc; padding: 5px; margin-bottom: 5px;"> <p>C Indicates compatibility for this method</p> <p>U Uncertain or variable for this method</p> <p>I Indicates incompatibility for this method</p> <p>X No data for administration methods chosen</p> </div> <p>Drugs</p>							
Amoxicillin sodium		X	I Admixture	X	X	X	X
Cefazolin sodium	X		X	C Y-Site	I Y-Site	X	C Y-Site
Ciprofloxacin	I Admixture	X		C Y-Site	C Y-Site C Admixture	X	I Y-Site
Digoxin	X	C Y-Site	C Y-Site		C Y-Site	X	X
Dopamine hydrochloride	X	I Y-Site	C Y-Site C Admixture	C Y-Site		X	C Y-Site
Gadobenate dimeglumine	X	X	X	X	X		X

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Calculator Controls

Calculator Lookup

Browse Category

All

Lookup Results

- Bivalirudin
- Dose Driven IV-Drip Rate Calculator
- IV Drip Maintenance Rate Calculator**
- Mepivacaine (Dental)
- Palliative Prognostic Score in Terminal Illness
- Unit Conversions: Comprehensive

Calculator

[Print](#) [Help](#)

IV Drip Maintenance Rate Calculator

[Customize Calculator](#)

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Equation

$$\text{DripRate[mL/hr]} = \text{TotalFluidVolume[mL]} / \text{TotalAdminTime[hr]}$$

ONLY DIGITS 0 TO 9 AND A SINGLE DECIMAL POINT "." ARE ACCEPTABLE AS NUMERIC INPUTS. ATTEMPTED INPUT OF OTHER CHARACTERS INTO A NUMERIC FIELD MAY LEAD TO AN INCORRECT RESULT.

Total Fluid Volume mL

Total Admin Time hr

Drip Rate mL/hr

Decimal Precision: 2

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- A-a Gradient
- ACC/AHA 2013 Cardiovascular Risk Assessment
- APACHE II Scoring System
- APACHE II Scoring System by Diagnosis
- Abciximab
- Absolute Neutrophil Count
- Acetaminophen Toxicity Assessment
- Acetylcysteine
- Adjusted Body Weight
- Advanced Life Support: Adult
- Advanced Life Support: Neonatal

Calculator

IV Drip Maintenance Rate Calculator

Customize Calculator

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Equation

$$\text{DripRate}[\text{mL/hr}] = \frac{\text{TotalFluidVolume}[\text{mL}]}{\text{TotalAdminTime}[\text{hr}]}$$

Total Fluid Volume: mL

Total Admin Time: hr

Drip Rate: mL/hr

Decimal Precision:

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Lookup Results
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Advanced Life Support: Neonatal
Advanced Life Support: Pediatric

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Advanced Life Support: Adult

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Age years ▼

Weight kg ▼

References

Field JM, Hazinski MF, Sayre MR, et al. "Part 1: Executive Summary: 2010 American Heart Association Guidelines for Cardiopulmonary Resuscitation and Emergency Cardiovascular Care," *Circulation*, 2010, 122 (Suppl 3):640-56. [\[PubMed 20956217\]](#)

Hollenberg SM, Ahrens TS, Annane D, et al. "Practice Parameters for Hemodynamic Support of Sepsis in Adult Patients: 2004 update," *Crit Care Med*, 2004; 32(9): 1928-48. [\[PubMed 15343024\]](#)

Neumar RW, Shuster M, Callaway CW, et al. "Part 1: Executive Summary: 2015 American Heart Association Guidelines Update for Cardiopulmonary Resuscitation and Emergency Cardiovascular Care," *Circulation*, 2015; 132(18 Suppl 2):S315-S367 [\[PubMed 26472989\]](#)

Calculators (over 190 medical / pharmacological calculators)

Calculators

This function gives you most commonly used drugs / dosages / instruction notes with patients in Life Supports

Calculator Controls

Calculator Lookup

Search

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Lookup Results
Advanced Life Support: Adult
Advanced Life Support: Neonatal
Advanced Life Support: Pediatric

Calculator

Advanced Life Support: Adult

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Reset

Time: 1/18/2018 12:49:08 AM

Age: 56 years
Weight: 70 kg

Adenosine IV (3 mg/mL)

Dose	Volume	Administration Notes
Initial: 6 mg	2 mL (3 mg/mL)	<ul style="list-style-type: none">Rapid bolus over 1-2 secondsFlush immediately with 20 mL of NS after each bolusIn patients with transplanted hearts, receiving concurrent carbamazepine or dipyridamole, or when administering via central line, reduce initial dose to 3 mg
Repeat: 12 mg	4 mL (3 mg/mL)	<ul style="list-style-type: none">Rapid bolus over 1-2 secondsFlush immediately with 20 mL of NS after each bolusMaximum cumulative dose: 30 mgInterval: Every 1-2 minutes as needed

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APACHE II Scoring System by Diagnosis
Abciximab
Absolute Neutrophil Count
Acetaminophen Toxicity Assessment
Acetylcysteine
Adjusted Body Weight
Advanced Life Support: Adult
Advanced Life Support: Neonatal

Calculator

Phenytoin Total Drug Level

Customize Calculator

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Equation

$$\text{PhenytoinAdjusted}[\text{mcg/mL.phenytoin}] = \text{PhenytoinMeasured}[\text{mcg/mL.phenytoin}] / ((\text{SerumAlbumin}[\text{g/dLalbumin}] * \text{RenalFx}) + 0.1)$$

ONLY DIGITS 0 TO 9 AND A SINGLE DECIMAL POINT "." ARE ACCEPTABLE AS NUMERIC INPUTS. ATTEMPTED INPUT OF OTHER CHARACTERS INTO A NUMERIC FIELD MAY LEAD TO AN INCORRECT RESULT.

Phenytoin Measured mcg/mL

Renal Fx Adequate Renal Function (0.2) Creat Clearance <10 mL/min (0.1)

Serum Albumin g/dL

Phenytoin Adjusted mcg/mL

Decimal Precision:

Lexicomp Online



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- [Antidotes and Decontaminants](#)
- [Agents of Toxicity](#)
- [MSDS](#)
- [Household Product Name](#)
- [Household Product Category](#)

Lexi-Tox

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Enter poison, antidote, household product, or

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Search Results : "warfarin" in Toxicology

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Lab Tests and Diagnostic Procedures

- [Warfarin Gene Mutations](#)
- [Warfarin Level](#)
- [Warfarin Management](#) Applies to Prothrombin Time and INR. Updated 11/6/16

Lexi-Tox

Warfarin Updated 2/16/17

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<http://online.lexi.com/ico/action/doc/retrieve/docid/lexid/13030137#l=warfarin>

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- Brand Names: Canada
- Brand Names: US
- Breast-Feeding Considerations
- CAS Registration
- Clinical Presentation
- Complications of Exposure
- Diagnosis
- Dosage Forms
- Hazardous Drugs Handling Considerations
- Index Terms
- Laboratory Testing/Diagnostic Procedures
- Mechanism of Toxicity
- Name
- Patient Disposition

Lexi-Tox: Treatment Antidote

Lexi-Tox™

Enter poison, antidote, household product, etc.

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Warfarin (Lexi-Tox)

Navigation Tree

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- ▼ Treatment
 - Treatment: Stabilization
 - Treatment: Decontamination
 - Treatment: Antidote(s)**
 - Treatment: Pharmacologic
 - Treatment: Supportive Therapy
- Patient Disposition
- Pharmacodynamics/Kinetics
- Hazardous Drugs Handling
- Considerations
- Complications of Exposure

Warfarin

Find in document [Print](#) [Home](#)

Treatment: Antidote(s)

[Phytonadione \(vitamin K1\):](#)

Indication for use: **Warfarin**-induced coagulopathy. Prophylactic vitamin K therapy is not recommended. Coagulation studies should be obtained first and vitamin K should not be initiated until evidence of a coagulopathy exists.

Mechanism of action: Vitamin K promotes the hepatic synthesis of clotting factors (II, VII, IX, X).

Goal of therapy: Reversal of coagulopathy and prevention or treatment of bleeding complications. In patients who will return to **warfarin** therapy for required anticoagulation, be cautious about aggressive vitamin K administration and causing **warfarin** resistance.

Dosage: Vitamin K deficiency (supratherapeutic INR) secondary to **warfarin** (Ansell 2008):

Children:

Excessively prolonged INR (usually INR>8; no significant bleeding): Note: Limited data available: IV: 0.03 mg/kg/dose; maximum dose: 1 mg (Bolton-Maggs 2002); if significant bleeding, consider use of fresh frozen plasma, prothrombin complex concentrates, or recombinant factor VIIa (Monagle 2012).

Adults maintained on **warfarin:**

If the INR is above the therapeutic range to <4.5 (no evidence of bleeding): Lower or hold the next vitamin K dose and monitor frequently; when the INR approaches the desired range, resume vitamin K dosing with a lower dose (Patriquin 2011).

If the INR is 4.5 to 10 (no evidence of bleeding): The 2012 ACCP guidelines recommend against routine phytonadione (aka, vitamin K) administration in this setting (Guyatt 2012). Previously, the 2008 ACCP guidelines recommended that if no risk factors for bleeding exist, to omit the next 1 or 2 vitamin K doses, monitor INR more frequently, and resume with an appropriately adjusted vitamin K dose when the INR is in the desired range; may consider administering vitamin K orally 1 to 2.5 mg if other risk factors for bleeding exist (Hirsh 2008). Others have recommended consideration of vitamin K 1 mg orally or 0.5 mg IV (Patriquin 2011).

If the INR is >10 (no evidence of bleeding): The 2012 ACCP guidelines recommend administration of oral vitamin K (dose not specified) in this setting (Guyatt 2012). Previously, the 2008 ACCP guidelines recommended to hold **warfarin**, administer vitamin K orally 2.5 to 5 mg, expect the INR to be reduced within 24 to 48 hours, monitor the INR more frequently, and give additional vitamin K at an appropriate dose if necessary; resume **warfarin** at an appropriately adjusted dose when the INR is in the desired range (Hirsh 2008). Others have recommended

Warfarin (Lexi-Tox)



Navigation Tree

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- Research Diagnostic
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 - Treatment: Decontamination
 - Treatment: Antidote(s)
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Warfarin

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Breast-Feeding Considerations Breast-feeding women may be treated with [warfarin](#). Based on available data, [warfarin](#) does not pass into breast milk. Women who are breast-feeding should be carefully monitored to avoid excessive anticoagulation. According to the American College of Chest Physicians (ACCP), [warfarin](#) may be used in lactating women who wish to breast-feed their infants (Bates, 2012). Monitor nursing infants for bruising or bleeding (per manufacturer).

Additional Information Optimal care decisions are made based upon specific patient details. Consider consultation with a poison control center. To reach poison control centers in the United States and its territories, call 1-800-222-1222.

Dosage Forms

Tablet, Oral:

Coumadin: 1 mg, 2 mg, 2.5 mg, 3 mg, 4 mg, 5 mg, 6 mg, 7.5 mg, 10 mg

Jantoven: 1 mg, 2 mg, 2.5 mg, 3 mg, 4 mg, 5 mg, 6 mg, 7.5 mg, 10 mg

Generic: 1 mg, 2 mg, 2.5 mg, 3 mg, 4 mg, 5 mg, 6 mg, 7.5 mg, 10 mg

References

American Academy of Clinical Toxicology; European Association of Poisons Centres and Clinical Toxicologists. Position paper: cathartics. *J Toxicol Clin Toxicol.* 2004;42(3):243-253 [[PubMed 15362580](#)]

American Academy of Clinical Toxicology; European Association of Poisons Centres and Clinical Toxicologists. Position paper: ipecac syrup. *J Toxicol Clin Toxicol.* 2004;42(2):133-143 [[PubMed 15214617](#)]

American Academy of Pediatrics Committee on Injury, Violence, and Poison Prevention. Poison treatment in the home. *Pediatrics.* 2003;112(5):1182-1185 [[PubMed 14595067](#)]

Ansell J, Hirsh J, Hylek E, et al. Pharmacology and management of the vitamin K antagonists: American College of Chest Physicians evidence-based clinical practice guidelines (8th ed). *Chest.* 2008;133(6 Suppl):160S-198S [[PubMed 18574265](#)]





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 DeLima Associates of McLean, Virginia (USA) 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's Hazard Communication Standards of 1994. However, as of June 15, 2015, manufacturers will be required to provide "Safety Data Sheets" (SDS) with format and content to be consistent with the United Nations Globally Harmonized System of Classification and Labelling of Chemicals (GHS). The deadline for providing GHS-compliant SDS is 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 40 manufacturers. **The database now contains 1,100 safety data sheets for over 340 Principal (Active) Ingredients contained in drugs produced by over 120 manufacturers.**

Authorized users may search for Safety Data Sheets by drug trade name, principal ingredient or manufacturer name.

FIND SAFETY DATA SHEETS

Search Alphabetically

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MSDS Drug Trade Name Search



Drug Name starting with Drug Name containing

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

OR

warfarin

Drug Name starting with Drug Name containing

You may also Search

Principal Ingredient

Manufacturer/Distributor

List of 7 Drugs

DRUG NAME	FORM	MANUFACTURER
Warfarin	Solid	Cayman Chemical Company
Warfarin	Tablet	Taro Pharmaceuticals USA Inc.
Warfarin Sodium	Tablet	Spectrum Lab Products
Warfarin Sodium Tablets	Tablet	Barr Laboratories, Inc. Div. of Teva Pharmaceuticals
Warfarin Sodium Tablets	Tablet	Zydus Pharmaceuticals USA Inc.
Warfarin Sodium Tablets-Waiver Letter	Tablet	Citron Pharma
Warfarin-SDS Waiver Letter	Tablet	Amneal Pharmaceuticals

SAFETY DATA SHEET(SDS) FOR : Warfarin
MANUFACTURER : Taro Pharmaceuticals USA Inc.

SECTION 1: PRODUCT IDENTIFICATION

PRODUCT NAME: Warfarin Sodium Tablets USP* **FORMULA:** C₁₉ H₁₅NaO₄
CAS #: 129-06-6 **M.W.:** 330.31

* Multiple strengths. See the table below for each Strength, Appearance, and Product Number

Strength	Appearance	Product Number
1mg	Pink, flat beveled, capsule shaped tablet, scored and engraved "1" on one side, and engraved with "WARFARIN" on the top of "TARO" on the other side.	51672-4027
2mg	Lavender flat beveled, capsule shaped tablet, scored and engraved "2" on one side, and engraved with "WARFARIN" on the top of "TARO" on the other side.	51672-4028
2.5mg	Green, flat beveled, capsule shaped tablet, scored and engraved "2 1/2" on one side, and engraved with "WARFARIN" on the top of "TARO" on the other side.	51672-4029
3mg	Tan, flat beveled, capsule shaped tablet, scored and engraved "3" on one side, and engraved with "WARFARIN" on the top of "TARO" on the other side.	51672-4030
4mg	Blue, flat beveled, capsule shaped tablet, scored and engraved "4" on one side, and engraved with "WARFARIN" on the top of "TARO" on the other side.	51672-4031
5mg	Peach, flat beveled, capsule shaped tablet, scored and engraved "5" on	51672-4032

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FDA Name Differentiation Project: The Use of "Tall Man" Letters (Pediatric and Neonatal Lexi-Drugs)

FDA Name Differentiation Project: The Use of "Tall Man" Letters

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FDA Name Differentiation Project: The Use of "Tall Man" Letters (Pediatric and Neonatal Lexi-Drugs)

Confusion between similar drug names is an important cause of medication errors. For years, The Institute For Safe Medication Practices (ISMP), has urged generic manufacturers to use a combination of large and small letters as well as bolding (ie, chlorpro**MAZINE** and chlorpro**PAMIDE**) to help distinguish drugs with look-alike names, especially when they share similar strengths. Recently the FDA's Division of Generic Drugs began to issue recommendation letters to manufacturers suggesting this novel way to label their products to help reduce this drug name confusion. Although this project has had marginal success, the method has successfully eliminated problems with products such as diphenhydr**AMINE** and dimenhy**DRINATE**. Hospitals should also follow suit by making similar changes in their own labels, preprinted order forms, computer screens and printouts, and drug storage location labels.

Lexi-Comp, Inc. Medical Publishing will use "Tall-Man" letters for the drugs suggested by the FDA or recommended by ISMP.

The following is a list of generic and brand name product names and recommended revisions.

Drug Product	Recommended Revision
acetazolamide	aceta ZOLAMIDE
alprazolam	ALPRAZolam
amiloride	a MILoride
amlodipine	am LODIPine
aripiprazole	ARIPiprazole
atomoxetine	ato MOXetine

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Beers Criteria 2015: Potentially Inappropriate Medication Use in Older Adults ≥65 Years of Age^a (Lexi-Drugs Multinational)

Beers Criteria 2015: Potentially Inappropriate Medication Use in Older Adults ≥65 Years of Age^a

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Beers Criteria 2015: Potentially Inappropriate Medication Use in Older Adults ≥65 Years of Age^a (Lexi-Drugs Multinational)

Drug Name	Avoid Use (Independent of Condition)	Avoid Use (Dependent on Condition)	Use Caution (Independent of Condition)	Dosing Considerations (Avoid or Reduce Dose) in Older Adults With Varying Levels of Kidney Functions
Aceclofenac	Based on pharmacologic class concerns for NSAIDs in the Beers Criteria, aceclofenac may be a potentially inappropriate medication to be avoided for chronic use (unless alternative agents are ineffective and patient can receive concomitant gastroprotective agent) due to increased risk of GI bleeding and	<p>Heart failure: Based on pharmacologic class concerns for NSAIDs in the Beers Criteria, aceclofenac may be a potentially inappropriate medication to be avoided due to their potential to promote fluid retention and exacerbate heart failure <i>[Evidence: Moderate; Strength of recommendation: Strong]</i></p> <p>History of gastric or duodenal ulcers: Based on pharmacologic class concerns for NSAIDs in the Beers Criteria, aceclofenac may be a potentially inappropriate medication to be avoided unless other alternatives are not effective and patient is able to</p>		

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- Lexicomp Mobile(行動版)是我們客戶非常推崇試用的產品，我強烈建議藥師試用看看，
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- <http://www.wolterskluwer CDI.com/drug-reference/apps/free-trial/>
- Contain all drug monographs, databases (except Martindale) and modules – allow clinicians to access to clinical drug information anytime anywhere!!!

Lexicomp Mobile Solution



Free Trial

Drug Information Mobile App

As an individual healthcare practitioner you have access to a free 30-day trial on your smartphone or mobile device. Please follow the steps below to get your Lexicomp Mobile App.

Available Platforms

- > iPhone/iPod touch/iPad
- > Android



Device Requirements

- > An iPhone, iPad and iPod touch running iOS 9.1 or later
- > An Android device running OS version 2.0 or later
- > Internet connection for installing and updating
- > 1.7 GB of storage space

Installation

Enter your email to access the installation instructions.

EMAIL ADDRESS

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Access Trial



Platform

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Follow these instructions for iPhone, iPod touch, & iPad

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