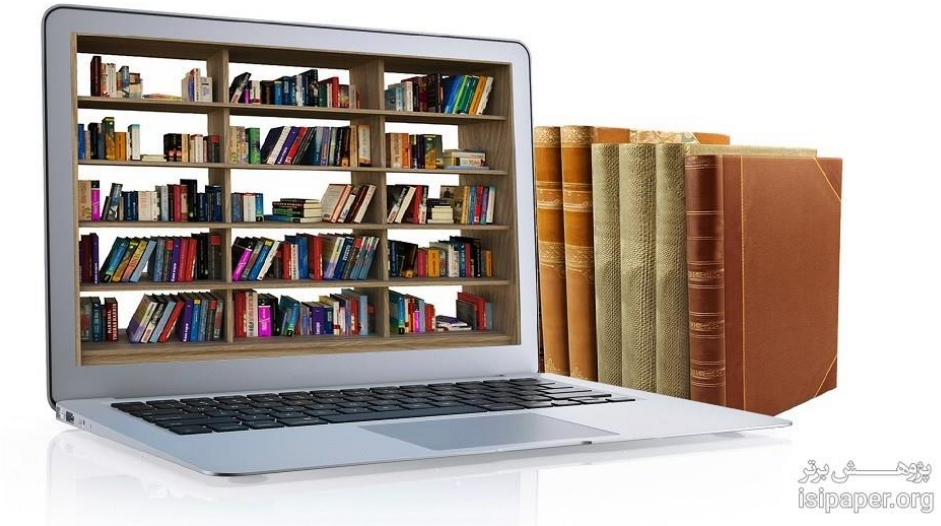
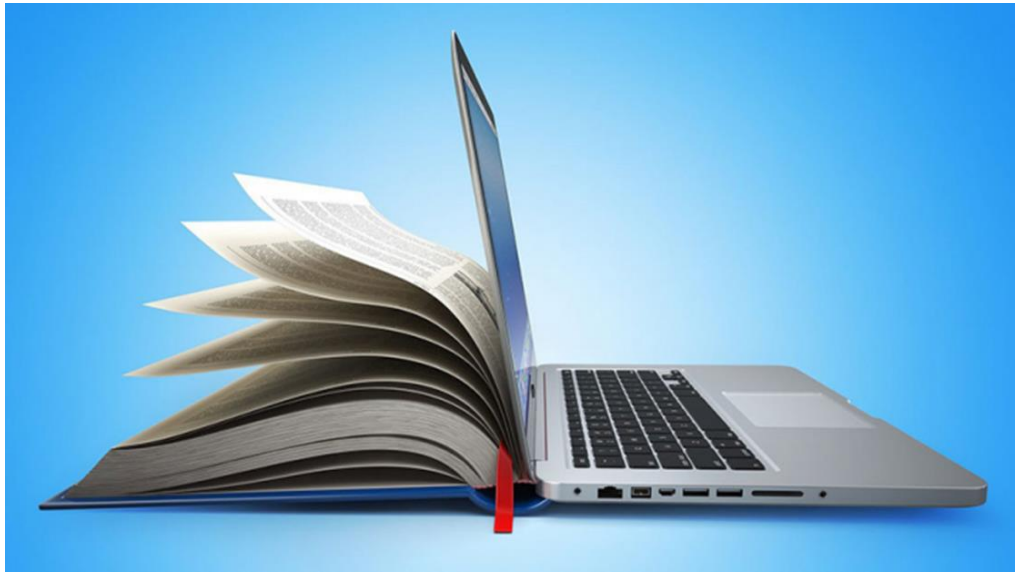
آشنایی با منابع اطلاعات دارویی



دکتر بهاره حکیمی نیا
متخصص داروسازی بالینی (فارماکوتراپی)
عضو هیات علمی دانشکده داروسازی

انواع منابع اطلاعاتی

- منابع نوع اول- Primary sources
- منابع نوع دوم- Secondary sources
- منابع نوع سوم- Tertiary sources
- جستجوی اینترنتی
- منابع متفرقه



منابع نوع اول

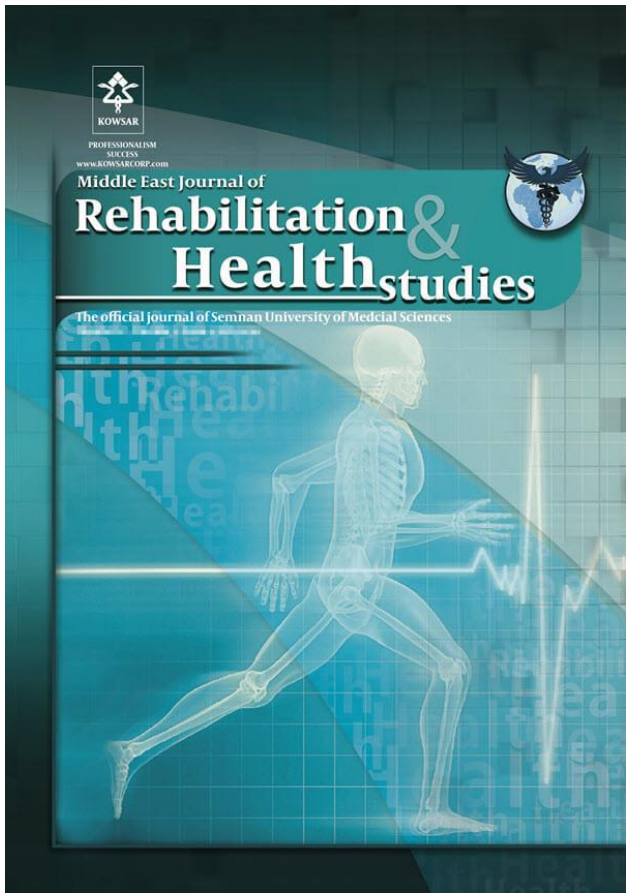
- مطالعات و تحقیقات علمی پایه یا مطالعات و گزارشات بالینی
case series, case reports, RCTs, cohort studies
- جدیدترین منبع اطلاعاتی- اطلاعاتی که برای اولین بار گزارش می شوند
- مقالات مروری جزو این دسته نیستند
- برای استفاده فرد باید قابلیت و مهارت ارزیابی مطالعات را داشته باشد.

منابع نوع اول

- مجلات علمی- ژورنالهای پزشکی و دارویی

JAMA, Lancet, BMJ,NEJM...

- مقالات کنفرانس ها
- پایان نامه ها



The NEW ENGLAND JOURNAL of MEDICINE

منابع نوع دوم

- منابع اولیه را خلاصه و فهرست بندی می کنند
- معمولا خلاصه ای از مقاله شامل هدف مطالعه، متغیرهای مهم مطالعه و نتایج به دست آمده بیان می شود
- دسترسی سریع به منابع اولیه
- مهیا کردن حجم وسیعی از اطلاعات در مورد موضوعی خاص
- امکان لینک کردن موضوعات برای انجام یک جستجوی کمپلکس

منابع نوع دوم

- پایگاههای اطلاعاتی ثانویه در زمینه علوم پزشکی و دارویی

Embase, IPA, MEDLINE, Scopus, Cochrane Library

Scopus

PubMed

MEDLINE

Embase

ELSEVIER

منابع نوع سوم

- درواقع جمع بندی و مروری بر منابع اولیه هستند که نویسنده یا نویسندگانی با ادبیات جدید آن را نگارش کرده اند
- اولین قدم در جهت به دست آوردن اطلاعات نسبتا کامل
- در دسترس و راحت
- به روز نبودن اطلاعات

✓ کتب مرجع درسی- text books

✓ منابع الکترونیک (سایت های معتبر و نرم افزارهای اطلاعات دارویی)

✓ مقالات مروری

کتابهای اطلاعات دارویی

- کتابهای عمومی

Martindale, Drug Facts and Comparisons, BNF, AHFS, Lexicomp Drug Information Handbook, PDR

- کتاب های موضوعی

Drugs in Pregnancy and Lactation

Meyler's Side Effects of Drugs

Stockley's Drug Interactions

Drug Interaction Facts

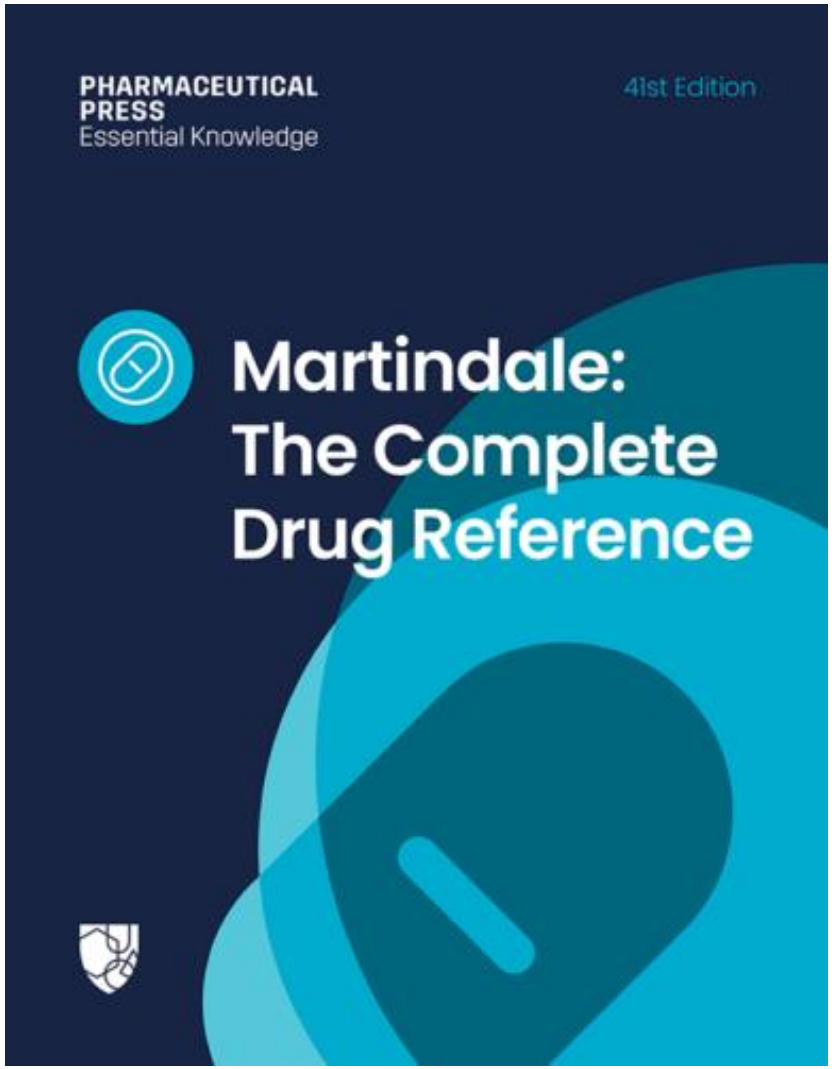
PDR for Herbal Medicines

Handbook on Injectable Drugs

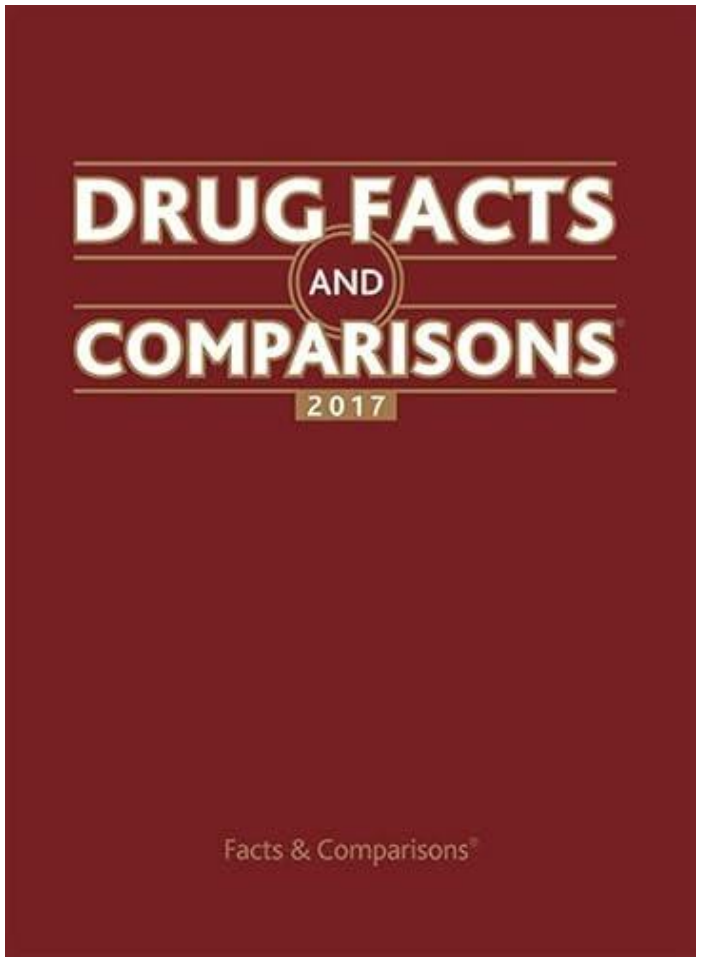
منابع الکترونیک اطلاعات دارویی

- Micromedex
- Up To Date
- Drugs.com

Martindale: The Complete Drug Reference



Drug Facts and Comparisons



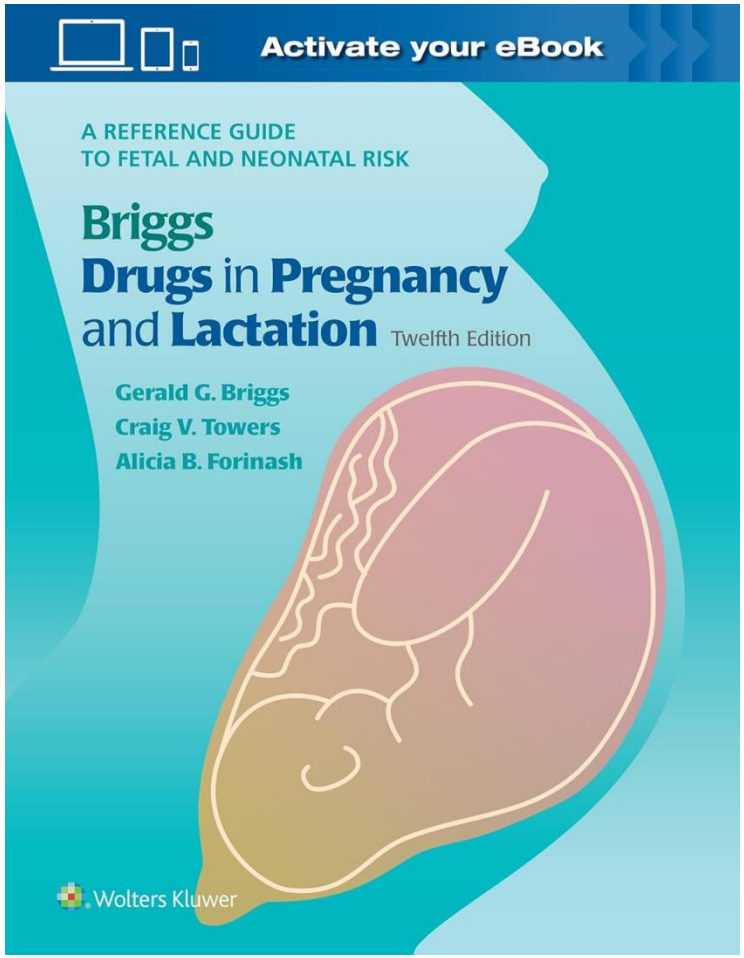
British National Formulary (BNF)

American Hospital Formulary Service (AHFS) Drug Information

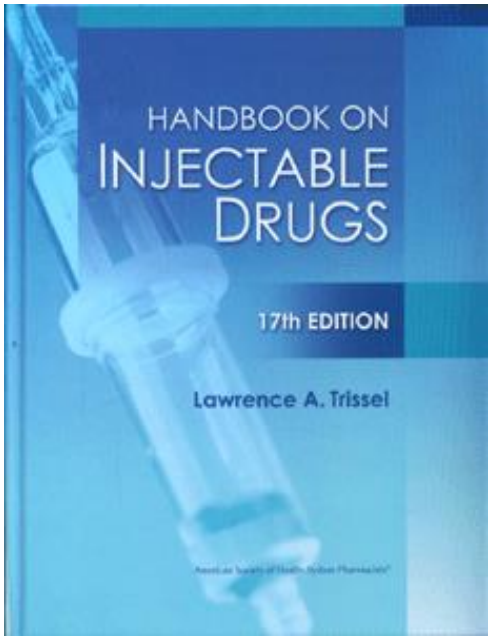
Lexicomp®Drug Information Handbook

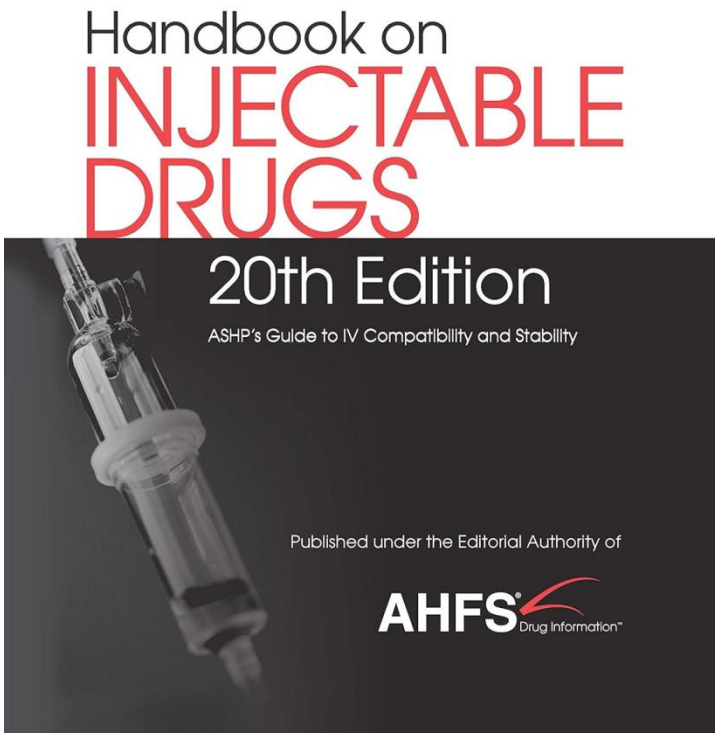
American Pharmacists Association (APhA)

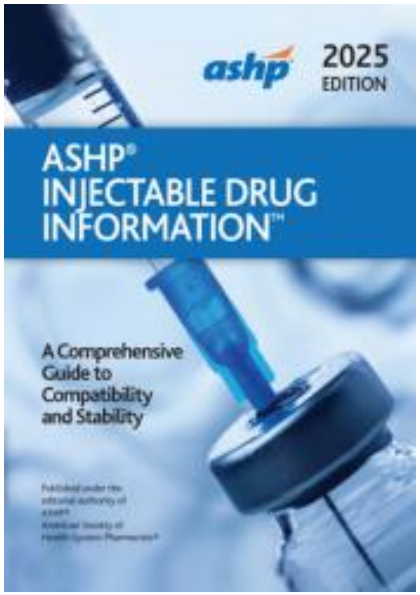
Briggs Drugs in Pregnancy and Lactation: A Reference Guide to Fetal and Neonatal Risk



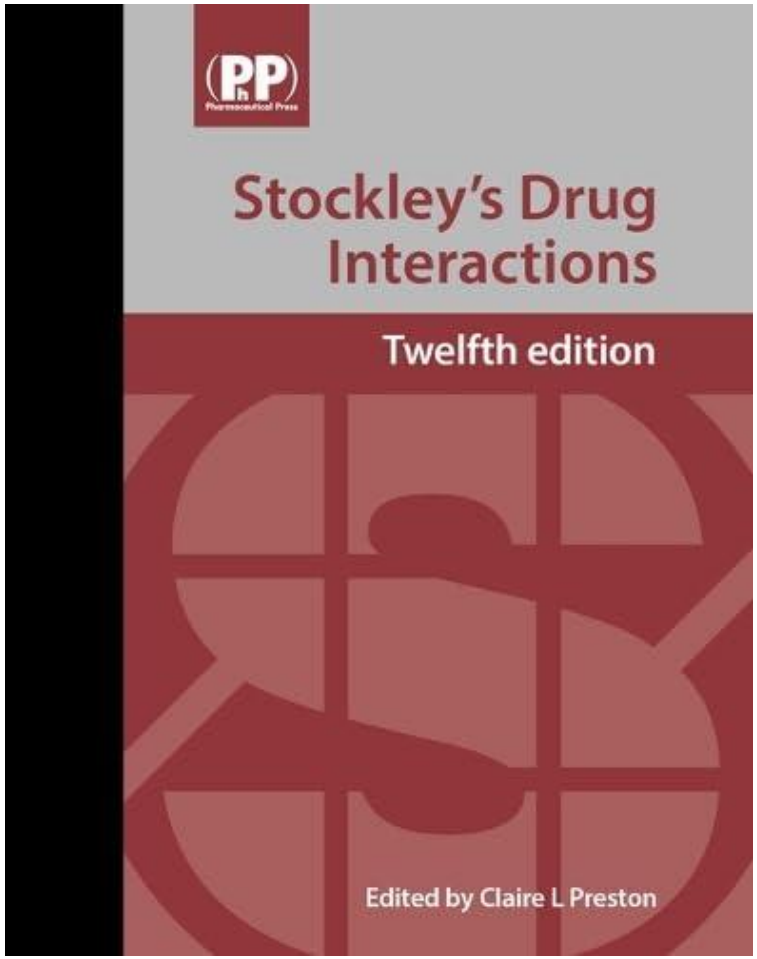
Handbook on Injectable Drugs



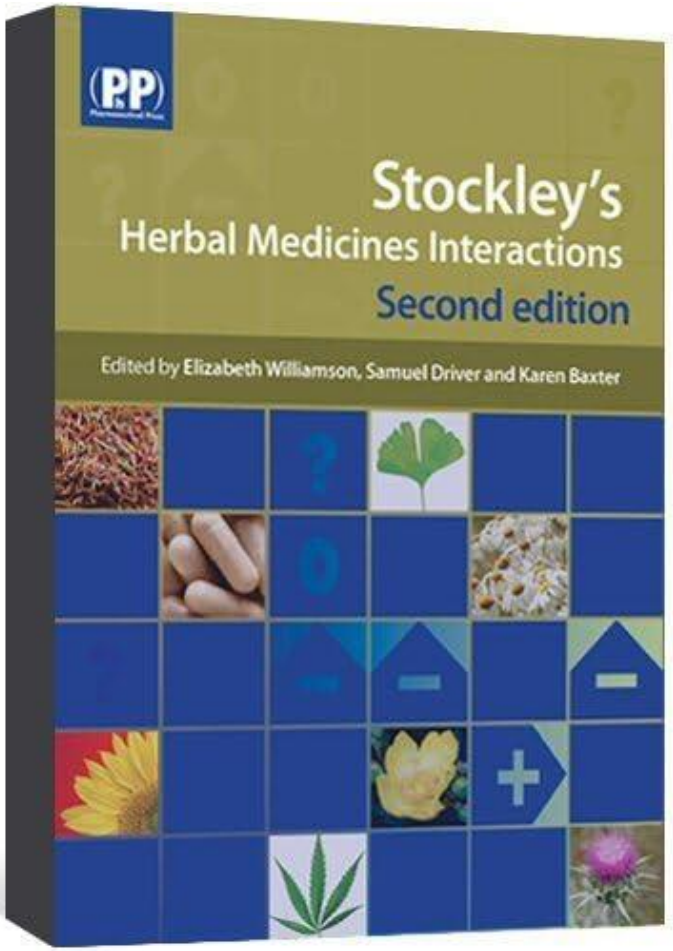




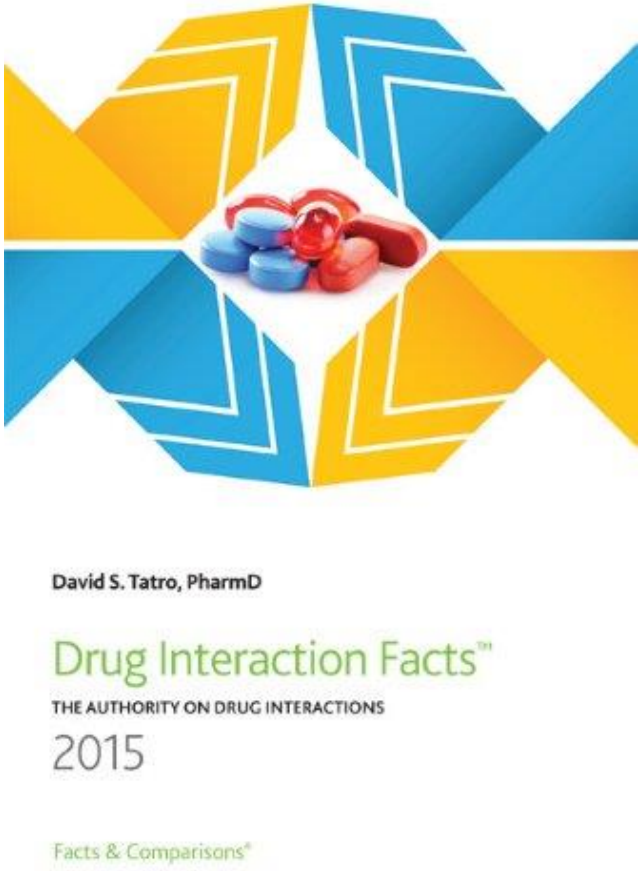
Stockley's Drug Interactions



Stockley's Herbal Medicines Interactions



Drug Interaction Facts: The Authority on Drug Interactions



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بزرگترین نرم افزار پزشکی جهان

iMD - Medical Resources

سریعترین و بهترین روش برای مطالعه و جستجو در کتاب ها و دیتابیس های معتبر پزشکی

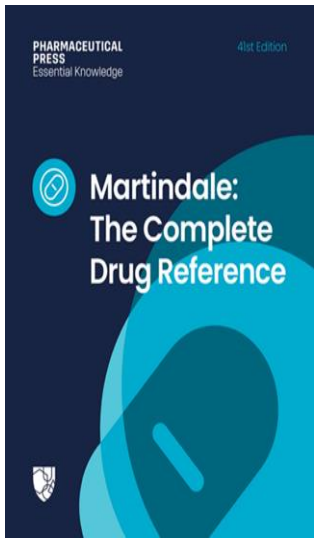
Drug names

- اسامی تجاری، ژنریک، مشابه

✓اسامی تجاری مختلف دارو

✓دارو دارای دو اسم ژنریک است (گلی بنکلامید/ گلی بوراید)

✓دارو ملح های مختلفی دارد (متیل پردنیزولون سوکسینات / استات، متوپرولول تارترات/ سوکسینات)



اسامی تجاری دارو

Clopidogrel: Drug information

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Access UpToDate Lexidrug for additional drug information, tools, and databases.

Contributor Disclosures

For additional information see "Clopidogrel: Patient drug information" and "Clopidogrel: Pediatric dru

For abbreviations, symbols, and age group definitions show table

ALERT: US Boxed Warning

Diminished antiplatelet effect in patients with two loss-of-function alleles of the CY

The effectiveness of clopidogrel results from its antiplatelet activity, which is dependen CYP2C19. Clopidogrel at recommended doses forms less of the active metabolite a of the CYP2C19 genes (termed "CYP2C19 poor metabolizers"). Tests are available tc inhibitor in patients identified as CYP2C19 poor metabolizers.

Brand Names: US

Plavix

Brand Names: Canada

ACT Clopidogrel; AG-Clopidogrel; APO-Clopidogrel; Auro-Clopidogrel; BIO-Clopidogrel; DOM Clopidogrel; Plavix; PMS-Clopidogrel; PRIVA-Clopidogrel [DSC]; RIVA-Clopidogrel; SANDOZ (

Betahistine (United States: Not available): Drug information

Access UpToDate Lexidrug for additional drug information, tools, and databases.

Contributor Disclosures

For additional information see "Betahistine (United States: Not available): Patient drug information"

For abbreviations, symbols, and age group definitions show table

Brand Names: Canada

Auro-Betahistine; M-Betahistine; MINT-Betahistine; NRA-Betahistine; PMS-Betahistine; Serc; TEVA-Betahistine

International Brand Names by Country

For country code abbreviations (show table)

(AE) United Arab Emirates: Betaquil | Betaserc | Biohistine | Histabentine | Lavistina | Merislon | Mevetin | Vertin | Virtigene; (AR) Argentina: Audipax | Audipax multidosis | Betahistina richet | Betaserc | Betina | Meniex | Microser | Microser forte | Microser ultra | Otevil | Rilif | Ronistina | Tiveg | Travelmin; (AT) Austria: Betahistin | Betahistin Arcana | Betahistin viatris | Betaserc; (AU) Australia: Apo betahistine | Betahistine an | Betahistine generichealth | Betahistine mylan | Betahistine sandoz | Betasert | Seniere | Serc | Setear; (BD) Bangladesh: Betatin | Menaril | Merislon | Tiniril | Vectra | Vertinor | Veserc; (BE) Belgium: Betahistine eurogenerics | Betahistine ips | Betahistine merck-generics | Betahistine sandoz | Betahistine teva generics belgium | Betahistop | Betaserc | Docbetahi | Lobione; (BF) Burkina Faso: Betaserc; (BG) Bulgaria: Alvobehist | Betahistine aurobindo | Betaserc | Betastad | Emperin | Microser | Tevabehist | Vertimed | Vertisan | Vestibo; (BR) Brazil: Betadine | Betadine xr | Betaserc | Betina | Debet | Dicloridrato de betaistina | Labirin | Ucibeta; (CH) Switzerland: Betahistin Actavis | Betahistin Mepha | Betahistin spirig hc | Betaserc; (CI) Côte d'Ivoire: Betaserc | Serc; (CL) Chile: Betahistina | Betaserc | Betina | Microser | Noretis | Vasomotal; (CN) China: Betahistine | Merislon | Microser | Min shi lang | Pu lai; (CO) Colombia: Betahistina | Betahistina Clorhidrato | Betahistina diclorhidrato | Betahistina winthrop | Betaserc | Bolaria | Garmisch leflux | Histivert | Leflux | Vaio | Vertibistin | Vertigen | Vertipro | Vertix | Verum | Visep; (CZ) Czech Republic: Avertin | Betahirex | Betahistin accord | Betahistin aurobindo | Betahistin Mylan | Betahistin ratiopharm | Betaserc | Emperin | Microser | Vertibetis | Vertimed | Zenostig; (DE) Germany: Aequamen | Betahistin | Betahistin Ratiopharm | Betaserc | Betavert | Betavert N |

اسامی مشابه دارو

Paracetamol (BAN, rINN)

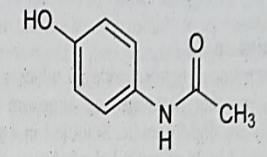
Acetaminophen; *N*-Acetyl-*p*-aminophenol; Paracétamol; Paracetamolis; Paracetamolum; Parasetamoli. 4′-Hydroxyacetanilide; *N*-(4-Hydroxyphenyl)acetamide.

Парацетамол

$C_8H_9NO_2$ = 151.2.

CAS — 103-90-2.

ATC — N02BE01.



NOTE. Compounded preparations of paracetamol may be represented by the following names:

- Co-bucafAPAP (*PEN*)—butalbital, paracetamol, and caffeine
- Co-codamol *x*/*y* (*BAN*)—where *x* and *y* are the strengths in milligrams of codeine phosphate and paracetamol respectively
- Co-codAPAP (*PEN*)—paracetamol and codeine phosphate
- Co-dydramol (*BAN*)—dihydrocodeine tartrate 1 part and paracetamol 50 parts (w/w)
- Co-hycodAPAP (*PEN*)—hydrocodone tartrate and paracetamol
- Co-methiamol *x*/*y* (*BAN*)—where *x* and *y* are the strengths in milligrams of DL-methionine and paracetamol respectively
- Co-oxycodAPAP (*PEN*)—oxycodone and paracetamol
- Co-proxamol (*BAN*)—dextropropoxyphene hydrochloride 1 part and paracetamol 10 parts (w/w)
- Co-proxAPAP (*PEN*)—dextropropoxyphene napsilate and paracetamol.

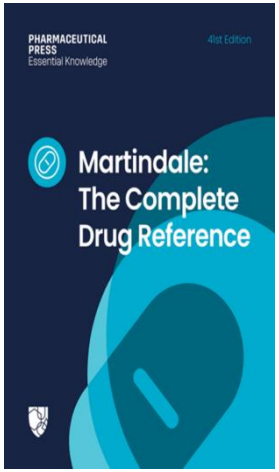
Pharmacopoeias. In *Chin.*, *Eur.* (see p.vii), *Int.*, *Jpn*, *Pol.*, *US*, and *Viet.*

Ph. Eur. 5.5 (Paracetamol). A white crystalline powder. Sparingly soluble in water; freely soluble in alcohol; very slightly soluble in dichloromethane. Protect from light.

USP 29 (Acetaminophen). A white odourless crystalline pow-

Synonyms

- *N*-Acetyl-*p*-aminophenol
- Acetaminofeno
- Acetaminophen
- Asetaminofen
- Paracetamolis
- Paracetamolo
- Paracetamolum



Paracetamol

Synonyms

- *N*-Acetyl-*p*-aminophenol
- Acetaminofeno
- Acetaminophen
- Asetaminofen
- Paracetamolis
- Paracetamolo
- Paracetamolum
- Paracétamol
- Parasetamol
- Parasetamoli
- παρακεταμόλη
- פרצטמול
- باراسيتامول
- アセトアミノフェン
- 对乙酰氨基酚

British Approved Names

- Paracetamol

International Nonproprietary Names

- Paracetamol [rINN (en)]
- Paracetamol [rINN (es)]
- Paracetamolum [rINN (la)]
- Paracétamol [rINN (fr)]
- Парацетамол [rINN (ru)]
- باراسيتامول [rINN (ar)]
- 对乙酰氨基酚 [rINN (zh)]

Anatomic Therapeutic Chemical Classification

ملح های دارو

Hydroxyprogesterone Caproate

Synonyms

- 17-AHPC
- Caproato de hidroxiprogesterona
- Hidroksiprogesteron Heksanoat
- Hidroksiprogesteron Kaproat
- Hidroxiprogesterona, caproato de
- Hydroxyprogesterone Hexanoate
- NSC-17592
- Υδροξυπρογεστερόνη καπροϊκή
- ヒドロキシプロゲステロンカプロン酸エステル

British Approved Names

- Hydroxyprogesterone Caproate [BANM]

International Nonproprietary Names

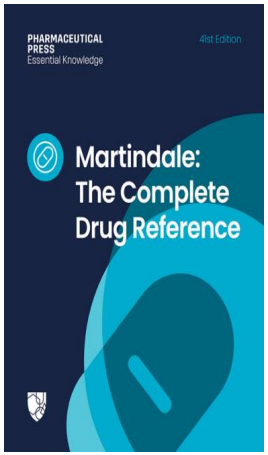
- Caproate d'Hydroxyprogestérone [rINN (fr)]
- Caproato de hidroxiprogesterona [rINN (es)]
- Hydroxyprogesterone Caproate [rINN (en)]
- Hydroxyprogesteroni Caproas [rINN (la)]
- Гидроксипрогестерона Капроат [rINN (ru)]
- كابروات هيدروكسيبروجيستيرون [rINN (ar)]
- 己酸羟孕酮 [rINN (zh)]

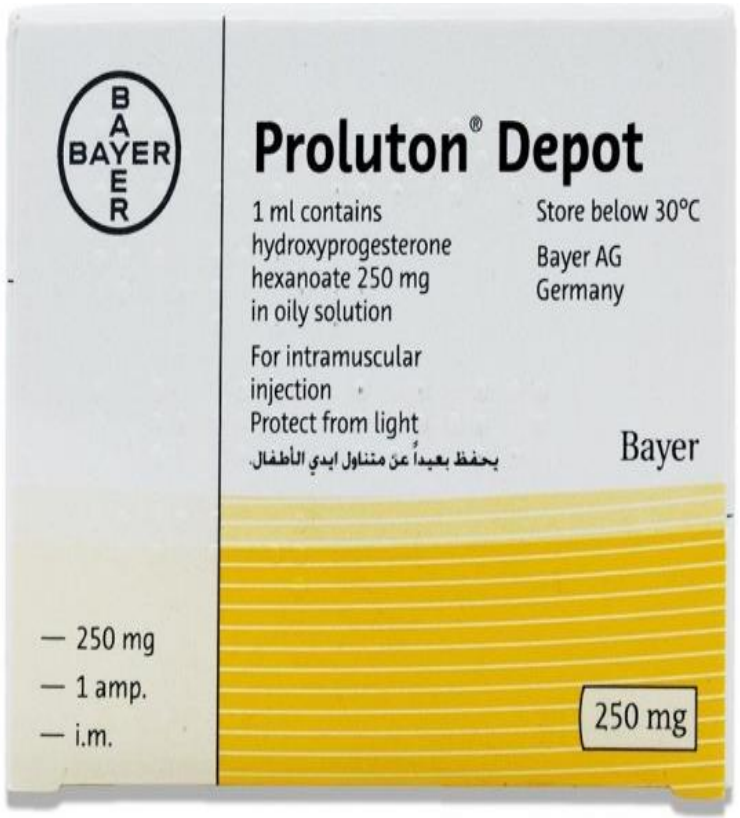
Anatomic Therapeutic Chemical Classification

- G03DA03

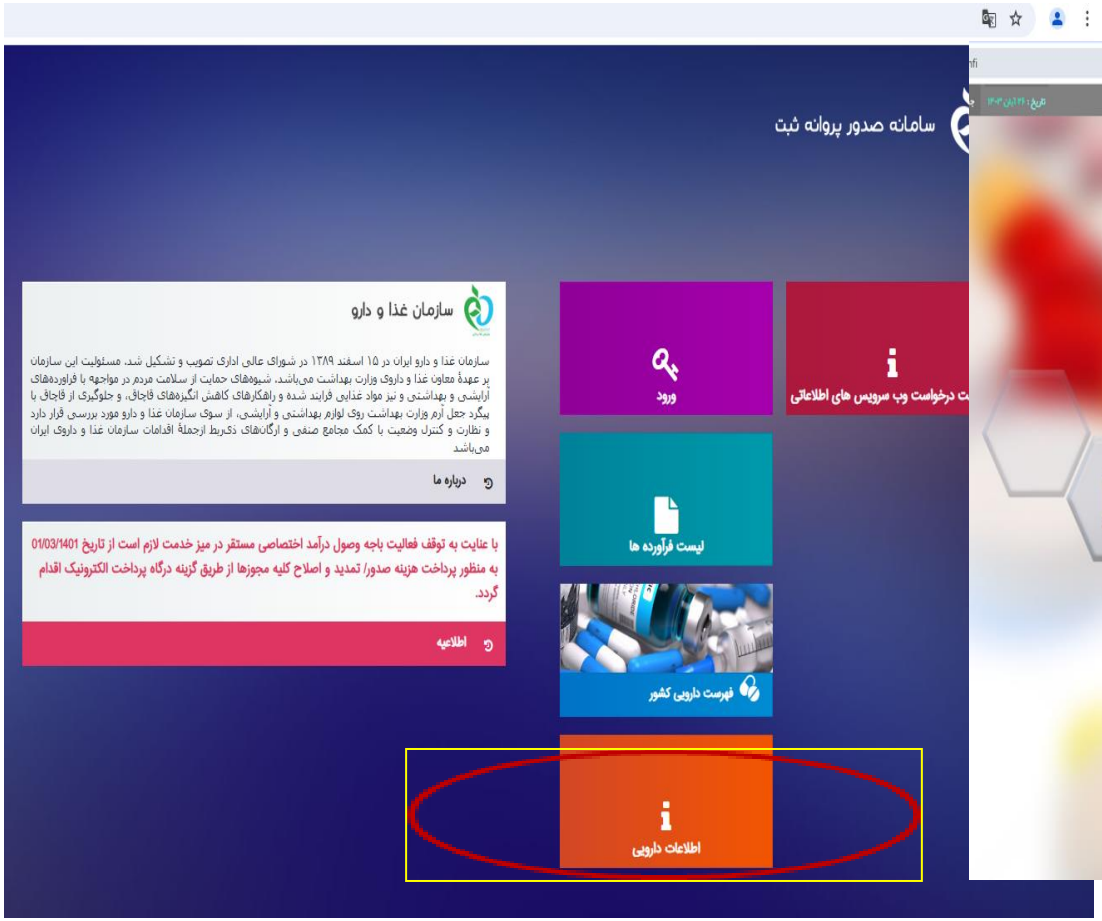
ATC Code (veterinary)

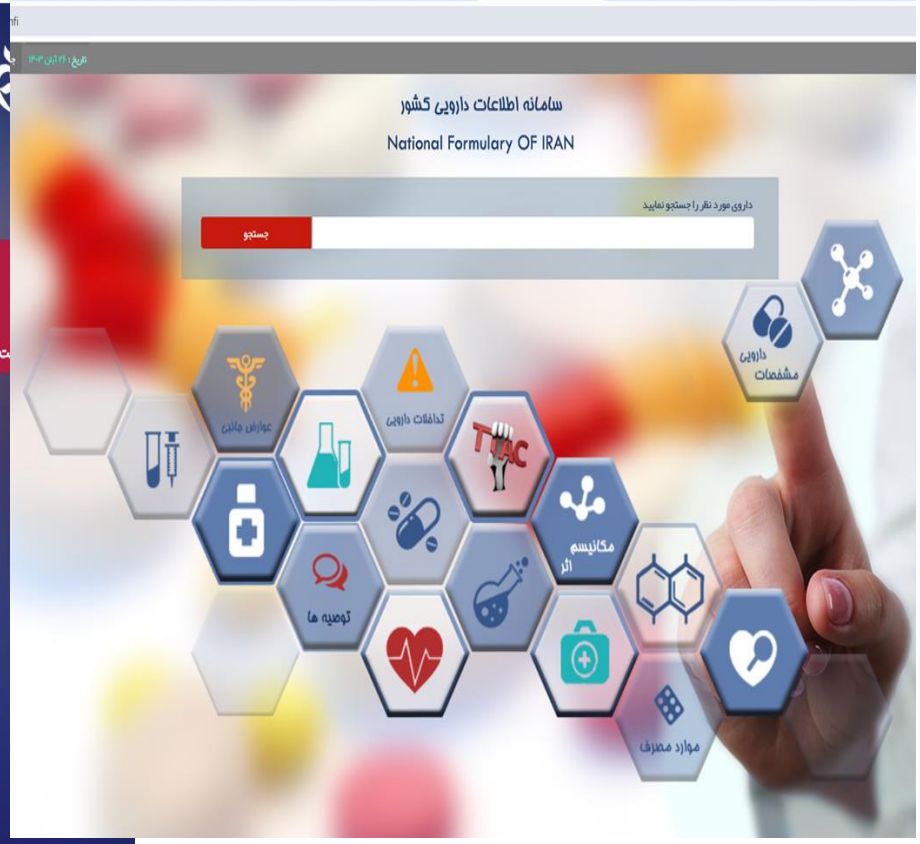
- QG03DA03





اسامی تجاری داروهای ایران
irc.fda.gov.ir





Deprilax??!!

جستجوی دارو
سازمان غذا و دارو

عنوان دارو

deprilax | جستجو

نتیجه جستجو

دپریلکس کپسول پیوسته رهش خوراکی ۷۵ mg (کپسول پیوسته رهش ونلافاکسین)

DEPRILAX CAPSULE, EXTENDED RELEASE ORAL 75 mg (VENLAFAXINE CAPSULE, EXTENDED RELEASE ORAL 75 mg)

صاحب برند : تدبیر کالای جم | صاحب پروانه : تدبیر کالای جم | قیمت هر بسته : ۱،۰۸۹،۰۰۰ ریال

بسته بندی : 30 CAPSULE, EXTENDED RELEASE in 3 BLISTER PACK in 1 BOX | کد فرآورده : ۲۱۷۳۴۰۸۶۵۱۲۸۸۵۳۶ | کد ژنریک : ۱۳۸۷۳

دپریلکس کپسول پیوسته رهش خوراکی ۷۵ mg (کپسول پیوسته رهش ونلافاکسین)

DEPRILAX CAPSULE, EXTENDED RELEASE ORAL 75 mg (VENLAFAXINE CAPSULE, EXTENDED RELEASE ORAL 75 mg)

صاحب برند : تدبیر کالای جم | صاحب پروانه : تدبیر کالای جم | قیمت هر بسته : ۱،۰۸۹،۰۰۰ ریال

بسته بندی : 30 CAPSULE, EXTENDED RELEASE in 3 BLISTER PACK in 1 BOX | کد فرآورده : ۹۶۵۷۵۳۶۹۴۵۶۴۰۲۰۰ | کد ژنریک : ۱۳۸۷۳

مشخصات

نام : DEPRILAX

شکل دارویی : CAPSULE, EXTENDED RELEASE

صاحب پروانه : تدبیر کالای جم

تولید کننده : فن آوریهای نوین دارویی آتیه

قیمت مصرف کننده هر بسته : ۱.۰۸۹.۰۰۰ ریال

GTIN: ۰۶۲۶۰۵۸۹۸۰۰۹۵۶

تعداد در بسته : 30 CAPSULE, EXTENDED RELEASE in 3 BLISTER PACK in 1 BOX

نام عمومی : VENLAFAXINE CAPSULE, EXTENDED RELEASE ORAL 75 mg

نحوه مصرف : ORAL

صاحب برند : تدبیر کالای جم

تاریخ اعتبار پروانه : ۱۴۰۳/۱۲/۱۰

قیمت واحد : ۳۶.۳۰۰ ریال

IRC: ۲۱۷۳۴۰۸۶۵۱۲۸۸۵۳۶

طرح بسته بندی

شکل ظاهری دارو

موارد مصرف : این دارو در درمان افسردگی شدید و اضطراب جنرالیزه به کار می رود.

مکانیسم اثر :

فارماکوکینتیک :

هشدارها : ۱- در صورت وجود اختلالات دوقطبی یا خطر بروز آن ها، پرفشاری خون، بیماری های قلبی، نارسایی کبد، سیروز کبدی، سابقه مانیا، نارسایی کلیه، سابقه تشنج و گلوکوم با زاویه بسته با احتیاط فراوان مصرف شود. ۲- به دلیل احتمال افزایش تمایل به خودکشی در اوایل درمان با این دارو، بیمار باید به دقت توسط بستگان تحت نظر باشد.

عوارض جانبی : ۱- در صورت وجود اختلالات دوقطبی یا خطر بروز آن ها، پرفشاری خون، بیماری های قلبی، نارسایی کبد، سیروز کبدی، سابقه مانیا، نارسایی کلیه، سابقه تشنج و گلوکوم با زاویه بسته با احتیاط فراوان مصرف شود. ۲- به دلیل احتمال افزایش تمایل به خودکشی در اوایل درمان با این دارو، بیمار باید به دقت توسط بستگان تحت نظر باشد.

تداخل های دارویی : مصرف همزمان این دارو با کلوزاپین می تواند منجر به افزایش غلظت خونی کلوزاپین و بروز عوارض ناخواسته از جمله تشنج شود. مصرف همزمان مهارکنندگان مونوآمین اکسیداز، مصرف این دارو نباید تا ۱۴ روز پس از قطع مصرف مهارکنندگان مونوآمین اکسیداز مصرف شود. همچنین مصرف دارو های مونوآمین اکسیداز باید پس از ۷ روز از قطع مصرف ونلافاکسین شروع شود. مصرف همزمان این دارو با دارو های سروتونرژیک، ممکن است منجر به بروز سندرم سروتونرژیک شود. این دارو زمان پروترومبین و زمان ترومبوپلاستین پارشیال را در بیماران تحت درمان با وارفارین افزایش می دهد. مصرف همزمان سایمتیدین با این دارو می تواند منجر به افزایش غلظت پلاسمایی ونلافاکسین شود. این تداخل به ویژه در سالمندان، بیماران مبتلا به پرفشاری خون یا اختلالات کبدی اهمیت دارد

نکات قابل توصیه : ۱- برای حصول به اثر درمانی مطلوب، ممکن است ۴ هفته یا بیشتر زمان مورد نیاز باشد. ۲- در صورت بروز عوارض گوارشی میتوان دارو را همراه غذا مصرف کرد. ۳- قطع مصرف دارو باید به تدریج و با نظر پزشک انجام شود. ۴- به دلیل احتمال بروز سرگیجه، هنگام برخاستن از حالت خوابیده یا نشسته باید احتیاط نمود. ۵- به دلیل اختلالات بینایی، خواب آلودگی در صورت رانندگی یا انجام کار هایی که نیاز به هوشیاری و دقت دارند باید احتیاط کرد. ۶- به دلیل افزایش خطر اقدام به خودکشی، به ویژه در اوایل درمان با این دارو، بستگان و افرادی که از بیمار نگهداری میکنند، باید هر گونه تغییر مشکوک در رفتار بیمار و وخیم شدن وضعیت افسردگی او را به پزشک اطلاع دهند. ۱۰- در صورت بروز هر گونه واکنش آلرژیک مانند بثورات جلدی یا کبیر، باید مراتب فوراً به اطلاع پزشک رسانده شود.

Deprilax??!!


darooyab
سامانه یکپارچه دارویاب
deprilax
خانه
اپلیکیشن
تازه های دارویی
اخبار
شرکت دارویی
داروخانه ها
پزشکان
طبقه بندی داروها
تماس باما
نتایج جستجو
نام دارو
وارد کننده
تولیدکننده
نام ژنریک
DEPRILAX 75MG EXTENDED RELEASE CAP
داروسازی تدبیر کالای جم
Venlafaxine
DEPRILAX 37.5MG EXTENDED RELEASE CAP
داروسازی تدبیر کالای جم
Venlafaxine
آگهی های عمومی
گلوتریو

Outline

- Brand Names: US
- Brand Names: Canada
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- Dosing: Kidney Impairment: Adult
- Dosing: Hepatic Impairment: Adult
- Dosing: Older Adult
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- Contraindications/Warnings
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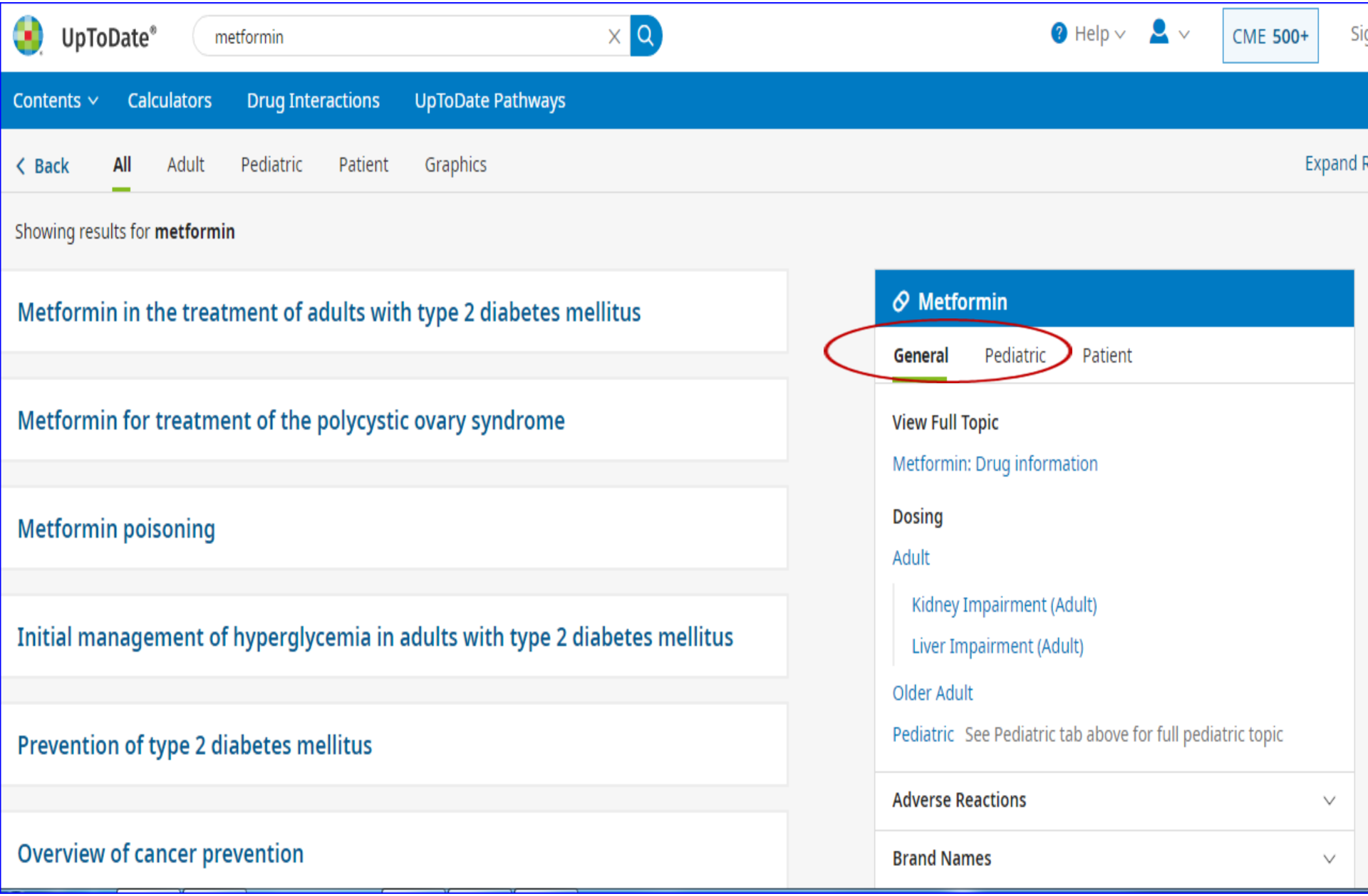
- Pharmacokinetics
- Administration
- Monitoring
- How Supplied
- Toxicology
- Clinical Teaching

Therapeutic use, usage, indication

- مورد مصرف دارو

labled use✓

off-labled /unlabled use✓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metformin
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CME 500+
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Metformin in the treatment of adults with type 2 diabetes mellitus
Metformin for treatment of the polycystic ovary syndrome
Metformin poisoning
Initial management of hyperglycemia in adults with type 2 diabetes mellitus
Prevention of type 2 diabetes mellitus
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Dosing
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Kidney Impairment (Adult)
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Older Adult
Pediatric See Pediatric tab above for full pediatric topic
Adverse Reactions
Brand Names

Dosing: Adult

Expand All

- Antipsychotic-induced weight gain, treatment
- Diabetes mellitus, type 2, prevention
- Diabetes mellitus, type 2, treatment
- Gestational diabetes mellitus, treatment
- Ovarian hyperstimulation syndrome prevention in patients with polycystic ovary syndrome undergoing in vitro fertilization/intracytoplasmic sperm injection

Dosing: Adult

Expand All

Antipsychotic-induced weight gain, treatment

Antipsychotic-induced weight gain, treatment (off-label use):

Note: When used as an early intervention strategy, the goal is plateau of weight gain; however, reversal of weight gain may also be possible. With weight loss, goals of at least 5% of baseline body weight within 6 months are suggested (Ref).

Immediate release: **Oral:** Initial: 500 mg once or twice daily; to minimize GI effects gradually increase dose based on response and tolerability in increments of 500 mg every 1 to 2 weeks up to a target dose of 1 g twice daily (Ref).

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Use: Labeled Indications

Diabetes mellitus, type 2, treatment: Management of type 2 diabetes mellitus when hyperglycemia cannot be managed with diet and exercise alone.

Use: Off-Label: Adult

Antipsychotic-induced weight gain; Diabetes mellitus, type 2 (prevention); Gestational diabetes mellitus (treatment); Ovarian hyperstimulation syndrome prevention in patients with polycystic ovary syndrome undergoing in vitro fertilization/intracytoplasmic sperm injection

MICROMEDEX DRUG INFORMATION

Metformin Hydrochloride

Dosing and Indications

Adult Dosing

Pediatric Dosing

Dose Adjustments

Indications

FDA-Labeled Indications

Type 2 diabetes mellitus

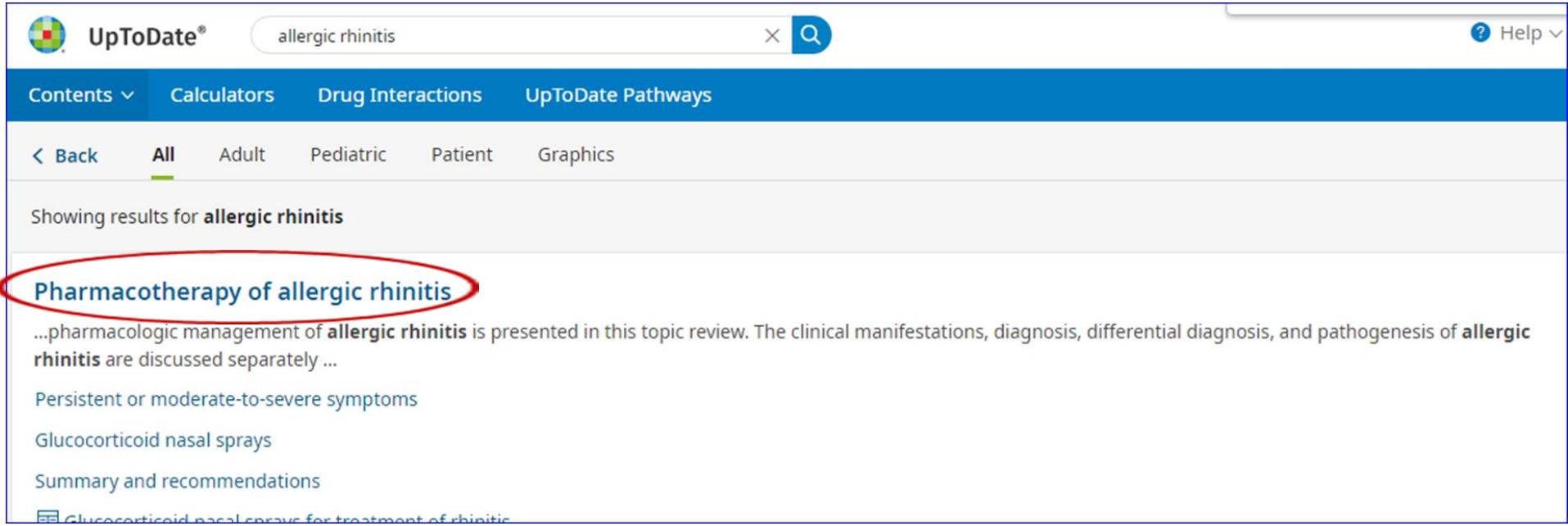
Non-FDA Labeled Indications

- Diabetes mellitus; Prophylaxis
- Gestational diabetes mellitus
- Hyperinsulinar obesity
- Hypersecretion of ovarian androgens; Adjunct
- Non-alcoholic fatty liver
- Polycystic ovary syndrome
- Weight gain, Antipsychotic therapy-induced

Place in therapy

- جایگاه یک دارو در درمان یک بیماری مشخص، خط اول درمان ....
- جایگاه کرومولین سدیم در درمان رینیت آلرژیک؟
- جهت یافتن پاسخ:

✓کلیدواژه جستجو در آپ تو دیت: اسم بیماری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allergic rhinitis
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Showing results for allergic rhinitis
Pharmacotherapy of allergic rhinitis
...pharmacologic management of allergic rhinitis is presented in this topic review. The clinical manifestations, diagnosis, differential diagnosis, and pathogenesis of allergic rhinitis are discussed separately ...
Persistent or moderate-to-severe symptoms
Glucocorticoid nasal sprays
Summary and recommendations

UpToDate® allergic rhinitis Help

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Pharmacotherapy of allergic rhinitis

Topic Graphics (7)

Antihistamine nasal sprays

Combination corticosteroid/antihistamine sprays

Oral antihistamine/decongestant combinations

- Adverse effects of decongestants

LESS-USED THERAPIES

Cromolyn sodium

Ipratropium bromide

Therapies requiring caution

ALTERNATIVE AND COMPLEMENTARY THERAPIES

AUTHORS: Richard D deShazo, MD, Stephen F Kemp, MD
SECTION EDITOR: Jonathan Corren, MD
DEPUTY EDITOR: Anna M Feldweg, MD

Contributor Disclosures

All topics are updated as new evidence b and our peer review process is complete

Literature review current through: **Oct 2**
This topic last updated: **Nov 07, 2024.**

What's New

First-generation antihistamines and seizure risk (November 2024)

Compared with newer, nonsedating antihistamines, older, first-generation antihistamine

Read more

UpToDate

Cromolyn sodium — Cromolyn sodium is a mast cell stabilizer. The dose is 1 to 2 sprays, three to four times daily. It inhibits mast cell release of histamine and other inflammatory mediators by inhibiting the intermediate conductance chloride channel pathways of mast cells, eosinophils, epithelial and endothelial cells, fibroblasts, and sensory neurons [135].

Cromolyn sodium is more effective than placebo in the treatment of seasonal allergic rhinitis. It also has no serious side effects and is available over the counter as a nasal spray. However, most studies show it to be less effective than glucocorticoid nasal sprays or second-generation antihistamines [136].

Cromolyn blocks symptoms associated with the immediate- and late-phase nasal allergen challenge and is effective in doing so, even when used shortly before allergen inhalation. This makes cromolyn particularly useful for individuals who experience episodic symptoms to allergens, such as a cat, where it may be used 30 minutes prior to exposure. For seasonal allergic rhinitis, it is most effective when initiated just prior to the pollen season, rather than after symptoms have begun. Frequent dosing is required to attain a good effect in seasonal allergic rhinitis. Dose frequency can be reduced after the first two to three weeks of treatment.

In summary, cromolyn sodium is very safe, but its utility is limited by the need for frequent dosing and lower efficacy relative to other agents. It may be tried if other agents are not well tolerated.

Comparison of drugs in a disease management

- مقایسه دو دارو از یک دسته دارویی در یک بیماری معین
- مقایسه دو دسته دارویی در یک بیماری معین

- مقایسه کلونازپام با آلپرازولام در بیماری پانیک؟
- مقایسه SSRIs با BDZs در بیماری پانیک؟
- جهت یافتن پاسخ:

✓کلیدواژه جستجو در آپ تو دیت: اسم بیماری

Panic disorder in adults: Treatment overview

... **Panic disorder** is characterized by recurrent, unexpected **panic attacks** along with one month of either worry about future attacks or the consequences of attacks (eg, medical concerns), or a significant ...

SSRIs as preferred initial pharmacotherapy

Partial response to initial medication

Summary and recommendations

Choosing initial treatment for individuals with panic disorder

Subsequent pharmacologic management of panic disorder

UpToDate

INITIATING TREATMENT

CBT as preferred psychotherapy

SSRIs as preferred initial pharmacotherapy

Considerations for specific populations

- Suicidality or co-occurring mental disorders
- Adjunctive treatment for marked distress or early side effects

DURATION OF TREATMENT

MANAGEMENT OF SUBOPTIMAL RESPONSE

Psychodynamic psychotherapy for those with "adult separation anxiety"

For those agreeing to combined treatment

Subsequent pharmacologic management

- Poor response to initial medication
- Partial response to initial medication
  - Benzodiazepines for those without an SUD

Partial response to initial medication — For individuals who have a partial response to an SSRI at the maximally tolerated dose, we suggest augmentation. Our choice of augmenting agent is based on whether there is a comorbid substance use disorder (SUD; active or by history).

Benzodiazepines for those without an SUD — We typically use the long-acting benzodiazepine, clonazepam, as augmentation for individuals without a history of an SUD who have had a partial response to initial pharmacologic agent. (See 'Adjunctive treatment for marked distress or early side effects' above.)

Preference for long-acting benzodiazepine (clonazepam) – Clonazepam's longer half-life allows dosing once to twice daily, versus three to four times daily required for commonly used alprazolam. For individuals who have difficulty tolerating clonazepam due to sedation, use of the more slowly absorbed lorazepam is a consideration.

Drug	Adult oral total daily dose (mg)*
Alprazolam	0.5 to 6
Alprazolam extended release	0.5 to 6 once daily
Bromazepam◇ §	6 to 30
Chlordiazepoxide§	5 to 100
Clonazepam	0.5 to 4

SSRIs as preferred initial pharmacotherapy — For individuals who prefer pharmacotherapy, we typically suggest treatment with a selective serotonin reuptake inhibitor (SSRI). Others such as serotonin-norepinephrine reuptake inhibitors, tricyclic antidepressants, monoamine oxidase inhibitors, and benzodiazepines have demonstrated efficacy in panic disorder, but we generally reserve them for patients with suboptimal response to SSRIs (see 'Management of suboptimal response' below). There are few head-to-head clinical trials comparing these drugs in panic disorder, but these trials and trials comparing these drugs with placebo suggest that they all have comparable efficacy.

Our preference for SSRIs over other antidepressants is based on their relatively benign side effect profile and safety in overdose. Among medications for panic disorder, SSRIs have been the most widely tested in clinical trials and shown to be efficacious compared with placebo [22].

- **Choosing an SSRI** – There is no evidence for superior efficacy in panic disorder for any particular SSRI versus any other [23]. Our selection of a particular medication is guided by differences in side effect profile, propensity for medication interactions, half-life, and availability of less expensive, generic preparations. Adverse effects of SSRIs and other antidepressants can be found elsewhere and on the table (table 1). (See "Selective serotonin reuptake inhibitors: Pharmacology, administration, and side effects".)

Comparison of drugs of the same drug class (general)

- مقایسه کلی دو دارو/ داروهای یک دسته دارویی

✓کلید واژه جستجو: اسم دسته دارویی

Selective serotonin reuptake inhibitors: Pharmacology, administration, and side effects

... activation. **Citalopram** and escitalopram inhibit liver enzymes less than other **SSRIs** and are thus the **SSRIs** of choice for situations in which drug-drug interactions are a concern . **Sertraline** is a reasonable

Outline

UpToDate

Dosage, dosing

- دوزینگ داروها در بیماری های مختلف- بالغین، کودکان و سالمندان
- تنظیم دوز در نارسایی کبد و کلیه
- تبدیل دوز، قطع دارو

Dosing: Adult

Usual dosage range: Oral: 400 mg/day divided every 12 or 24 hours.

- Gonococcal infection, uncomplicated
- Gonococcal infection, expedited partner therapy
- Rhinosinusitis, acute bacterial
- Streptococcal pharyngitis, group A
- Typhoid fever
- Urinary tract infection

Urinary tract infection (alternative agent): Note: Use only when preferred agents cannot be used; limited evidence suggests inferior efficacy of oral beta-lactams (Ref).

Cystitis, acute uncomplicated or acute simple cystitis (infection limited to the bladder without signs/symptoms of upper tract, prostate, or systemic infection): **Oral:** 400 mg once daily for 7 days (Ref).

Urinary tract infection, complicated (including pyelonephritis): **Oral:** 400 mg once daily for 10 to 14 days (Ref); for patients with symptomatic improvement within the first 48 to 72 hours of therapy, some experts recommend shorter courses of 7 to 10 days (Ref). **Note:** Oral therapy should follow appropriate parenteral therapy (Ref).

Dosing: Kidney Impairment: Adult

The renal dosing recommendations are based upon the best available evidence and clinical expertise. Senior Editorial Team: Bruce Mueller, PharmD, FCCP, FASN, FNKF; Jason A. Roberts, PhD, BPharm (Hons), B App Sc, FSHP, FISAC; Michael Heung, MD, MS.

Note: Single-dose regimens (eg, 800 mg as a single dose) do not need to be dose adjusted for any degree of kidney dysfunction or type of renal replacement therapy. Renally adjusted dose recommendations are based on doses of 400 mg/day. Use only chewable tablets or oral suspension for patients with kidney dysfunction since unable to achieve recommended doses using capsules. Recommendations below are expert opinion derived from Dhib 1991, Guay 1986, and manufacturer's labeling.

Altered kidney function:

CrCl ≥60 mL/minute: No dosage adjustment necessary.

CrCl >20 to <60 mL/minute: 300 mg once daily.

CrCl ≤20 mL/minute: 200 mg once daily.

Hemodialysis, intermittent (thrice weekly): Limited dialyzability (Ref): 300 mg once daily.

Peritoneal dialysis: Minimally dialyzed (Ref): 200 mg once daily.

Dosing: Liver Impairment: Adult

No dosage adjustment provided in manufacturer's labeling.

Dosing: Older Adult

Refer to adult dosing.

Dosing: Pediatric

(For additional information see "Cefixime: Pediatric drug information")

Note: Unless otherwise specified, any dosage form may be used. Oral suspension is available in multiple concentrations; use caution.

General dosing; susceptible infection (mild to moderate): Infants, Children, and Adolescents: Oral: 8 mg/kg/day once daily or in divided doses every 12 hours; maximum daily dose: 400 mg/**day** (Ref).

Expand All

Febrile neutropenia

Gonococcal infection, uncomplicated infections of the cervix, urethra, or rectum

Irinotecan-associated diarrhea, prophylaxis

Metformin conversion recommendations:

Conversion from IR to ER dosage forms: Patients receiving metformin immediate-release may be switched to metformin extended-release once daily at the same total daily dose, up to 2 g once daily. However, in patients who are doing well with immediate-release metformin, some experts recommend they continue using it, as there is little additional benefit documented with ER tablets (Ref).

روش صحیح مصرف دارو (Administration)

- نکات مورد توجه در استفاده از دارو در اشکال مختلف

✓مونوگراف دارویی مربوط به بالغین و کودکان- Administration

✓مونوگراف بیمار- How is this drug best taken

Ibandronate tablet

Administration: Adult

Oral: Administer 60 minutes before the first food or drink of the day (other than water) and prior to taking any oral medications or supplements (eg, calcium, antacids, vitamins). Ibandronate should be taken in an upright position with a full glass (6 to 8 oz) of plain water and the patient should avoid lying down for 60 minutes to minimize the possibility of GI side effects. Mineral water with a high calcium content should be avoided. The tablet should be swallowed whole; do not chew or suck. Do not eat or drink anything (except water) for 60 minutes following administration of ibandronate.

How is this drug best taken?

Use this drug as ordered by your doctor. Read all information given to you. Follow all instructions closely.

Tablets:

- Take 150 mg tablet on the same day each month.
- Take with a full glass of water at least 60 minutes before the first food, drink, or drugs of the day.
- Take with plain water only. Avoid taking with mineral water, milk, or other drinks.
- Swallow tablet whole. Do not chew, break, or crush.
- Do not suck on this product.
- Do not lie down for at least 60 minutes after taking this drug.
- Do not take calcium, iron, vitamins with minerals, or antacids within 1 hour of this drug.
- Keep taking this drug as you have been told by your doctor or other health care provider, even if you feel well.

Meropenem

→ **Administration: Adult**

IV: For IV infusion only; do not administer IV push. Infuse doses ≤500 mg over 20 to 30 minutes; infuse doses >500 mg over 40 to 60 minutes. If nausea and/or vomiting occur during administration, decrease the rate of IV infusion.

How is this drug best taken?

Use this drug as ordered by your doctor. Read all information given to you. Follow all instructions closely.

- It is given as an infusion into a vein over a period of time.

شکل دارویی (Dosage form)

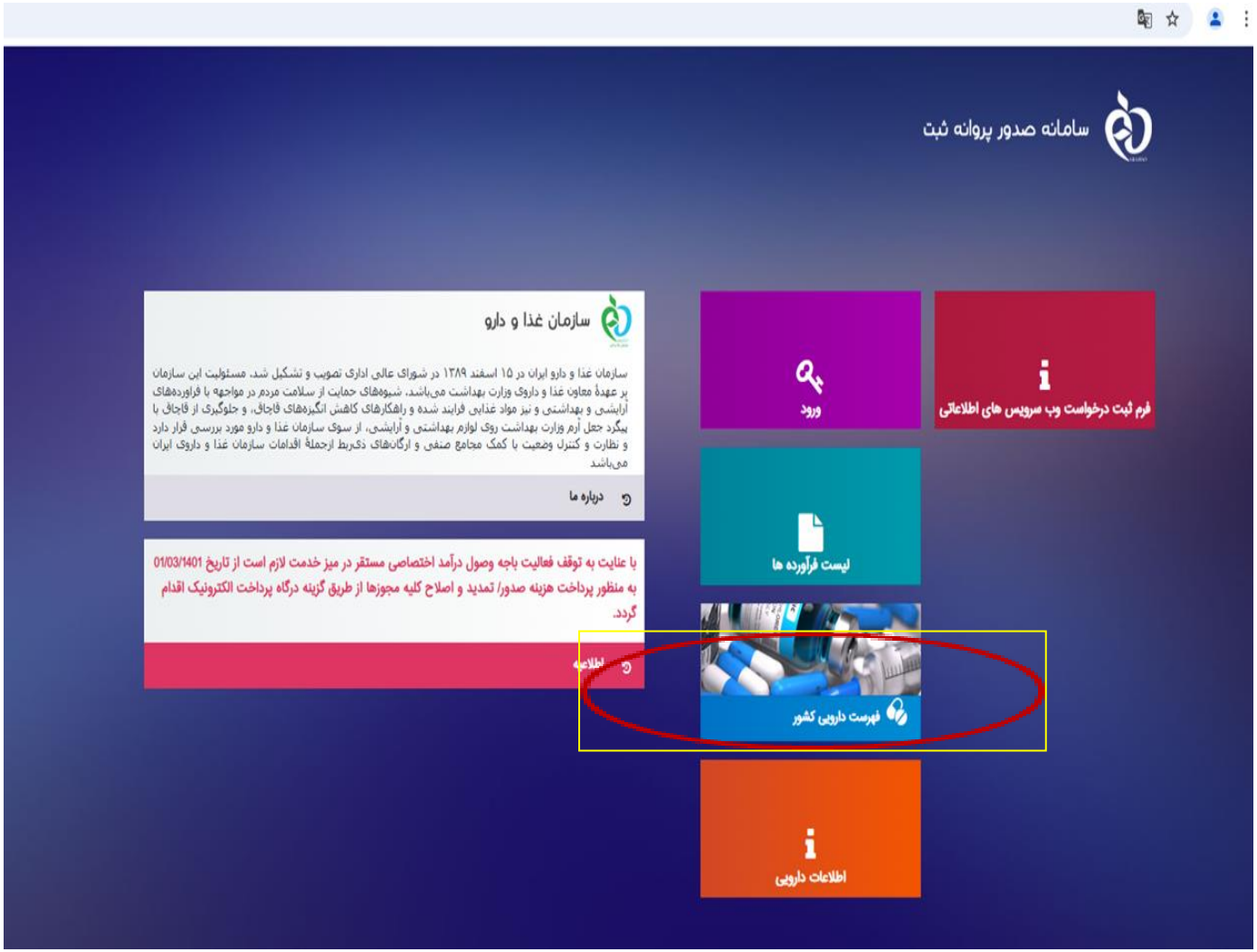
- مولکول دارویی (نام/ ساختار شیمیایی)
- ملح دارو
- قدرت دارو
- شکل خود فرآورده
- روکش
- راه مصرف

✓قرص متوپرولول تارترات ۲۵ میلی گرم خوراکی

✓قرص پیوسته رهش متوپرولول سوکسینات ۴۷,۵ میلی گرم خوراکی

✓آمپول متوپرولول تارترات ۱ میلی گرم تزریقی

اشکال دارویی ایران
irc.fda.gov.ir



فهرست دارویی کشور

metoprolol | جستجو | ارسال به اکسل

نام	قدرت دارویی(فرمت قدیمی)	مولکول	نحوه مصرف	شکل دارویی	کد ATC	سطح دسترسی	نوع دارو	کاربرد بالینی تایید شده	تاریخ کارگروه ورود به فهرست
METOPROLOL TARTRATE	mg ۱	METOPROLOL TARTRATE 1 mg/1mL	PARENTERAL	INJECTION	C۰۷AB۰۲	بيمارستاني	غیر بیولوژیک		۱۳۷۹/۰۴/۰۶
METOPROLOL TARTRATE	mg ۵۰	METOPROLOL TARTRATE 50 mg	ORAL	TABLET	C۰۷AB۰۲	_	غیر بیولوژیک		
METOPROLOL SUCCINATE	mg ۴۷.۵	METOPROLOL SUCCINATE 47.5 mg	ORAL	TABLET,EXTENDED RELEASE	C۰۷AB۰۲	_	غیر بیولوژیک		۱۳۸۵/۱۱/۲۴
METOPROLOL SUCCINATE	mg ۹۵	METOPROLOL SUCCINATE 95 mg	ORAL	TABLET,EXTENDED RELEASE	C۰۷AB۰۲	_	غیر بیولوژیک		
METOPROLOL SUCCINATE	mg ۱۹۰	METOPROLOL SUCCINATE 190 mg	ORAL	TABLET,EXTENDED RELEASE	C۰۷AB۰۲	_	غیر بیولوژیک		۱۳۸۵/۱۱/۲۴
METOPROLOL SUCCINATE	mg ۲۳.۷۵	METOPROLOL SUCCINATE 23.75 mg	ORAL	TABLET,EXTENDED RELEASE	C۰۷AB۰۲	_	غیر بیولوژیک		
NOT EXIST		/	Not Exist	Not Exist		_	غیر بیولوژیک		
METOPROLOL TARTRATE	mg ۱۰۰	METOPROLOL TARTRATE 100 mg	ORAL	TABLET	C۰۷AB۰۲	_	غیر بیولوژیک		۱۳۸۰/۰۶/۲۵

Contraindications –موارد منع مصرف

- Prednisolone

→ **Contraindications**

Hypersensitivity to prednisolone or any component of the formulation; administration of live or live attenuated virus vaccines (with immunosuppressive doses of corticosteroids); systemic fungal infections.

Significant drug interactions exist, requiring dose/frequency adjustment or avoidance. Consult drug interactions database for more information.

Canadian labeling: Additional contraindications (not in US labeling): Hepatitis; herpes; shingles; varicella; measles; uncontrolled active infections; uncontrolled psychotic states.

UpToDate

Warnings/Precautions – احتیاطات و هشدارها

- Prednisolone:

✓**Concerns related to adverse effects**:

Adrenal suppression, Anaphylactoid reactions, Immunosuppression, Kaposi sarcoma, Myopathy, Psychiatric disturbances

✓**Disease-related concerns**

✓**Special populations**

✓**Dosage form specific issues**

✓**Other warnings/precautions**

UpToDate

Disease-related concerns:

- Cardiovascular disease: Use with caution in patients with HF and/or hypertension; use has been associated with fluid retention, electrolyte disturbances, and hypertension. Use with caution following acute MI; corticosteroids have been associated with myocardial rupture.

- Diabetes: Use corticosteroids with caution in patients with diabetes mellitus; may alter glucose production/regulation leading to hyperglycemia.

Special populations:

- Older adults: Use cautiously in older adults with the smallest possible effective dose for the shortest duration.

- Pediatric: May affect growth velocity; growth should be routinely monitored in pediatric patients.

Dosage form specific issues:

- Benzyl alcohol and derivatives: Some dosage forms may contain sodium benzoate/benzoic acid; benzoic acid (benzoate) is a metabolite of benzyl alcohol; large amounts of benzyl alcohol (≥99 mg/kg/day) have been associated with a potentially fatal toxicity ("gasping syndrome") in neonates; the "gasping syndrome" consists of metabolic acidosis, respiratory distress, gasping respirations, CNS dysfunction (including convulsions, intracranial hemorrhage), hypotension, and cardiovascular collapse (AAP ["Inactive" 1997]; CDC 1982); some data suggests that benzoate displaces bilirubin from protein binding sites (Ahlfors 2001); avoid or use dosage forms containing benzyl alcohol derivative with caution in neonates. See manufacturer's labeling.

- Propylene glycol: Some dosage forms may contain propylene glycol; large amounts are potentially toxic and have been associated hyperosmolality, lactic acidosis, seizures, and respiratory depression; use caution (AAP 1997; Zar 2007).

Other warnings/precautions:

- Discontinuation of therapy: Withdraw therapy with gradual tapering of dose.
- Stress: Patients may require higher doses when subject to stress (ie, trauma, surgery, severe infection).

Adverse effects/reactions/undesirable effects

- Adverse reactions (Significant): Considerations
  - عوارض جانبی مهم

- Adverse reactions
  - عوارض جانبی کلی

✓ابتدا بر اساس شیوع (نه اهمیت): ۱۰٪> و ۱۰-۱٪ و <۱٪

✓سپس بر اساس اثر دارو بر بخش های مختلف بدن

UpToDate

Clozapine

Adverse Reactions (Significant): Considerations

- Anticholinergic effects
- Dyslipidemia
- Extrapyramidal symptoms
- Fever
- Gastrointestinal hypomotility
- Hepatic effects
- Hyperglycemia
- Mortality in older patients
- Myocarditis/cardiomyopathy
- Neuroleptic malignant syndrome
- Orthostatic hypotension
- QTc prolongation
- Sedation
- Seizures or myoclonus
- Severe neutropenia/agranulocytosis
- Sialorrhea
- Temperature dysregulation
- Venous thromboembolism
- Weight gain

Severe neutropenia/agranulocytosis

Clozapine may cause **severe neutropenia** (ANC <500/mm^3) in adult and pediatric patients and potentially life-threatening **agranulocytosis** (ANC <100/mm^3) in adult and pediatric patients (Ref). Due to the risk, clozapine is only available under a Risk Evaluation Mitigation Strategy (REMS), and baseline and regular ANC monitoring is required. Patients with benign ethnic neutropenia are *not* at increased risk for developing clozapine-induced severe neutropenia and may receive clozapine, but these patients require a different ANC monitoring algorithm and frequently have ANC values in the typical neutropenia range (Ref).

Mechanism: Non–dose-related; idiosyncratic. Mechanism has not been fully elucidated, although an immune-mediated mechanism has been proposed. Clozapine has a high potential to undergo oxidative degradation and form nitrenium ion. The nitrenium ion may cause direct toxicity or stimulate an immune response following covalent binding to human leukocytes and forming an antigen (Ref).

Onset: Varied; clozapine-induced agranulocytosis typically occurs in the first 18 weeks of therapy, with a few cases developing after 6 months of use. Risk is further decreased after 1 year of treatment (Ref).

Risk factors:

- History of drug-induced neutropenia or preexisting low WBC or ANC
- Age between 40 and 59 years (Ref). **Note:** It has also been suggested that children and adolescents are at increased risk for neutropenia (Ref)

Adverse Reactions

The following adverse drug reactions and incidences are derived from product labeling unless otherwise specified.

>10%:

Cardiovascular: Hypertension (4% to 12%), hypotension (9% to 13%), tachycardia (17% to 25%) (table 1)

Endocrine & metabolic: Hypercholesterolemia (8% to 38%) (table 2), hyperglycemia (27% to 42%) (table 3), hypertriglyceridemia, weight gain (4% to 31%)

Gastrointestinal: Constipation (14% to 25%) (table 4), decreased gastrointestinal motility (literature suggests an incidence of 31%) (Cohen 2017), dyspepsia (14%), nausea (≤17%), sialorrhea (13% to 48%) (table 5), vomiting (≤17%)

Nervous system: Dizziness (14% to 27%) (table 6), drowsiness (≤46%) (table 7), EEG pattern changes (literature suggests an incidence of 63%) (Goyal 2011), insomnia (2% to 20%), sedated state (≤39%) (table 8), vertigo (≤19%)

Miscellaneous: Fever (5% to 13%) (table 9)

1% to 10%:

Cardiovascular: Syncope (6%)

Dermatologic: Diaphoresis (6%), skin rash (2%)

Gastrointestinal: Abdominal distress (≤4%), diarrhea (2%), heartburn (≤4%), xerostomia (5% to 6%) (table 10)

Genitourinary: Urine abnormality (2%)

Hematologic & oncologic: Agranulocytosis (literature suggests an incidence up to 1% to 2%) (Alvir 1993), eosinophilia (1%) (Chatterton 1997; Lally 2019; Majumder 2011; Monteleone 2021), leukopenia (≤3%), neutropenia (≤3%, can be severe neutropenia)

Nervous system: Agitation (4%), akathisia (3%), akinesia (≤4%), confusion (3%), fatigue (2%), headache (7% to 10%), nightmares (≤4%), restlessness (4%), seizure (3%; dose related), sleep disturbance (≤4%), tremor (6%)

Neuromuscular & skeletal: Hypokinesia (≤4%), muscle rigidity (3%)

Ophthalmic: Visual disturbance (5%)

Frequency not defined:

Cardiovascular: Bradycardia, orthostatic hypotension

Nervous system: Tardive dyskinesia

Postmarketing:

ALERT: US Boxed Warning

Expand All

- **Severe neutropenia:**
- **Orthostatic hypotension, bradycardia, syncope:**
- **Seizures:**
- **Myocarditis, cardiomyopathy and mitral valve incompetence:**
- **Increased mortality in elderly patients with dementia-related psychosis:**

ALERT: US Boxed Warning

Expand All

Severe neutropenia:

Clozapine treatment has caused severe neutropenia, defined as an absolute neutrophil count (ANC) less than 500/mm^3. Severe neutropenia can lead to serious infection and death. Prior to initiating treatment, a baseline ANC must be at least 1,500/mm^3 for the general population and must be at least 1,000/mm^3 for patients with documented Benign Ethnic Neutropenia. During treatment, patients must have regular ANC monitoring. Advise patients to immediately report symptoms consistent with severe neutropenia or infection (eg, fever, weakness, lethargy, sore throat).

Because of the risk of severe neutropenia, clozapine is available only through a restricted program under a Risk Evaluation Mitigation Strategy (REMS) called the Clozapine REMS Program.

Monitoring parameters

Monitoring Parameters

The only mandatory monitoring is the routine ANC, however, monitoring of several other clinical outcomes is recommended. Clozapine-treated patients should be monitored as frequently as possible in the first few weeks during titration.

Frequency of Antipsychotic Monitoring for Clozapine [a,b]

Monitoring parameter	Frequency of monitoring	Comments
Adherence	Every visit	
Blood chemistries (electrolytes, renal function, liver function, thyroid stimulating hormone)	Annually	
Bowel function	Every visit	
CBC (ANC)	Refer to "ANC monitoring" section following this table (~weekly for 6 months, biweekly for 6 months, then monthly after 1 year).	

- ECG, EPS, Fall risk, FBS/ HbA1c, Lipid panel, Mental status….., Weight/BMI

ANC monitoring:

US labeling:

Note: See below for considerations during COVID-19 quarantine, in patients with benign ethnic neutropenia (BEN), hospice situations, use of concurrent medications that cause neutropenia, and Canadian labeling. Laboratory hematology results may be presented in different units; 1 mcL = 1 mm^3.

General population: Prior to initiating treatment, obtain a baseline ANC; the ANC must be ≥1,500/mm^3 for the general population in order to initiate treatment. During the first 6 months of treatment, monitor the ANC weekly. If the ANC remains ≥1,500/mm^3, the monitoring frequency can be reduced to every 2 weeks for the next 6 months. If the ANC remains ≥1,500/mm^3 for the second 6 months of continuous therapy, the ANC monitoring frequency can be reduced to once every 4 weeks.

Pregnancy/ Lactation

- ایمنی دارو در بارداری/ شیردهی؟
- داروی مناسب و ایمن برای یک بیماری در دوران بارداری/ شیردهی؟

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. The teratogenic effects of warfarin may be dose dependent (ACC/AHA [Otto 2021]).

Use is contraindicated during pregnancy except in patients with mechanical heart valves who are at high risk for thromboembolism; use is also contraindicated in patients with threatened abortion, eclampsia, or preeclampsia.

Patients with mechanical heart valves have an increased risk of adverse maternal and fetal outcomes and these risks are greater without appropriate anticoagulation. When choosing therapy, fetal outcomes (ie, pregnancy loss, malformations), maternal outcomes (ie, venous thromboembolism, hemorrhage), burden of therapy, and maternal preference should be considered. Use of warfarin during the first trimester may be considered if the therapeutic INR can be achieved with a dose ≤5 mg/day. Alternately, adjusted-dose low molecular weight heparin or adjusted-dose heparin may be used until after the first trimester, when therapy can be changed to warfarin, if required. Warfarin should be discontinued and changed to heparin at least 1 week prior to delivery (ACC/AHA [Otto 2021]). Consult current recommendations for appropriate use in pregnancy.

CLINICAL STATEMENTS AND GUIDELINES

13.2.2. Anticoagulation for Pregnant Women With Mechanical Prosthetic Heart Valves

Recommendations for Anticoagulation for Pregnant Women With Mechanical Prosthetic Heart Valves
Referenced studies that support the recommendations are summarized in Online Data Supplement 44.

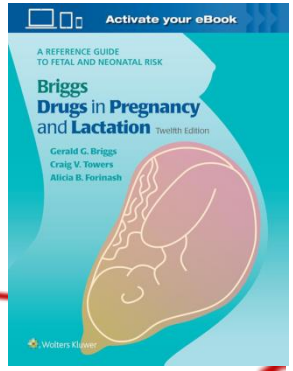
COR	LOE	Recommendations
1	B-NR	1. Pregnant women with mechanical prostheses should receive therapeutic anticoagulation with frequent monitoring during pregnancy.[723,726,728–735]
1	B-NR	2. Women with mechanical heart valves who cannot maintain therapeutic anticoagulation with frequent monitoring should be counseled against pregnancy.[707,724,725,732,733,735–737]
1	B-NR	3. Women with mechanical heart valves and their providers should use shared decision-making to choose an anticoagulation strategy for pregnancy. Women should be informed that VKA during pregnancy is associated with the lowest likelihood of maternal complications but the highest likelihood of miscarriage, fetal death, and congenital abnormalities, particularly if taken during the first trimester and if the warfarin dose exceeds 5 mg/d.[707,725–727,729–731]
1	C-LD	7. If labor begins or urgent delivery is required in a woman therapeutically anticoagulated with a VKA, cesarean section should be performed after reversal of anticoagulation.[726,743,744]
2a	B-NR	8. For pregnant women with mechanical prostheses who require a dose of warfarin ≤5 mg/d to maintain a therapeutic INR, continuation of warfarin for all 3 trimesters is reasonable after full discussion with the patient about risks and benefits.[726,727,731,739,743,745,746]
2a	B-NR	9. For pregnant women with mechanical prostheses who require >5 mg/d of warfarin to achieve a therapeutic INR, dose-adjusted LMWH (with a target anti-Xa level of 0.8 to 1.2 U/mL at 4 to 6 hours after dose) at least 2 times per day during the first trimester, followed by warfarin during the second and third trimesters, is reasonable.[726,727,731,737,746]

Breastfeeding Considerations

Based on available data, warfarin is not present in breast milk.

Warfarin is considered compatible with breastfeeding (ACOG 2018). The manufacturer recommends monitoring of breastfeeding infants for bruising or bleeding.

Chlorothiazide



Diuretic

PREGNANCY RECOMMENDATION: Compatible

BREASTFEEDING RECOMMENDATION: Compatible

PREGNANCY SUMMARY

Chlorothiazide is a member of the thiazide group of diuretics. The information in this monograph applies to all members of the group, including the pharmacologically and structurally related diuretics, chlorthalidone, indapamide, metolazone, and quinethazone.

The published experience with 1st trimester use of thiazides and related diuretics does not indicate these agents are teratogenic. However, one large study (the Collaborative Perinatal Project) did find an increased risk of defects when diuretics were used during the 1st trimester. Diuretics are not recommended for the treatment of gestational hypertension or preeclampsia because of the maternal hypovolemia characteristic of this disease. Other risks to the fetus or newborn include hypoglycemia, thrombocytopenia, hyponatremia, hypokalemia, and death from maternal complications. Moreover, thiazide diuretics may have a direct effect on smooth muscle and inhibit labor.

FETAL RISK SUMMARY

Chlorothiazide is indicated as adjunctive therapy in edema associated with congestive heart failure, hepatic cirrhosis, and corticosteroid and estrogen therapy. It is also indicated for the management of hypertension and for edema due to various forms of renal dysfunction. The drug is not metabolized and the plasma half-life is 45-120 minutes (1).

Animal Data: Reproduction studies in mice (500 mg/kg/day), rats (60 mg/kg/day), and rabbits (50 mg/kg/day) revealed no external malformations or growth impairment and no effect on fetal survival (1). However, these studies did not include a thorough examination for visceral anomalies and skeletal defects (1).

Carcinogenicity studies have not been conducted. The drug was not mutagenic in multiple assays and had no adverse effects on fertility in female and male rats (1).

Placental Transfer: Consistent with its molecular weight (about 296), chlorothiazide crosses the human placenta (1). At term, fetal serum levels may equal those of the mother (2). In 10 women following 2 weeks of hydrochlorothiazide, 50 mg/day, the cord:maternal plasma ratio determined 2-13 hours after the last dose ranged from 0.10 to 0.80 (3). Chlorthalidone also crosses the placenta (4). Other diuretics probably cross to the fetus in similar amounts, although specific data are lacking.

Human Data: Data from published reports indicate that thiazide and related diuretics are infrequently administered during the 1st trimester. In the past, when these drugs were routinely given to prevent or treat toxemia, therapy was usually begun in the 2nd or 3rd trimester, and adverse effects in the fetus were rare (5,6,7,8,9,10,11,12,13,14). No increases in the incidence of congenital defects were discovered, and thiazides were considered nonteratogenic (15,16,17,18).

In contrast, the Collaborative Perinatal Project monitored 50,282 mother-child pairs, 233 of whom were exposed in the 1st trimester to thiazide or related diuretics (19, pp.371-373). All of the mothers

BREASTFEEDING SUMMARY

Chlorothiazide is excreted into breast milk in low concentrations (44). Following a single 500-mg oral dose, milk levels were <1 mcg/mL at 1, 2, and 3 hours. The authors speculated that the risks of pharmacologic effects in nursing infants would be remote. However, it has been stated that thrombocytopenia can occur in the nursing infant if the mother is taking chlorothiazide (45). Documentation of this is needed (46). Chlorthalidone has a very low milk:plasma ratio of 0.05 (25).

In one mother taking 50 mg of hydrochlorothiazide (HCTZ) daily, peak milk levels of the drug occurred 5-10 hours after a dose and were about 25% of maternal blood concentrations (47). The mean milk concentration of HCTZ was about 80 ng/mL. An infant consuming 600 mL of milk/day would thus ingest about 50 mcg of the drug, probably an insignificant amount (47). The diuretic could not be detected in the serum of the nursing 1-month-old infant, and measurements of serum electrolytes, blood glucose, and blood urea nitrogen were all normal.

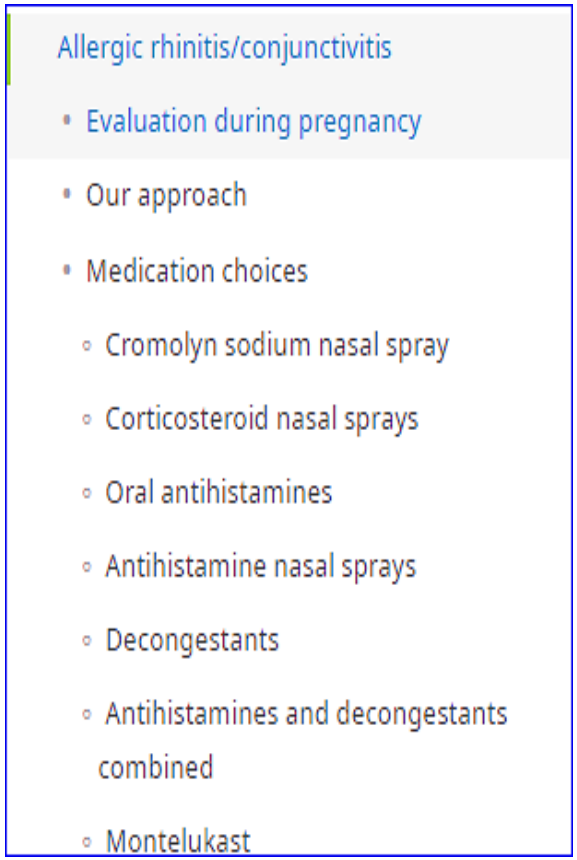
Thiazide diuretics have been used to suppress lactation (48,49). However, in 2001 the American Academy of Pediatrics classified bendroflumethiazide, chlorothiazide, chlorthalidone, and HCTZ as compatible with breastfeeding (50).

References

1. Product information. Diuril. Salix Pharmaceuticals, 2017.

2. Garnet J. Placental transfer of chlorothiazide. Obstet Gynecol 1963;21: 123-5. Ovid Full Text Full Text Document Delivery Bibliographic Links Internet Resources External Resolver

Recognition and management of allergic disease during pregnancy



UpToDate

Cromolyn sodium nasal spray — Intranasal cromolyn sodium may be considered a first-line therapy for mild allergic rhinitis in pregnancy because of its excellent safety profile. Cromolyn sodium is minimally absorbed into the systemic circulation when applied to a mucosal surface [26]. Three human studies of over 600 pregnancies, including first trimester use, failed to detect any increased risk for congenital defects with inhaled cromolyn sodium, although there are no safety data specific to nasal or ophthalmic preparations [27].

Dosing of intranasal cromolyn is one spray per nostril up to six times daily. The utility of cromolyn is limited by the need for frequent dosing and by lower efficacy compared with newer therapies. However, the safety of this therapy and its availability without a prescription (ie, over the counter) make it a reasonable initial choice for some patients.

Corticosteroid nasal sprays — Intranasal corticosteroids are highly effective for allergic rhinitis and are particularly helpful for alleviating nasal congestion and postnasal drip. Corticosteroid sprays are the treatment of choice for moderate-to-severe allergic rhinitis during pregnancy (table 2). The lowest effective dose should be used during pregnancy.

The safety of corticosteroid nasal sprays in pregnancy has been based on reassuring data from glucocorticoid inhalers for asthma [28], which deliver higher doses than nasal sprays. The overall safety of intranasal corticosteroids in pregnancy was confirmed by a 2016 study of over 140,000 pregnant persons, of whom 2502 were exposed to these medications during the first trimester [29,30]. There was no increase in overall rates of major congenital malformations or

choose budesonide if starting intranasal corticosteroids for the first time during pregnancy since it was classified as a category B drug in the previous US Food and Drug Administration (FDA) system, based on reassuring data on inhaled budesonide from the population-based Swedish Medical Birth Registry, whereas most of the other agents were category C [31]. The 2016 study also provided reassuring data about use of intranasal fluticasone or mometasone in the first trimester as these agents were more commonly used in the study population and were not associated with adverse outcomes [29,30]. (See 'Systems for

Oral antihistamines — Oral antihistamines are less effective for the treatment of allergic rhinitis compared with intranasal corticosteroids, particularly for the relief of nasal congestion and postnasal drip. Several studies have evaluated the safety of antihistamines during pregnancy [32-36]. Most pregnant persons who require antihistamines are most appropriately treated with a second-generation agent because these drugs are less sedating and have fewer cholinergic side effects compared with first-generation agents.

- Among second-generation antihistamines (eg, loratadine [10 mg once daily] or cetirizine [10 mg once daily]) may be considered the second-generation antihistamines of choice in pregnancy. There are reassuring human data for each of these drugs in a large number of pregnant patients, and they were rated category B [36]. Levocetirizine is also a category B drug, but there are few published human data. Data on use of fexofenadine in pregnancy are also reassuring [37].

- First-generation agents are widely available, inexpensive, and can be useful on an as-needed basis and/or before bed. Among the first-generation agents, chlorpheniramine has been recommended as the first-generation antihistamine of choice for use during pregnancy because it has been used for decades, and animal and human data are reassuring [32]. The dosing of chlorpheniramine is 4 mg every four to six hours. Sustained-release formulations are available (eg, 8 mg up to three times daily and 12 mg twice daily). Dosing should not exceed 24 mg per day.

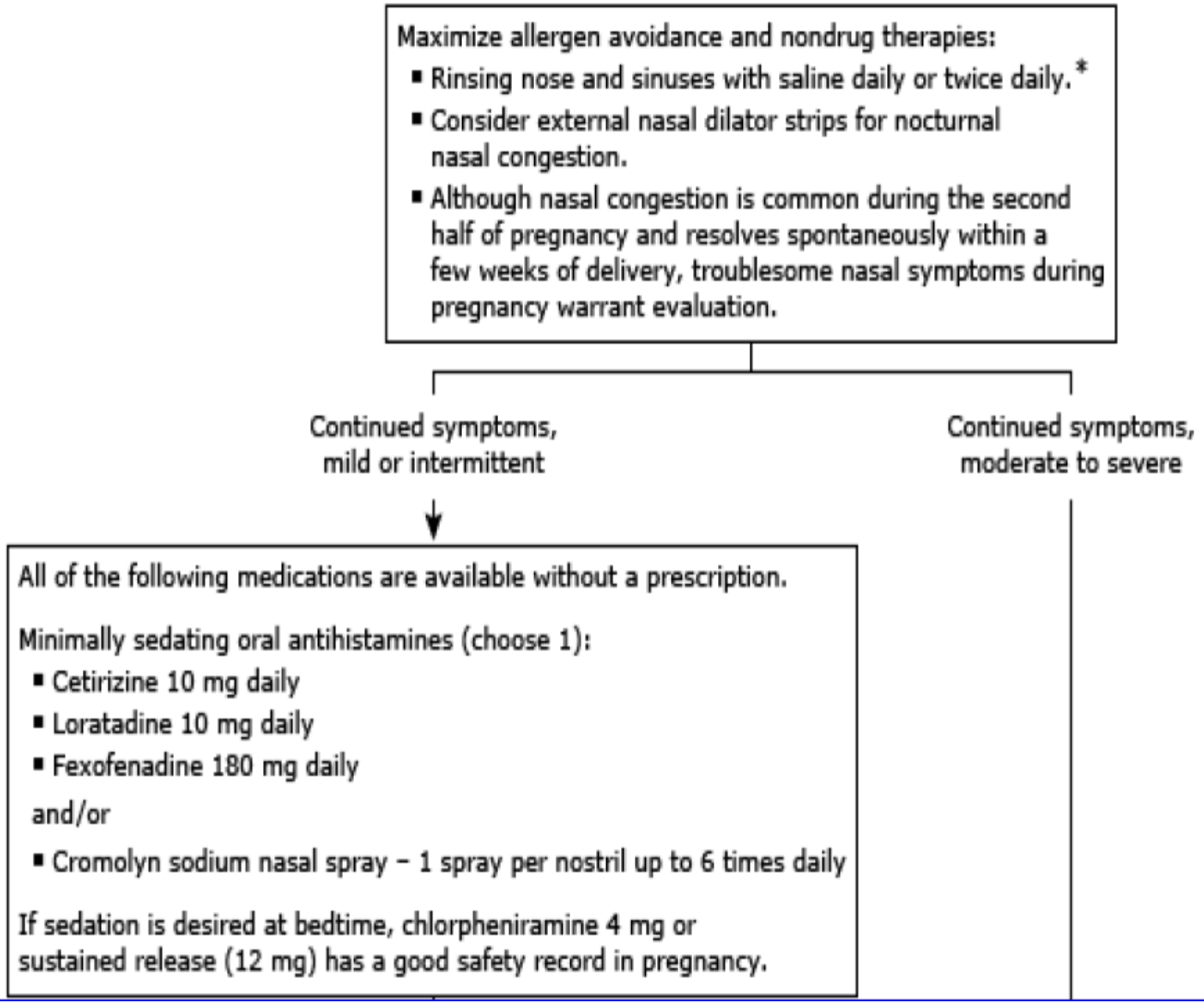
Antihistamine nasal sprays — Human safety data are not available for azelastine or olopatadine nasal sprays, although animal studies are reassuring [21]. Until more information is available, we would suggest avoiding these medications during pregnancy unless a patient was uniquely responsive to one of them prior to pregnancy.

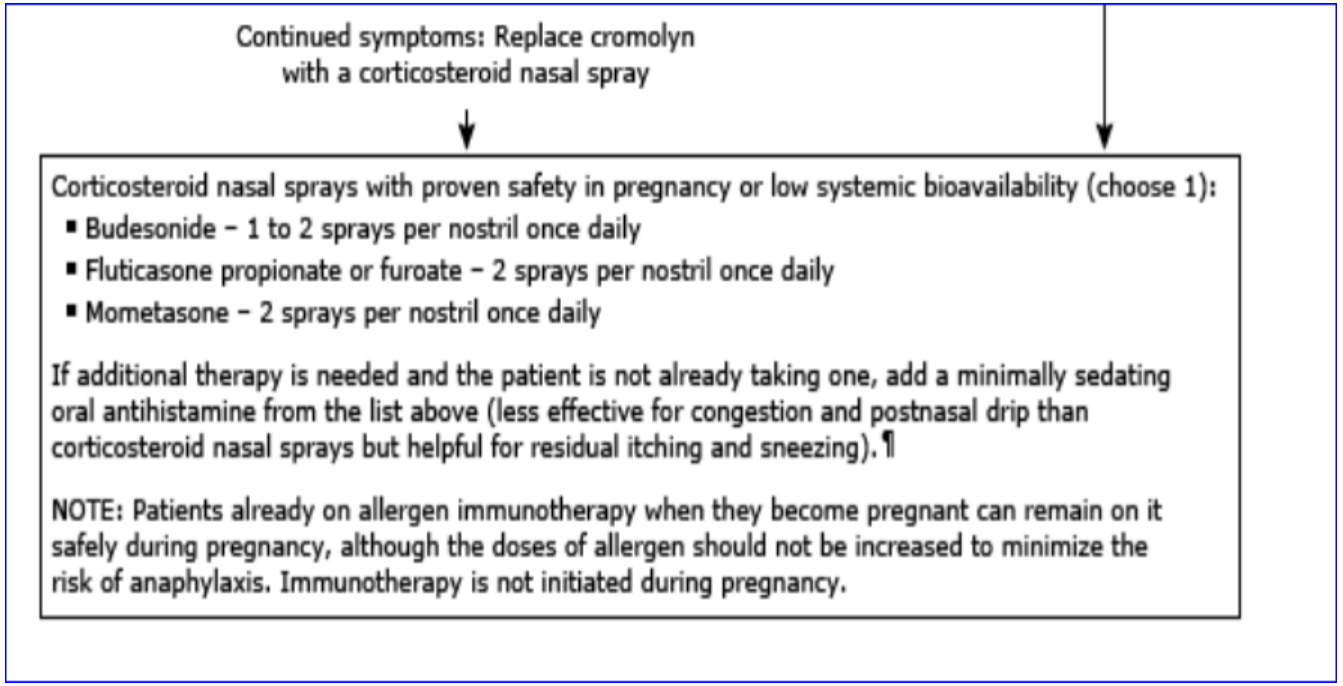
Decongestants — Decongestants are vasoconstrictors that are available as both oral preparations and nasal sprays. It is not known whether or not this group of drugs crosses the placenta [38].

- **Intranasal decongestants** – Decongestant nasal sprays can be used **very briefly** (eg, three days or less) for temporary relief of severe nasal congestion during pregnancy. Some reassuring human data exist for intranasal oxymetazoline[39,40], although one study found possible associations between oxymetazoline or xylometazoline and several malformations [38]. Patients should be warned about dependence with prolonged use. (See 'Rhinitis medicamentosa' below.)
- **Oral decongestants** – Oral decongestants are best avoided altogether during the first trimester because of an uncertain risk of several rare congenital anomalies [38]. Pseudoephedrine can be used in the second and third trimesters in females without hypertension.

Montelukast — Montelukast is approved for the treatment of allergic rhinitis and has reassuring animal and human gestational safety data regarding congenital malformations [51-53]. However, it is not as effective as intranasal corticosteroids [54] and should generally only be used during pregnancy for the treatment of allergic rhinitis in patients who have demonstrated substantial benefit before pregnancy or in patients with confirmed allergic rhinitis not controlled by intranasal corticosteroids and antihistamines.

Treatment of allergic rhinitis in pregnancy




Continued symptoms: Replace cromolyn with a corticosteroid nasal spray
Corticosteroid nasal sprays with proven safety in pregnancy or low systemic bioavailability (choose 1):
Budesonide – 1 to 2 sprays per nostril once daily
Fluticasone propionate or furoate – 2 sprays per nostril once daily
Mometasone – 2 sprays per nostril once daily
If additional therapy is needed and the patient is not already taking one, add a minimally sedating oral antihistamine from the list above (less effective for congestion and postnasal drip than corticosteroid nasal sprays but helpful for residual itching and sneezing). ¶
NOTE: Patients already on allergen immunotherapy when they become pregnant can remain on it safely during pregnancy, although the doses of allergen should not be increased to minimize the risk of anaphylaxis. Immunotherapy is not initiated during pregnancy.

Extemporaneous preparation

- بصورت موقت و دم دستی از یک شکل دارویی یک شکل دارویی دیگر را می سازند
- عمدتا از یک فرآورده دارویی جامد، فرآورده دارویی مایع را می سازند

✓مراجعه به مونوگراف کودکان در آپ تودیت

Omeprazole: Pediatric drug information

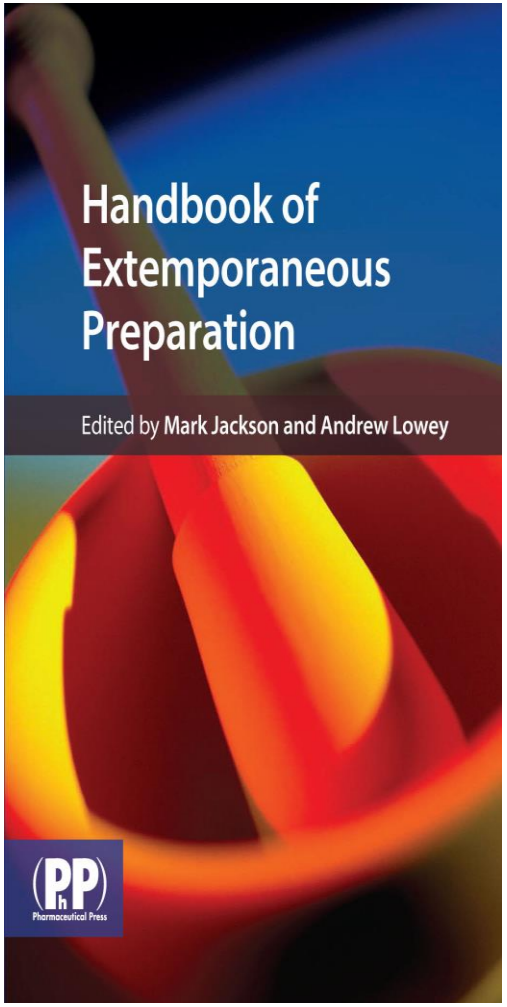
Extemporaneous Preparations

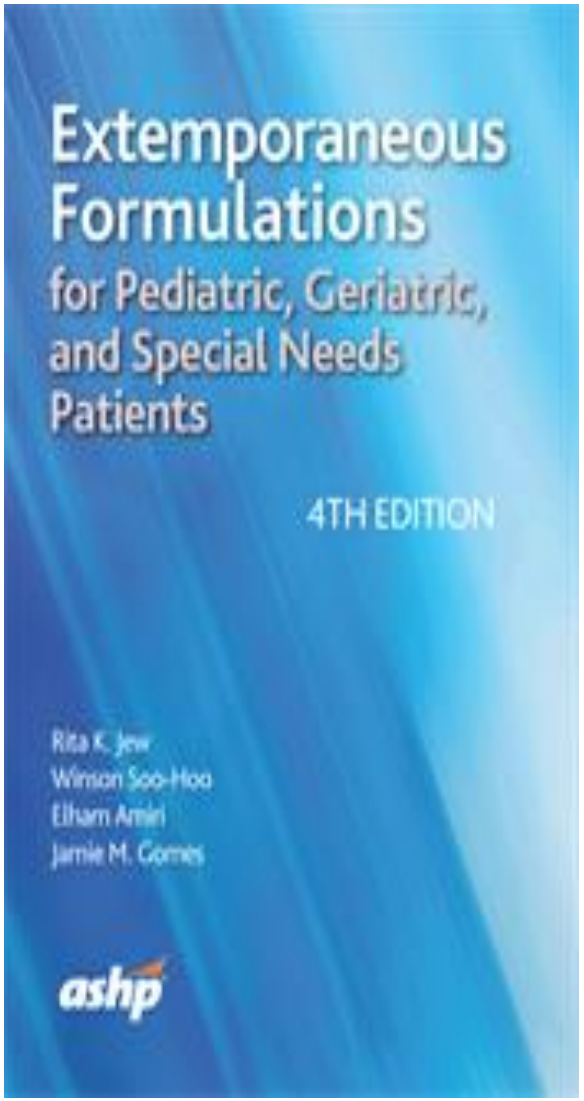
Note: A more palatable omeprazole (2 mg/mL) suspension is commercially available as a compounding kit (First-Omeprazole).

2 mg/mL Oral Solution

A 2 mg/mL oral omeprazole solution (Simplified Omeprazole Solution) may be made with five omeprazole 20 mg delayed release capsules and 50 mL sodium bicarbonate 8.4%. Empty capsules into beaker. Add sodium bicarbonate solution. Gently stir (about 15 minutes) until a white suspension forms. Transfer to amber-colored syringe or bottle. Stable for 14 days at room temperature or for 30 days refrigerated.

DiGiacinto JL, Olsen KM, Bergman KL, et al, "Stability of Suspension Formulations of Lansoprazole and Omeprazole Stored in Amber-Colored Plastic Oral Syringes," Ann Pharmacother, 2000, 34(5):600-5.10852086
Quercia R, Fan C, Liu X, et al, "Stability of Omeprazole in an Extemporaneously Prepared Oral Liquid," Am J Health Syst Pharm, 1997, 54(16):1833-6.9269520
Sharma V, "Comparison of 24-hour Intragastric pH Using Four Liquid Formulations of Lansoprazole and Omeprazole," Am J Health Syst Pharm, 1999, 56(23 Suppl 4):18-21.10597120


Handbook of
Extemporaneous
Preparation
Edited by Mark Jackson and Andrew Lowey
PhP
Pharmaceutical Press


Extemporaneous
Formulations
for Pediatric, Geriatric,
and Special Needs
Patients
4TH EDITION
Rita K. Jew
Winson Soo-Hoo
Elham Amiri
Jamie M. Gomes
ashp

Drug interactions

References

- Drug Interaction Facts
- Stockley's Drug Interactions
- Stockley's Herbal Medicines Interactions

- Lexicomp Drug Interaction/ Up To Date
- Micromedex Drug Interactions
- Drugs.com
- Medscape.com

Classification of drug interactions by Drug Interaction Facts

Classification	Description
Severity	
1	Major: life-threatening or permanent damage
2	Moderate: deterioration of patient's status, treatment is required
3	Minor: bothersome or little effect
Documentation	
1	Established: proven to occur in well-controlled studies
2	Probable: very likely, but not proven clinically
3	Suspected: may occur; some good data, but needs more study
4	Possible: could occur, but data are very limited
5	Unlikely: doubtful; no good evidence of a clinical effect

How To Use *Drug Interaction Facts*™

Index

1. The index is the key to locating interaction monographs. Three types of entries will be found:

   Generic names – all interactions referenced (eg, Propranolol)
   Class names – all interactions referenced (eg, Beta-Adrenergic Blockers)
   Trade names – cross referenced to generic listings (eg, *Inderal*)

2. The index also identifies the significance rating of each interaction.

Features of Drug Interaction Monographs

1. **Drugs or drug classes** that may interact.
2. **Drugs** – Known and potentially interacting drugs are listed. Common trade names are given for ease of reference.
3. **Significance** –

   Significance rating – Summary of Severity and Documentation

   Onset

   ☐ Rapid – within 24 hours
   ☐ Delayed – days to weeks

   Severity

   ☐ Major – life-threatening or permanent damage
   ☐ Moderate – deterioration of patient's status
   ☐ Minor – bothersome or little effect

   Documentation

   The confidence that an interaction *can* occur. This evaluation is based on supporting biomedical literature. The Discussion in each monograph provides specific comments on the data reviewed.

   ☐ Established – proven to occur in well-controlled studies
   ☐ Probable – very likely, but not proven clinically
   ☐ Suspected – may occur; some good data, but needs more study
   ☐ Possible – could occur, but data are very limited
   ☐ Unlikely – doubtful; no good evidence of a clinical effect

4. **Effects** – Pharmacologic effects and clinical manifestations.
5. **Mechanism** – How the interaction occurs.
6. **Management** – Recommendations for appropriate action to prevent or respond to an interaction.
7. **Discussion** – Brief review of published data and selected primary references.

Significance Rating

1 2 3 4 5

A number 1 through 5 will be assigned to each interaction monograph, based on the Editorial Group's assessment of the interaction's Severity and Documentation (defined below).

1 is a severe and well-documented interaction.

5 is an interaction of no more than unlikely or possible documentation.

The formula for these number ratings is given in the following table:

Significance Rating	Severity	Documentation
1	Major	Suspected or >
2	Moderate	Suspected or >
3	Minor	Suspected or >
4	Major/Moderate	Possible
5	Minor	Possible
	Any	Unlikely

Onset

How rapidly the clinical effects of an interaction can occur determines the urgency with which preventive measures should be instituted to avoid the consequences of the interaction. Two levels of onset are used:

Rapid: The effect will be evident within 24 hours of administration of the interacting drug. *Immediate action is necessary to avoid the effects of the interaction.*

Delayed: The effect will not be evident until the interacting drug is administered for a period of days or weeks. *Immediate action is not required.*

Severity

The potential severity of the interaction is particularly important in assessing the risk vs benefit of therapeutic alternatives. With appropriate dosage adjustments or modification of the administration schedule, the negative effects of most interactions can be avoided. Three degrees of severity are defined:

Major: The effects are potentially life-threatening or capable of causing permanent damage.

Moderate: The effects may cause a deterioration in a patient's clinical status. Additional treatment, hospitalization, or an extended hospital stay may be necessary.

Minor: The effects are usually mild; consequences may be bothersome or unnoticeable but should not significantly affect the therapeutic outcome. Additional treatment is usually not required.

Documentation

Documentation determines the degree of confidence that an interaction can cause an altered clinical response. This scale represents the Editorial Group's evaluation of the quality and clinical relevance of the primary literature supporting the occurrence of an interaction. However, multiple factors can influence whether

Serotonin Reuptake Inhibitors — MAOIs

Citalopram* (eg, *Celexa*)
Duloxetine* (*Cymbalta*)
Escitalopram (*Lexapro*)
Fluoxetine* (eg, *Prozac*)
Fluvoxamine (eg, *Luvox CR*)
Milnacipran* (*Savella*)
Nefazodone
Paroxetine (eg, *Paxil*)
Sertraline* (eg, *Zoloft*)
Venlafaxine* (eg, *Effexor*)
Vilazodone* (*Viibryd*)

Isocarboxazid* (*Marplan*)
Phenelzine* (eg, *Nardil*)
Rasagiline (*Azilect*)
Selegiline* (eg, *Eldepryl*)
Tranylcypromine* (eg, *Parnate*)

Significance 1

Onset	Severity	Documentation
■ **Rapid**	■ **Major**	☐ Established
☐ Delayed	☐ Moderate	☐ **Probable**
	☐ Minor	☐ Suspected
		☐ Possible
		☐ Unlikely

Effects Serotonin syndrome (eg, agitation, altered consciousness, ataxia, myoclonus, overactive reflexes, shivering) may occur.

Mechanism Possible rapid, excessive accumulation of serotonin.[1]

Management Do not coadminister. Allow at least 5 days after stopping DULOXETINE or MILNACIPRAN; 1 week after stopping NEFAZODONE or VENLAFAXINE; 2 weeks after stopping CITALOPRAM, ESCITALOPRAM, FLUVOXAMINE, PAROXETINE, SERTRALINE, or VILAZODONE; and 5 weeks after stopping FLUOXETINE before giving an MAOI. After stopping an MAOI, allow at least 14 days before giving any SRI.

Discussion

Serotonin syndrome has been reported in patients who stopped fluoxetine and received an MAOI shortly thereafter.[1-3] This syndrome was reported during administration of sertraline and tranylcypromine or phenelzine,[4-6] and when taking venlafaxine with isocarboxazid, phenelzine, or tranylcypromine.[7-12] Several deaths have been reported by the manufacturer.[13] In a retrospective study, patients treated with fluoxetine and an MAOI (together or at least 10 days after stopping fluoxetine) had a high incidence of adverse reactions, particularly serotonin syndrome.[14] These patients also were taking other medications. Similar reactions were reported with the selective MAO type B inhibitor selegiline.[15,16] A similar reaction may occur with duloxetine,[17] milnacipran,[18] or vilazodone.[19] In patients with Parkinson disease, selegiline given with sertraline, paroxetine, or fluoxetine was well tolerated.[20,21] In a study of 12 healthy men, coadministration of escitalopram and rasagiline was well tolerated.[22]

1 Kline SS, et al. *Clin Pharm.* 1989;8(7):510.
2 Sternbach H. *Lancet.* 1988;2(8615):850.
3 Ost TK. *Anaesthesia.* 1991;46(6):507.
4 Bhatara VS, et al. *Clin Pharm.* 1993;12(3):222.
5 Brannan SK, et al. *J Clin Psychopharmacol.* 1994;14(2):144.
14 Feighner JP, et al. *J Clin Psychiatry.* 1990;51(6):222.
15 Suchowersky O, et al. *Can J Psychiatry.* 1990;35(6):571.
16 Shad MU, et al. *J Clin Psychopharmacol.* 2001;21(1):119.
17 *Cymbalta* [package insert]. Indianapolis, IN: Eli Lilly

Serotonin Reuptake Inhibitors — Proton Pump Inhibit

Citalopram (eg, *Celexa*)
Escitalopram* (*Lexapro*)
Sertraline (eg, *Zoloft*)
Omeprazole* (eg, *Prilosec*)

Significance 4

Onset	Severity	Documentat
☐ Rapid	☐ Major	☐ Established
■ **Delayed**	■ **Moderate**	☐ Probable
	☐ Minor	☐ Suspected
		■ **Possible**
		☐ Unlikely

Effects Serum concentrations and the pharmacologic effects of certain SRIs may be increased.

Mechanism Inhibition of metabolism is suspected.

Management If an interaction is suspected, it may be necessary to adjust the dose of the SRI when OMEPRAZOLE is started or stopped.

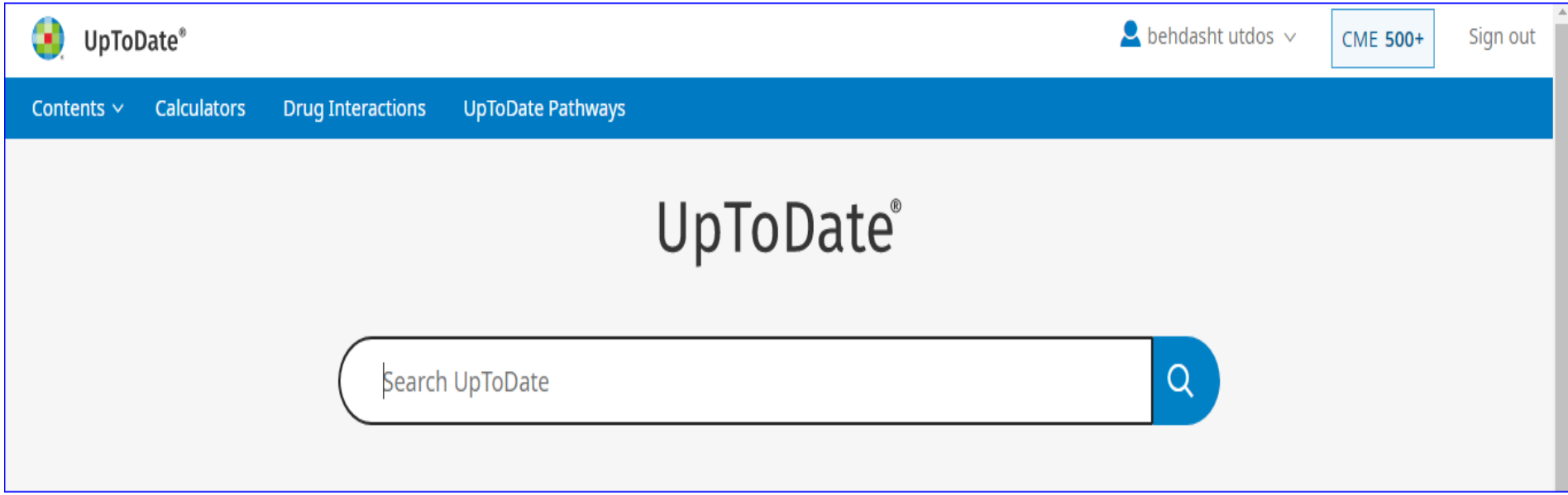
Discussion

The effects of omeprazole on the pharmacokinetics of escitalopram were studied in 16 healthy subjects.[1] In a randomized, double-blind, crossover study, subjects received omeprazole 30 mg daily or placebo for 6 days. On day 5, each subject received a single dose of escitalopram 20 mg. Omeprazole increased the escitalopram AUC 51% and prolonged the $t_{1/2}$ from 26.5 to 34.8 hours, compared with placebo. No increase in adverse reactions occurred. The pharmacokinetics of racemic citalopram were studied in 9 healthy volunteers before and after administration of omeprazole 20 mg for 7 days.[2] Subjects were phenotyped as CYP2C19 and CYP2D6 extensive metabolizers. The AUC of both (R)- and (S)-citalopram increased; however, the effect was greatest for (S)-citalopram.

1 Malling D, et al. *Br J Clin Pharmacol.* 2005;60(3):287.
2 Rocha A, et al. *Br J Clin Pharmacol.* 2010;70(1):43.

Lexicomp Interact

Name	Categories
Lexicomp Drug Interactions	5 risk ratings:
	X – Avoid Combination,
	D – Consider Therapy Modification,
	C – Monitor Therapy,
	B – No Action Needed,
	A – No Known Interaction.
	3 severity ratings: Major, Moderate, Minor.
	4 reliability ratings: Excellent, Good, Fair, Poor.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Calculators
Drug Interactions
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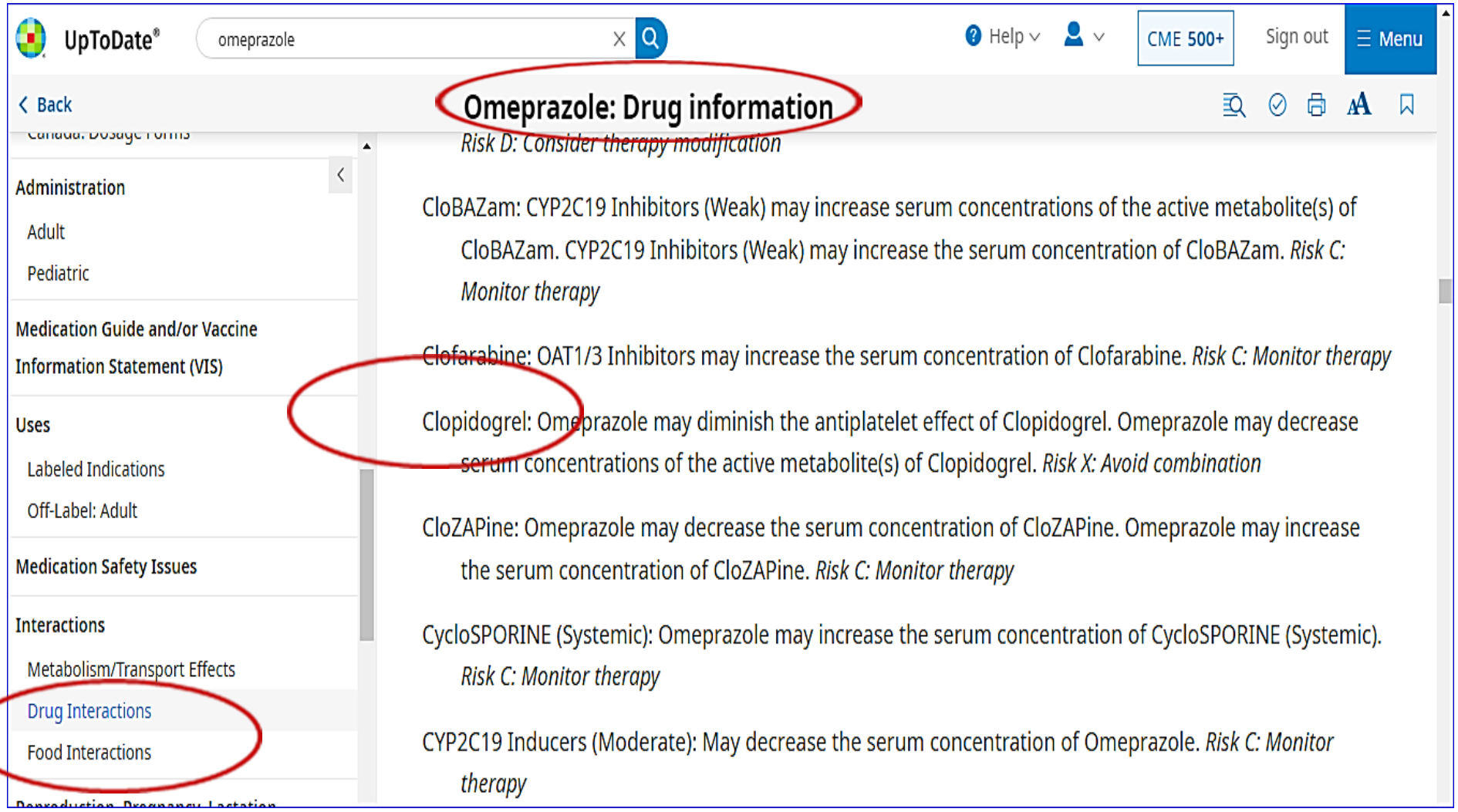
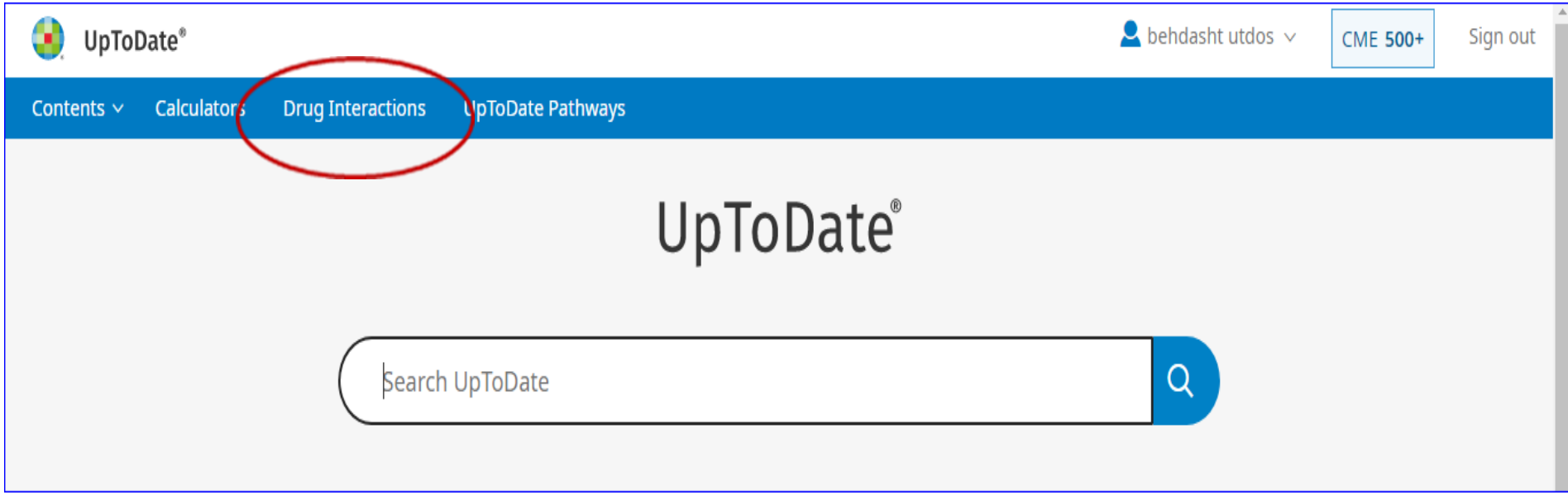
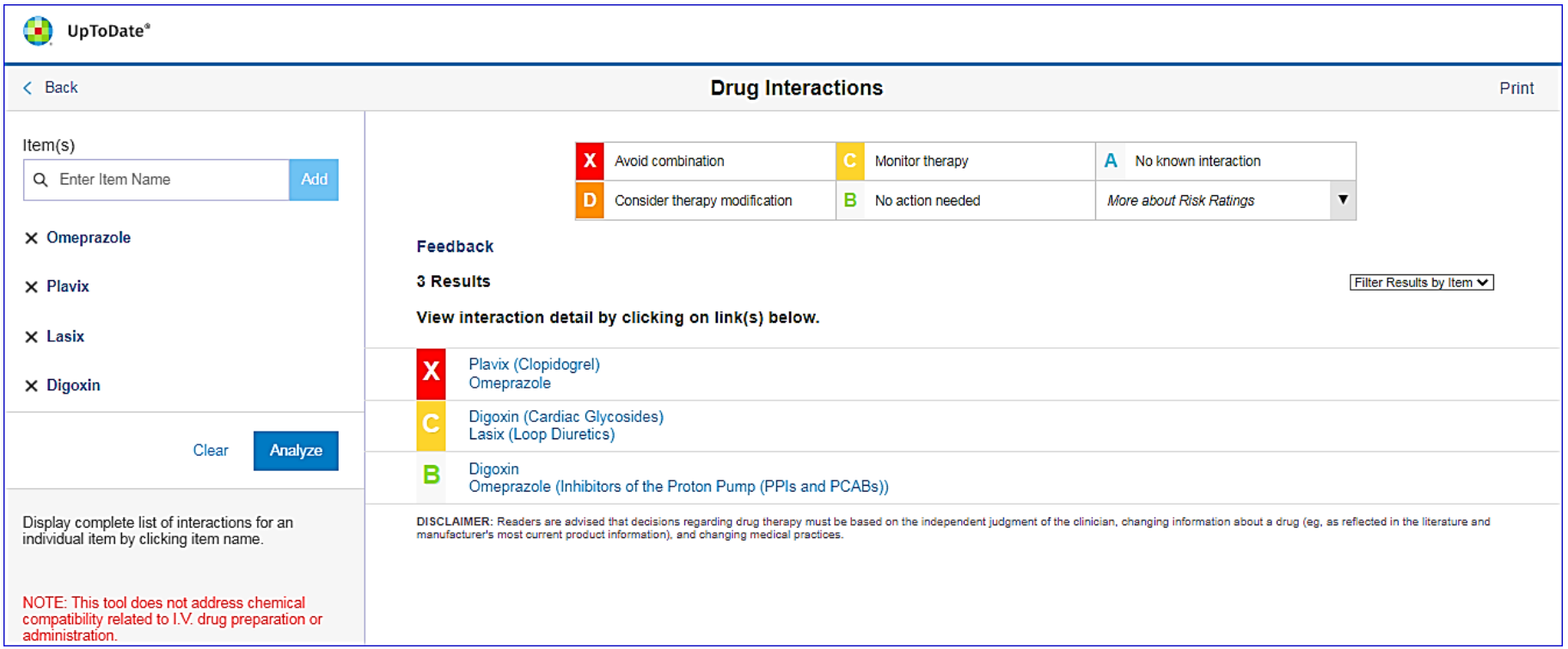


Food Interactions

Prolonged treatment (≥2 years) may lead to malabsorption of dietary vitamin B_{12} and subsequent vitamin B_{12} deficiency (Lam, 2013).

Omeprazole, Plavix, Lasix &Digoxin interactions:




UpToDate®
Back
Drug Interactions
Print
Item(s)
Enter Item Name
Add
Omeprazole
Plavix
Lasix
Digoxin
Clear
Analyze
Display complete list of interactions for an individual item by clicking item name.
NOTE: This tool does not address chemical compatibility related to I.V. drug preparation or administration.
X Avoid combination
C Monitor therapy
A No known interaction
D Consider therapy modification
B No action needed
More about Risk Ratings
Feedback
3 Results
Filter Results by Item
View interaction detail by clicking on link(s) below.
X Plavix (Clopidogrel)
Omeprazole
C Digoxin (Cardiac Glycosides)
Lasix (Loop Diuretics)
B Digoxin
Omeprazole (Inhibitors of the Proton Pump (PPIs and PCABs))
DISCLAIMER: Readers are advised that decisions regarding drug therapy must be based on the independent judgment of the clinician, changing information about a drug (eg, as reflected in the literature and manufacturer's most current product information), and changing medical practices.

Title Clopidogrel / Omeprazole

Risk Rating X: Avoid combination

Summary Omeprazole may diminish the antiplatelet effect of Clopidogrel. Omeprazole may decrease serum concentrations of the active metabolite(s) of Clopidogrel. **Severity** Major **Reliability Rating** Good

Patient Management Clopidogrel prescribing information recommends avoiding concurrent use with omeprazole due to the possibility that combined use may result in decreased clopidogrel effectiveness. Rabeprazole or pantoprazole may be lower-risk alternatives to omeprazole.

Discussion Studies have reported decreased antiplatelet effects of clopidogrel and reduction in the AUC and Cmax of the clopidogrel active metabolite by 33% and 44%, respectively, with concurrent omeprazole.[1,2,3,4] Several trials have evaluated this possible interaction, with many reporting significantly increased risks for negative cardiac-related outcomes (6% to 18% increased incidence) and overall mortality (3% to 9% increased mortality rate) associated with concurrent use of omeprazole and clopidogrel.[5,6,7,8,9,10] Other clinical outcome studies (n=340 to 3,761) have reported minimal or no impact of concurrent omeprazole and clopidogrel use on cardiovascular outcomes.[11,12,13,14] One large retrospective study (n=12,440) found a 12.2% higher risk of myocardial infarction among patients coadministered omeprazole and clopidogrel compared to clopidogrel alone; overall mortality was not significantly increased.[15] Another retrospective study showed the risk of ischemic stroke significantly increased when clopidogrel was used with omeprazole compared to clopidogrel alone (HR 1.39 [95% CI 1.03 to 1.74]).[16]

Title Cardiac Glycosides / Loop Diuretics

Risk Rating C: Monitor therapy

Summary Loop Diuretics may enhance the adverse/toxic effect of Cardiac Glycosides. Specifically, cardiac glycoside toxicity may be enhanced by the hypokalemic and hypomagnesemic effect of loop diuretics. **Severity** Moderate **Reliability Rating** Fair

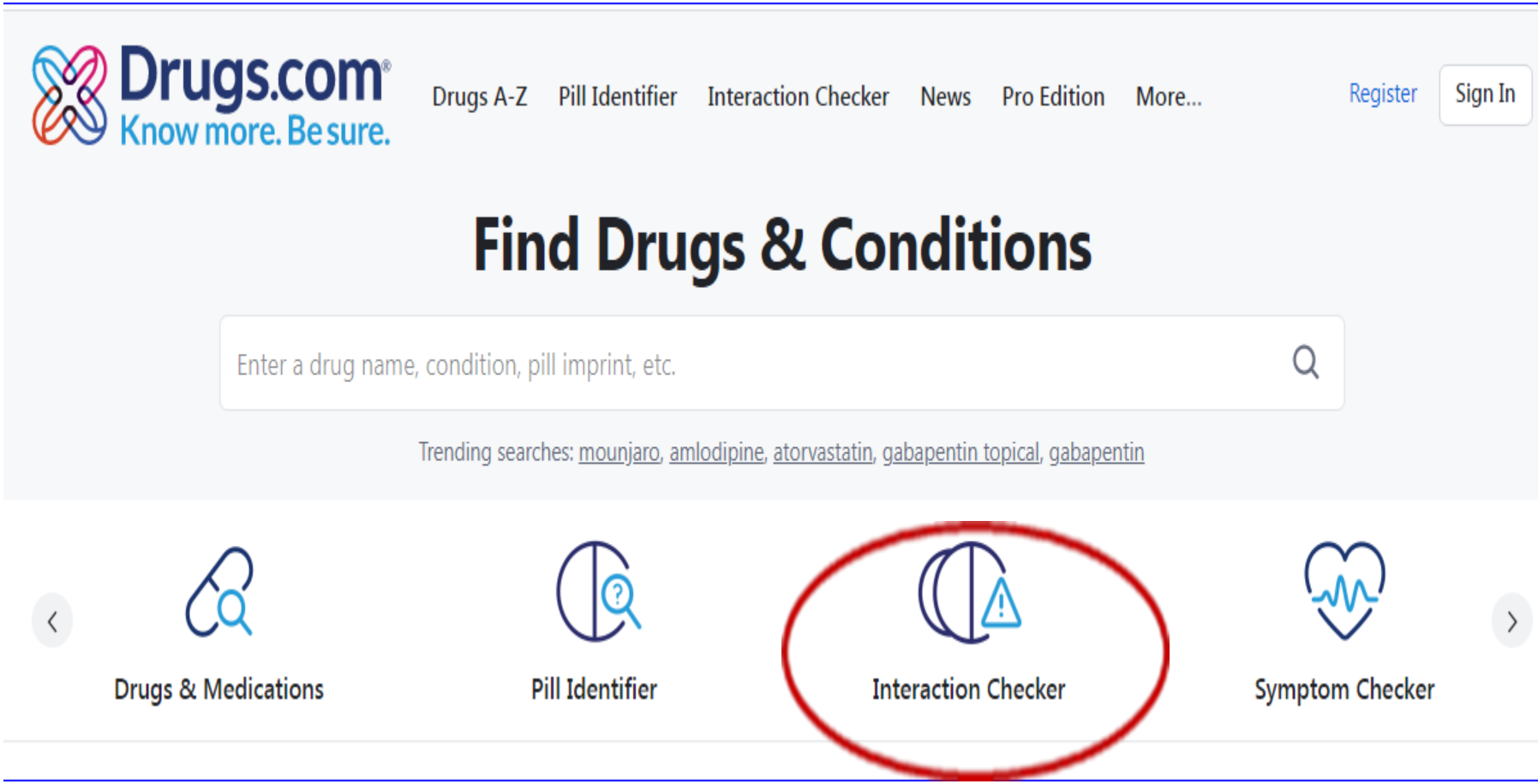
Patient Management Monitor for increased cardiac glycoside toxicity (eg, cardiac arrhythmias) if a loop diuretic is initiated or the dose is increased. Careful monitoring of serum potassium and magnesium along with administration of electrolyte replacement therapy to correct hypokalemia or hypomagnesemia may reduce the risk of cardiac glycoside toxicity.

Cardiac Glycosides Interacting Members Beta-Acetyldigoxin, Digitoxin, Digoxin*

Loop Diuretics Interacting Members Azosemide, Bumetanide, Ethacrynic Acid, Furosemide*, Torsemide

** Denotes agent(s) specifically implicated in clinical data. Unmarked agents are listed because they have properties similar to marked agents, and may respond so within the context of the stated interaction.*

Discussion The risk of cardiac glycoside toxicity increases in the presence hypokalemia and hypomagnesemia, even when serum concentrations are maintained in the therapeutic range.[1] The association of digitalis toxicity and electrolyte disturbances induced by diuretic (loop and thiazide) use has been reported in numerous studies[2,3,4,5,6,7,8] and case reports[9,10] In contrast, some studies report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Enter a drug name, condition, pill imprint, etc.
Trending searches: mounjaro, amlodipine, atorvastatin, gabapentin topical, gabapentin
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Pill Identifier
Interaction Checker
Symptom Checker

Drugs.com DIs

Drug Interaction Classification

These classifications are only a guideline. The relevance of a particular drug interaction to a specific individual is difficult to determine. Always consult your healthcare provider before starting or stopping any medication.

● Major	Highly clinically significant. Avoid combinations; the risk of the interaction outweighs the benefit.
● Moderate	Moderately clinically significant. Usually avoid combinations; use it only under special circumstances.
● Minor	Minimally clinically significant. Minimize risk; assess risk and consider an alternative drug, take steps to circumvent the interaction risk and/or institute a monitoring plan.
○ Unknown	No interaction information available.

Drug Interaction Checker

Check interactions with multiple drugs, vaccines, supplements, alcohol, food and diseases.

Enter a drug name

Add

Unsaved interactions list

Start over

digoxin

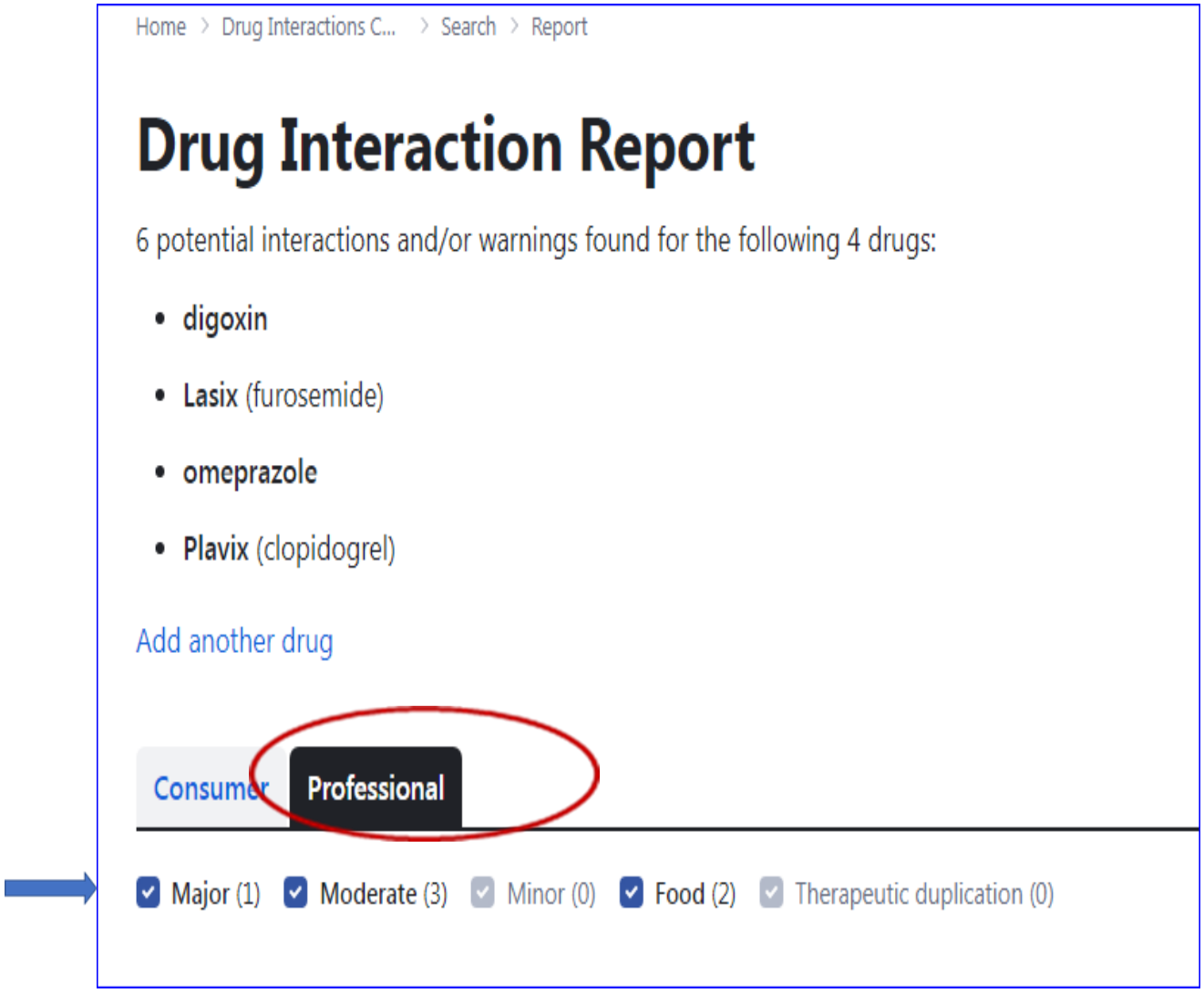
Lasix (furosemide)

omeprazole

Plavix (clopidogrel)

Check Interactions

Save


Home › Drug Interactions C... › Search › Report
Drug Interaction Report
6 potential interactions and/or warnings found for the following 4 drugs:
digoxin
Lasix (furosemide)
omeprazole
Plavix (clopidogrel)
Add another drug
Consumer
Professional
Major (1)
Moderate (3)
Minor (0)
Food (2)
Therapeutic duplication (0)

Drug interaction report

- Interactions between your drugs
- Drug and food interactions
- Therapeutic duplication warnings

Moderate

furosemide ⇄ digoxin

Applies to: Lasix (furosemide), digoxin

MONITOR: Although diuretics and digitalis glycosides are frequently and appropriately used together, diuretic-induced hypokalemia and hypomagnesemia may predispose patients on digitalis to arrhythmias.

MANAGEMENT: Digoxin, potassium and magnesium levels should be followed closely. Hypokalemia and hypomagnesemia should be treated appropriately. Digitalis dose adjustments may be required. Patients should be advised to notify their physicians if they experience signs of possible digoxin toxicity or electrolyte disturbances, such as weakness, lethargy, muscle pains or cramps, nausea, anorexia, visual disturbances, or irregular heartbeats.

References (2)

1. Tilstone WJ, Semple PF, Lawson DH, Boyle JA (1977) "Effects of furosemide on glomerular filtration rate and clearance of practolol, digoxin, cephaloridine, and gentamicin." *Clin Pharmacol Ther*, 22, p. 389-94

2. Semple P, Tilstone WJ, Lawson DH (1975) "Furosemide and urinary digoxin clearance." *N Engl J Med*, 293, p. 612-3

3. Brown DD, Dormois JC, Abraham GN, et al. (1976) "Effect of furosemide on the renal excretion of digoxin." *Clin Pharmacol Ther*, 20, p. 395-400

4. McAllister RG, Howell SM, Gomer MS, Selby JB (1976) "Effect of intravenous furosemide on the renal excretion of digoxin." *J Clin Pharmacol*, 16, p. 110-7

Moderate

furosemide ⇄ food

Applies to: Lasix (furosemide)

MONITOR: Many psychotherapeutic and CNS-active agents (e.g., anxiolytics, sedatives, hypnotics, antidepressants, antipsychotics, opioids, alcohol, muscle relaxants) exhibit hypotensive effects, especially during initiation of therapy and dose escalation. Coadministration with antihypertensives and other hypotensive agents, in particular vasodilators and alpha-blockers, may result in additive effects on blood pressure and orthostasis.

MANAGEMENT: Caution and close monitoring for development of hypotension is advised during coadministration of these agents. Some authorities recommend avoiding alcohol in patients receiving vasodilating antihypertensive drugs. Patients should be advised to avoid rising abruptly from a sitting or recumbent position and to notify their physician if they experience dizziness, lightheadedness, syncope, orthostasis, or tachycardia.

References (5)

1. Sternbach H (1991) "Fluoxetine-associated potentiation of calcium-channel blockers." *J Clin Psychopharmacol*, 11, p. 390-1
2. Shook TL, Kirshenbaum JM, Hundley RF, Shorey JM, Lamas GA (1984) "Ethanol intoxication complicating intravenous nitroglycerin therapy." *Ann Intern Med*, 101, p. 498-9
3. Feder R (1991) "Bradycardia and syncope induced by fluoxetine." *J Clin Psychiatry*, 52, p. 139
4. Ellison JM, Milofsky JE, Ely E (1990) "Fluoxetine-induced bradycardia and syncope in two patients." *J Clin Psychiatry*, 51, p. 385-6

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NEWS & PERSPECTIVE DRUGS & DISEASES CME & EDUCATION VIDEO DECISION POINT

Drug Interaction Checker

Enter a drug, OTC or herbal supplement:

Print

Drug Interaction Checker

- Use the search field above to look up prescription or OTC drugs, and herbal supplements
- Add a full drug regimen and view interactions

Medscape Drug Interaction Checker

4 categories:

Contraindicated,

Serious – Use Alternative,

Monitor Closely,

Minor.

5 Interactions Found

Patient Regimen Clear All

- omeprazole
- clopidogrel
- digoxin
- furosemide
  - Lasix

Serious - Use Alternative

omeprazole + clopidogrel

omeprazole decreases effects of clopidogrel by affecting hepatic enzyme CYP2C19 metabolism. Avoid or Use Alternate Drug. Clopidogrel efficacy may be reduced by drugs that inhibit CYP2C19. Inhibition of platelet aggregation by clopidogrel is entirely due to an active metabolite. Clopidogrel is metabolized to this active metabolite in part by CYP2C19.

.

omeprazole + digoxin

omeprazole will increase the level or effect of digoxin by increasing gastric pH. Applies only to oral form of both agents. Avoid or Use Alternate Drug.

Monitor Closely

furosemide + digoxin

furosemide increases effects of digoxin by pharmacodynamic synergism. Use Caution/Monitor. Hypokalemia increases digoxin effects.

digoxin + furosemide

digoxin increases and furosemide decreases serum potassium. Effect of interaction is not clear, use caution. Use Caution/Monitor.

omeprazole + digoxin

omeprazole increases toxicity of digoxin by Other (see comment). Use Caution/Monitor. Comment: Prolonged use of PPIs may cause hypomagnesemia and increase risk for digoxin toxicity.

Micromedex Interact

- Omeprazole+Clopidogrel

✓Severity: Major

✓Onset: Rapid

✓Documentation: Excellent

✓Interaction Effect: ….

✓Clinical Management: ….

Storage, stability, compatibility

- Storage: شرایط نگه داری دارویی که آکبند است
- Stability: پایداری دارو بعد از این که از شکل اصلی اش خارج شد
  - ✓این دو تابع شرایط ساخت، اکسپیانت و فرمولاسیون می باشند
  - ✓بهترین رفرنس راهنمای مصرف دارو
- Compatibility: سازگاری (تابع مولکول دارو)

سرم

دارو- دارو

English Edition

Medscape

NEWS & PERSPECTIVE | DRUGS & DISEASES | CME & EDUCATION | VIDEO

Drugs & Diseases

ceftriaxone (Rx)

Brand and Other Names: Rocephin (DSC)

Classes: Cephalosporins, 3rd Generation

54

Dosing & Uses | Interactions | Adverse Effects | Warnings | Pregnancy

Pharmacology | Administration | Images | Patient Handout | Formulary

Administration

IV Incompatibilities

Solution: LR (at drug concentrations >10 mg/mL; compatible at 1 mg/mL)

Additive: Aminophylline, clindamycin, linezolid, theophylline, metronidazole (at metronidazole 15 g/L with ceftriaxone 20 g/L; compatible at metronidazole 7.5 g/L with ceftriaxone 10 g/L)

Syringe: Lidocaine (variable)

Y-site: Alatrofloxacin, amphotericin B cholesteryl sulfate, amsacrine, filgrastim, fluconazole, labetalol, pentamidine, vinorelbine, vancomycin

General: Calcium-containing drugs

IV/IM Preparation

Dilutions are stable for 24 hours at room temperature

IV

- Reconstitute to ~100 mg/mL, then dilute further to 10-40 mg/mL
- 10 g bulk package: not for direct IV infusion; reconstitute in 95 mL, then use appropriate portions for further dilution
- 10-g bulk package not for direct IV injection; reconstitute in 95 mL, then use appropriate portions for further dilution

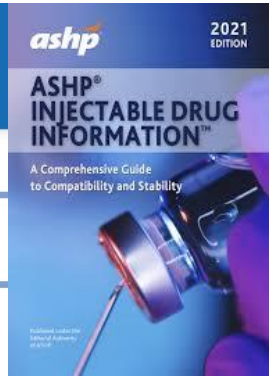
IM

- Dilute with compatible fluid (eg, SWI, NS, D5W) to 250-350 mg/mL

IV/IM Administration

IV: Infuse intermittently over 30 minutes

IM: Inject deep into large muscle mass



Compatibility Information

Solution Compatibility

Ceftriaxone sodium

Test Soln Name	Test Soln Mfr	Base Drug Mfr	Base Drug Conc/L or %	Remarks	Refs	Compat
Dextrose 5% in sodium chloride 0.45%		RC	10 to 40 g	Less than 10% loss in 2 days at 25°C. Incompatible if refrigerated	1(9/08)	C
Dextrose 5% in sodium chloride 0.45%		RC	10 g	3% loss in 48 hr at 20°C. 5% loss in 72 hr and 9% in 96 hr at 4°C	965	C
Dextrose 5% in sodium chloride 0.9%		RC	10 to 40 g	Less than 10% loss in 2 days at 25°C. Incompatible if refrigerated	1(9/08)	C
Dextrose 5%		RC	10 to 40 g	Less than 10% loss in 2 days at 25°C and 10 days at 4°C	1(9/08)	C
Ringer's injection, lactated		RC	10 and 13 g	Precipitate forms relatively rapidly	2222	I
Sodium chloride 0.9%		RC	10 to 40 g	Less than 10% loss in 2 days at 25°C and 10 days at 4°C	1(9/08)	C
Sodium chloride 0.9%		RC	10 g	4% loss in 48 hr and 14% in 72 hr at 20°C. 3% loss in 48 hr and 9% in 72 hr at 4°C	965	C
Sodium chloride 0.9%	MG[c]	RC	20 g	Physically compatible with 10% drug loss in 24 hr and 16% in 48 hr at 25°C under fluorescent light	1026	C

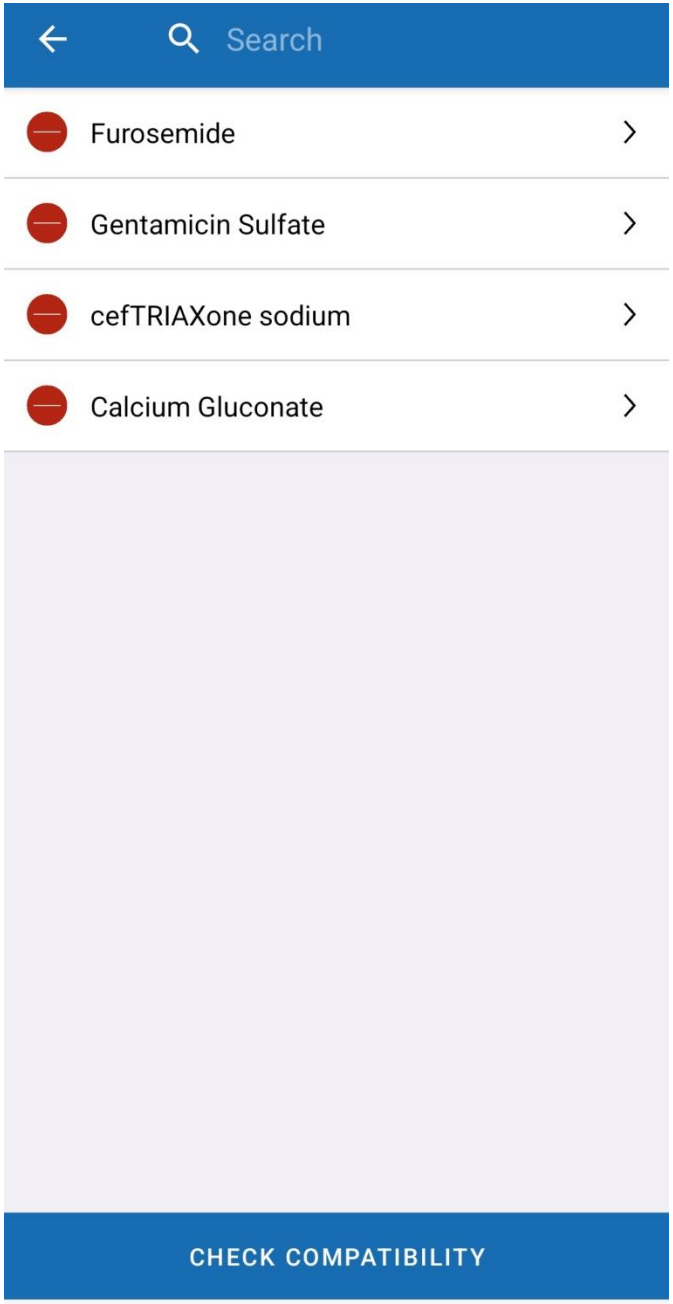
Additive Compatibility

Ceftriaxone sodium

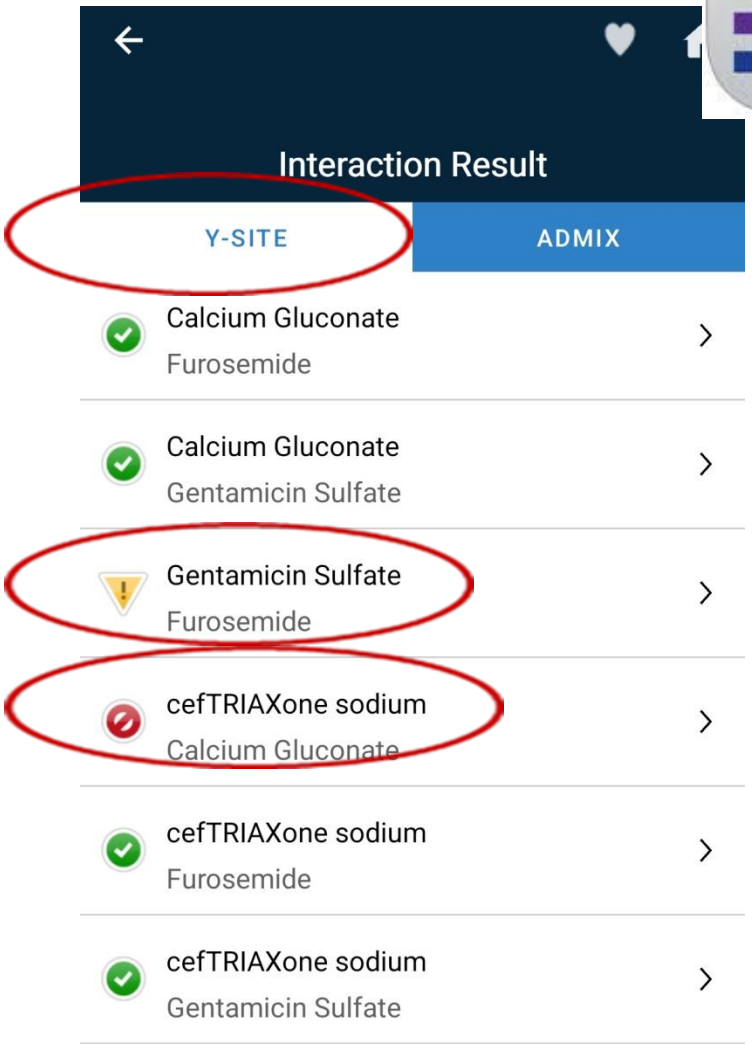
Test Drug	Test Drug Mfr	Test Drug Conc/L or %	Base Drug Mfr	Base Drug Conc/L or %	Test Solution	Remarks	Refs	Compat
Amikacin sulfate	BR	15 and 25 mg	RC	100 mg	D5W	6% loss of amikacin in 24 hr at 22°C	504	C
Aminophylline	AMR	1 g	RC	20 g	D5W, NS[a]	Yellow color forms immediately. 3 to 6% ceftriaxone loss and 8 to 12% aminophylline loss in 24 hr	1727	I
Aminophylline	AMR	4 g	RC	20 g	D5W, NS[a]	Yellow color forms immediately. 15 to 20% ceftriaxone loss and 7 to 9% aminophylline loss in 24 hr	1727	I
Aminophylline	AMR	1 g	RC	40 g	D5W, NS[a]	Yellow color forms immediately. 15 to 18% ceftriaxone loss and 1 to 3% aminophylline loss in 24 hr	1727	I
Calcium chloride						Incompatible. Precipitate may form in calcium-containing solutions	2222, 2731, 2784	I
Calcium gluconate						Incompatible. Precipitate may form in calcium-containing	2222, 2731,	I

Y-Site Injection Compatibility (1:1 Mixture)

Ceftriaxone sodium							
	Test Drug		Base Drug				
Test Drug	Mfr	Test Drug Conc	Mfr	Base Drug Conc	Remarks	Refs	Compat
Acetaminophen	CAD	10 mg/mL	HOS	40 mg/mL	Physically compatible with no loss of either drug in 4 hr at 23°C	2901, 2902	C
Acyclovir sodium	BW	5 mg/mL[a]	RC	20 mg/mL[a]	Physically compatible for 4 hr at 25°C	1157	C
Allopurinol sodium	BW	3 mg/mL[b]	RC	20 mg/mL[b]	Physically compatible for 4 hr at 22°C	1686	C
Amifostine	USB	10 mg/mL[a]	RC	20 mg/mL[a]	Physically compatible for 4 hr at 23°C	1845	C
Amiodarone HCl	WY	6 mg/mL[a]	RC	20 mg/mL[a]	Turned yellow in 24 hr at 22°C, but considered	2352	C
Caspofungin acetate	ME	0.7 mg/mL[b]	ORC	20 mg/mL[b]	Immediate white turbid precipitate forms	2758	I
Caspofungin acetate	ME	0.5 mg/mL[b]	NVP	20 mg/mL[b]	Amber crystals and white paste form	2766	I
Ceftolozane sulfate–tazobactam sodium	CUB	10 mg/mL[c k]	HOS	40 mg/mL[c]	Physically compatible for 2 hr	3262	C



MICROMEDEX IV COMPATIBILITY



Gentamicin Sulfate - Furosemide

Furosemide 0.16 mg/mL : Dextrose 5% in Water
Gentamicin Sulfate 0.64 mg/mL :

Storage
Room temperature of 20 °C.

Study Period
3 hours.

Container
The test sample container was not cited.

Physical Compatibility
Physically compatible. No visible haze or particulate formation, color change, or gas evolution.

Furosemide 0.16 mg/mL : Normal saline- Sodium chloride 0.9%
Gentamicin Sulfate 0.64 mg/mL :

Storage
Room temperature of 20 °C.

Study Period
3 hours.

Container
The test sample container was not cited.

Physical Compatibility
Physically compatible. No visible haze or particulate formation, color change, or gas evolution.

Furosemide 5 mg/mL : Dextrose 5% in Water
Gentamicin Sulfate 6.4 mg/mL :

Storage
Ambient room temperature near 23 °C exposed to normal fluorescent light.

Study Period
4 hours.

Container
Simulated Y-site administration using glass test tubes.

Physical Compatibility
Physically incompatible. An increase in measured haze or turbidity, particulates, and/or a color change was found.

cefTRIAXone sodium - Calcium Gluconate

Calcium Gluconate 50 mg/mL : Dextrose 5% in Water
cefTRIAXone sodium 165 mg/mL :

Storage
Ambient room temperature near 23 °C exposed to normal fluorescent light.

Study Period
4 hours.

Container
Simulated Y-site administration using glass test tubes.

Physical Compatibility
Physically incompatible. An increase in measured haze or turbidity, particulates, and/or a color change was found.

Calcium Gluconate 50 mg/mL : Dextrose 5% in sodium chloride 0.45%
cefTRIAXone sodium 165 mg/mL :

Storage
Ambient room temperature near 23 °C exposed to normal fluorescent light.

Study Period
4 hours.

Container
Simulated Y-site administration using glass test tubes.

Physical Compatibility
Physically incompatible. An increase in measured haze or turbidity, particulates, and/or a color change was found.

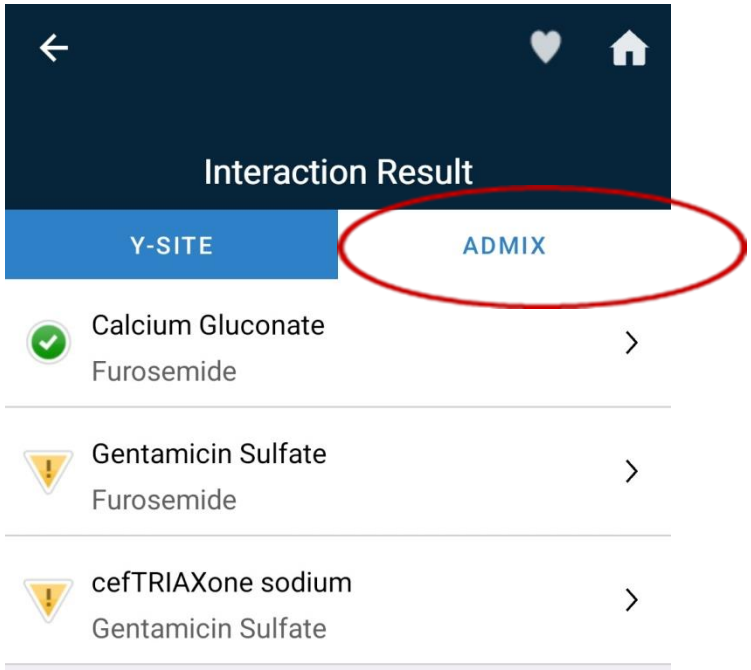
Calcium Gluconate 50 mg/mL : Dextrose 5% in sodium chloride 0.9%
cefTRIAXone sodium 165 mg/mL :

Storage
Ambient room temperature near 23 °C exposed to normal fluorescent light.

Study Period
4 hours.

Container
Simulated Y-site administration using glass test tubes.

Physical Compatibility
Physically incompatible. An increase in measured haze or turbidity, particulates, and/or a color change was found.


Interaction Result
Y-SITE
ADMIX
Calcium Gluconate
Furosemide
Gentamicin Sulfate
Furosemide
cefTRIAXone sodium
Gentamicin Sulfate


Thank you