

Editor:

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The Apothecary Bulletin

PHARMACY SERVICE & THERAPEUTICS COMMITTEES
US ARMY MEDDAC, FORT CARSON, COLORADO

FORMULARY CHANGES

The Pikes Peak Region Formulary Committee and the Evans Pharmacy & Therapeutics (P&T) Committee **added** the following medications to the Formulary at their January meetings:

- + amlodipine/benazepril (*Lotrel*) 2.5mg/10mg, 5mg/10mg, 5mg/20mg capsules — **note: Lotrel is not restricted; Norvasc remains restricted to Internal Medicine and Cardiology for initial prescription**
- + clotrimazole 1% and betamethasone dipropionate 0.05% (*Lotrisone*) cream
- + colestipol (*Colestid*) 1gm tablets — **will phase out granules over 1 year (all refills will be honored; new prescriptions should be written for tablets)**
- + escitalopram (*Lexapro*) 10mg and 20mg tablets — **will be available once discrepancy in price corrected by manufacturer and vendor (approximately 30 days)**
- + guanfacine (*Tenex*) 1mg and 2mg tablets — **restricted to pediatric psychiatry**
- + norethindrone 1mg/ethinyl estradiol 20mcg (*Loestrin FE 1/20*) 28 tablet pack — **was added to the DoD Basic Core Formulary (BCF)**
- + risedronate (*Actonel*) 5mg and 35mg tablets — **consider as first-line bisphosphonate; 1 month supply: Actonel 35mg weekly is \$31.12 compared to \$36.72 for Fosamax 70mg weekly**

The following medications were **deleted** from the Formulary:

- guaifenesin 600mg sustained release tablets (*Humibid LA*)
- pantoprazole sodium powder for injection (*Protonix I.V.*) — **due to sharp increase in cost; inpatient pharmacy will keep some in stock for nonformulary requests**

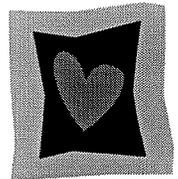
As part of the ongoing drug class review process, the Pikes Peak Region Formulary Committee will review the dermatologic and ophthalmologic agents at the March 2003 meeting. Providers desiring to have input into this review are encouraged to contact one of the Pikes Peak Committee members: LTC Edward Torkilson (Pharmacy), MAJ Robert Gray (Family Practice), and Dr. Garold Paul (Internal Medicine).

The next Formulary Committee Meetings will be held on Thursday, 6 March 2003 (Pikes Peak at the Air Force Academy) and Tuesday, 11 March 2003 (Evans' P&T). New Drug Requests must be received by the Chief, Pharmacy Service, no later than **24 February** to be considered at the next meetings.

February is ... American Heart Month

From the AHA's *Heart Disease and Stroke Statistics — 2003 Update* (year 2000 data):

- CVD claimed 39.4% of all deaths or 1 of every 2.5 deaths in the U.S. in 2000
- Since 1900, CVD has been the #1 killer in the U.S. every year but 1918
- Nearly 2,600 Americans die of CVD each day, an average of 1 death every 33 seconds
- CVD claims more lives each year than the next 5 leading causes of death combined (cancer, chronic lower respiratory diseases, accidents, diabetes, influenza and pneumonia)
- Almost 150,000 Americans killed by CVD each year are under age 65
- In the U.S. in 2000, 46.5% of deaths from CVD were males and 53.5% were females; 1 in 29 women's deaths is from breast cancer, while 1 in 2.4 is from CVD
- On average, every 45 seconds someone in the U.S. has a stroke; on average, every 3.1 minutes someone dies of a stroke
- Each year, about 700,000 people experience a new or recurrent stroke; about 500,000 are first attacks and 200,000 are recurrent attacks
- Each year, about 40,000 more women than men have a stroke
- Of all strokes, 88% are ischemic, 9% are intracerebral hemorrhage, and 3% are subarachnoid hemorrhage



Q & A

What are the top 10 selected risks to health based on *The World Health Report 2002: Reducing Risks, Promoting Healthy Life* published by the World Health Organization?

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In this issue....

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- Starter Packs Available
- ADR Report
- ALLHAT Published
- Herb (Gotu kola)
- Recent FDA Approvals

STARTER PACKS AVAILABLE

As a reminder, *Aricept* (donepezil) and *Zoloft* (sertraline) Starter Packs are available for **NEW** patients being started on these medications. The Packs contain the following:

- ✧ *Zoloft* Starter Pack
 - seven 25mg tablets followed by fourteen 50mg tablets; patient education material on depression, panic/anxiety, PTSD, and OCD
- ✧ *Aricept* Starter Pack
 - forty-two 5mg tablets
 - the pharmacy will remove the seven 10mg tablets from the Starter Pack (if dispensed from a physician's office, the manufacturer has added the 10mg tablets with note to remove if not clinically indicated)

If you choose to start a patient on *Aricept* or *Zoloft* using the Starter Pack, please enter 2 prescriptions: one for the Starter Pack (instructions already entered in CHCS for the Packs) and an additional prescription for continuation of therapy after the Starter Pack is completed. You will receive a warning for a "class overlap" but can override without cancelling either prescription.

COST OF NEW FORMULARY MEDICATIONS — MTF pricing

Lotrel, combination tablet with amlodipine & benazepril: \$1.13 per 2.5mg/10mg, \$1.10 per 5mg/10mg, \$1.22 per 5mg/20mg

- comparison with other selected antihypertensive medications:

Selected Antihypertensive	Usual Adult Total Daily Dose Range	Usual Number of Doses Per Day	Cost Per Month (as of 22 Jan 03)
HCTZ	12.5mg to 50mg	1	\$0.30 to \$2.10
<i>Maxzide</i>	1/2 to 1 tablet	1	\$0.15 to \$0.30
diltiazem (<i>Tiazac</i>)	120mg to 360mg	1	\$8.70 to \$13.80
verapamil (<i>Calan SR</i>)	120mg to 480mg	1 to 2	\$24.90 to \$54.00
felodipine (<i>Plendil</i>)	2.5mg to 10mg	1	\$15.00 to \$15.90
amlodipine (<i>Norvasc</i>)	5mg to 10mg	1	\$21.30 to \$26.40
amlodipine & benazepril (<i>Lotrel</i>)	2.5mg/10mg to 5mg/20mg	1	\$33.00 to \$36.60
lisinopril	5mg to 40mg	1	\$9.30 to \$23.40
fosinopril (<i>Monopril</i>)	10mg to 40mg	1 to 2	\$4.50 to \$12.30
ramipril (<i>Altace</i>)	1.25mg to 20mg	1 to 2	\$3.60 to \$7.20
candesartan (<i>Atacand</i>)	4mg to 32mg	1	\$19.50 to \$31.80
losartan (<i>Cozaar</i>)	25mg to 100mg	1 to 2	\$15.30 to \$44.40
losartan & HCTZ (<i>Hyzaar</i>)	50mg/12.5mg to 100mg/25mg	1	\$15.30 to \$22.50
atenolol (<i>Tenormin</i>)	25mg to 100mg	1	\$0.60 to \$0.90
metoprolol (<i>Lopressor</i>)	100mg to 400mg	1 to 2	\$1.50 to \$6.00

Colestid (colestipol) tablets, bile acid sequestrant: \$9.89 per 120 tablets; dose = 2 to 16gm per day in single or divided dose

- comparison: *Colestid* granules — \$20.32 per can

Lotrisone (clotrimazole 1% & betamethasone 0.05%) cream, topical anti-infective/anti-inflammatory: \$8.11 per 15gm tube

Lexapro (escitalopram), S-isomer of citalopram, SSRI antidepressant: expected price of \$1.08 per tablet

- comparison: *Prozac* (fluoxetine) — \$0.03 for all strengths (10mg, 20mg)
Zoloft (sertraline) — \$1.30 per 25mg, \$1.36 per 50mg, \$1.36 per 100mg
Paxil (paroxetine) — \$1.30 for all strengths (10mg, 20mg)
Celexa (citalopram) — \$1.13 per 40mg

Guanfacine, central alpha-adrenergic agonist: \$0.06 per 1mg, \$0.09 per 2mg

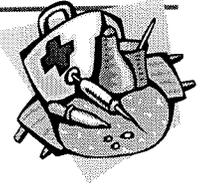
Loestrin FE 1/20, oral contraceptive: \$0.21 per month

- comparison: monophasic — *Loestrin Fe 1.5/30* \$0.35/month; *Alesse* \$5.96/month; *Demulen 1/35* \$3.29/month; *Norinyl 1/35* \$3.78/month; *Norinyl 1/50* \$2.63/month; *LoOvral* \$7.90/month; *Desogen* \$12.84/month
biphasic — *Mircette* \$5.98 per month
triphasic — *Estrostep Fe* \$2.07 per month; *Tri Levlén* \$1.35/month; *Ortho Tri-Cyclen* \$7.94/month; *Ortho-Novum 7/7/7* \$5.84/month
other — *NuvaRing* \$14.90/month

Actonel (risedronate), bisphosphonate: \$1.11 per 5mg (once daily), \$7.78 per 35mg (once weekly)

- comparison: *Fosamax* — \$1.18 per 10mg (once daily), \$8.26 per 35mg (once weekly); \$9.18 per 70mg (once weekly)

ADVERSE DRUG REACTION REPORT



There were 73 adverse drug reactions (ADRs) reported for November (n=34) and December (n=39), of which 42 (58%) were reported **spontaneously** (11 from Family Practice; 10 from pharmacy; 5 from Internal Medicine; 4 from the Emergency Department; 2 each from Pediatrics, Preventive Medicine, and 3E; and 1 each from L&D, Mental Health, PACC, PACU, SDS, and 5E). The most prevalent adverse events involved the anti-infective agents (n=31; 42%) and the analgesic agents (n=7; 10%).

One event (1.3%) was deemed preventable —

- 1) **patient error/dose-related:** 7 year old female who developed “psychosis” (mother reported patient was acting strange, going “ballistic” over minor things, and thought the devil was sitting next to her) secondary to *Zyrtec*; the mother gave the girl her brother’s *Zyrtec* at the dose prescribed for him

Two events (2.7%) were deemed *moderate* in severity —

- 1) 66 year old female with headache and “seizure” with respiratory arrest thought secondary to *Labetalol*; the patient was revived and all testing in civilian ER was normal
- 2) 27 year old female on 3E with facial and throat swelling with difficulty breathing secondary to *Nubain* administration

Three events (4.1%) were reported to the FDA through the VAERS system: three active duty (2 male, 1 female) presented to the Emergency Department with GI complaints (nausea +/- vomiting/diarrhea/cramps) after receiving the Anthrax vaccine.

Six events (8.2%) were reported from inpatient areas:

- 1) 24 year old male with erythema and skin rash secondary to *Cefotan* (PACU)
- 2) 25 year old male with itching secondary to *Percocet* (5E)
- 3) 27 year old female with facial/throat swelling with difficulty breathing secondary to *Nubain* (3E)
- 4) 23 year old female with itching at IV site secondary to *Levaquin* (SDS)
- 5) 20 year old female with dystonic reaction secondary to *Compazine* (3E)
- 6) 19 year old female with burning sensation from IV site to elbow secondary to penicillin (L&D)

Thanks to all who continue to report adverse drug events.

Q & A

The aim of *The World Health Report 2002* was to estimate the contributions of major risk factors to global and regional burdens of disease. Expert working groups evaluated how various socioeconomic, lifestyle, environmental, and physiologic factors determine a population’s health. They reviewed data (from government reports, international databases, etc.) on 26 risk factors in 14 epidemiologic regions worldwide.

The top 10 selected risks to health:

1. Underweight
2. Unsafe sex
3. High blood pressure
4. Tobacco consumption
5. Alcohol consumption
6. Unsafe water, sanitation, and hygiene
7. Iron deficiency
8. Indoor smoke from solid fuels
9. High cholesterol
10. Obesity

The report can be found at: www.who.int/whr

“The world is living dangerously — either because it has little choice, or because it is making the wrong choices.”

— Dr. Gro Harlem Brundtland, Director-General, WHO

“Whether by a healthy child, a garden patch or a redeemed social condition; to know even one life has breathed easier because you have lived.

This is the meaning of success.”

— Ralph Waldo Emerson

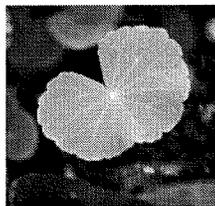
ALLHAT PUBLISHED

The results of ALLHAT (Antihypertensive and Lipid-Lowering Treatment to Prevent Heart Attack Trial), a randomized, double-blind, multi-center, clinical trial involving 42,418 participants in the antihypertensive trial and 10,355 participants in the lipid trial, were published in the December 18th issue of *JAMA*. The investigators concluded that drug treatment for hypertension should begin with a diuretic, and for those who cannot take a diuretic, calcium channel blockers and angiotensin converting enzyme inhibitors should be considered. The investigators acknowledged that most patients will require more than one drug to adequately control their blood pressure.



Information on the trial can be found at: www.allhat.org

HERB OF THE (every other) MONTH



Gotu kola (*Centella asiatica*, also known as Indian pennywort) is a slender, creeping plant that grows abundantly in swampy areas of India, Sri Lanka, Madagascar, and South Africa. It has been used as a medicinal herb for thousands of years in India, China, and Indonesia. Historically, Sri Lankans propagated the myth that gotu kola promoted longevity after witnessing elephants chewing on the plant leaves and suspected it was responsible for the elephants' long life span. It has been called one of the "miracle elixirs of life" because legend has it that an ancient Chinese herbalist lived for more than 200 years as a result of using the herb. A Sri Lankan proverb advises "two leaves a day will keep old age away". Gotu kola contains no caffeine and should not be confused with the dried seed of *Cola nitida*, known as kolanuts, kola or cola, which is the plant used in cola beverages.

Claims for gotu kola include use as an antipsoriatic, antifertility, antihypertensive, and anticancer agent, and as an agent for wound healing, varicose veins, chronic hepatic disorders, rheumatism, and mental fatigue. It has been shown to be effective in patients with psoriasis, for preventing and treating keloids and hypertrophic scars, and has also been used in patients with chronic skin maladies including cutaneous ulcers, surgical wounds, and gynecologic wounds. As a titrated extract, gotu kola has shown improvement in symptoms in patients with venous insufficiency of the lower limbs.

The primary active constituents of gotu kola are saponins, also called triterpenoids. The triterpenoid fraction of the extracts has been shown to increase the collagen content of cell layer fibronectin, which may explain the action in wound healing. The glycoside madecassoside has anti-inflammatory properties, while asiaticoside appears to stimulate wound healing. Phytochemical screening of *C. asiatica* revealed the presence of amino acids, flavonoids, fatty acids, alkaloids, phytosterols, saccharides, and inorganic salts. The root contains 14 different polyacetylenes.

A double-blind, placebo controlled study of 94 patients with venous insufficiency of the lower limbs indicated that the titrated extract of *C. asiatica* (TECA) produced clinical improvement in the subjective measures of the sensation of heaviness and pain in the legs, edema, and overall patient assessment of efficacy, and in the objective measure of vein distensibility. Those receiving placebo had an increase in vein distensibility. The researchers concluded that TECA stimulated collagen synthesis in the vein wall, thus increasing vein tonicity and reducing the capacity of the vein to distend.

Doses vary with the condition being treated. Usual doses are 600mg of the dried leaf three times daily or a 450mg capsule once daily. It is recommended to use the herb for no more than 6 weeks continuously.

Adverse reactions have included burning sensation with topical use, contact dermatitis, hypercholesterolemia, hyperglycemia, pruritus, and sedation with large doses. Due to its effects on lipids and glucose, high doses of the herb may interfere with cholesterol-lowering and antidiabetic agents and concomitant use is not recommended. Use is contraindicated in pregnant and breast-feeding patients. Use caution in patients with a history of contact dermatitis.

Resources: *Complementary & Alternative Medicines* (1999), *The Review of Natural Products* (1995), Various Websites

RECENT FDA APPROVALS

Aralast (alpha-1 proteinase inhibitor) ... as augmentation therapy for patients with congenital deficiency of alpha-1 proteinase inhibitor and clinically evident emphysema

Finacea (azelaic acid) ... for topical treatment of inflammatory papules and pustules of mild to moderate rosacea

Prozac (fluoxetine) ... for treatment of children and adolescents 7 to 17 years of age for major depressive disorder and obsessive compulsive disorder

Relpax (eletriptan hydrobromide) ... for the acute treatment of migraine

Depakote ER (divalproex extended release) ... for sole and adjunctive therapy to treat complex partial seizures and simple and complex absence seizures in adults

Forteo (teriparatide) ... for the treatment of osteoporosis in postmenopausal women who are at high risk of fracture and to increase bone mass in men with primary or hypogonadal osteoporosis who are also at high risk for fracture

"Be sure you put your feet in the right place,
then stand firm."

~ Abraham Lincoln



Drug Interaction Corner

Iron - Drug Interactions

- decreased absorption of iron: antacids, cimetidine, tetracycline
- increased absorption of iron: ascorbic acid at doses \geq 200mg
- increased serum iron levels: chloramphenicol
- decreased drug absorption: levodopa, methyldopa, penicillamine, quinolones, tetracyclines
- decreased efficacy of drug: levothyroxine