AMERICAN HEALTH CONSULTANTS®

RN® DRUG ALERT

Cutting-Edge Updates in Therapeutics and Drug Data

IN THIS ISSUE

JULY 2001

VOL. 1, NO. 1 (pages 1-8)

For more information, call: (800) 688-2421.

FDA OKs long-acting beta$_2$-agonist with faster onset of action than salmeterol

By **Joan Unger**, RN, MS, ARNP
and **James Chan**, PharmD, PhD

There is good news for your asthma patients and those who suffer from exercise-induced bronchospasm. The Food and Drug Administration (FDA) recently approved formoterol inhalation powder, a long-acting, inhaled selective beta$_2$-adrenergic receptor agonist. The drug is the second long-acting beta$_2$-agonist on the market along with salmeterol (Serevent). Formoterol is approved for the maintenance treatment of asthma and the prevention of exercise-induced bronchospasm. Formoterol, which has been available in Europe, is marketed as Foradil by Novartis Pharmaceuticals.

• **Indications.**

— Long-term maintenance of asthma control and the prevention of bronchospasm in adults and children 5 years and older;

— Acute prevention of exercise-induced bronchospasm in adults and children 12 years and older.[1]

The primary difference between formoterol and salmeterol is the faster onset of action of the formoterol,[2] which is similar to albuterol. With twice-daily dosing, the benefit of faster onset may be negligible. Despite its faster onset of action, formoterol is not recommended for rescue use as its long duration of action may mask signs of more serious asthma.[2] However, the faster onset of action of formoterol may be advantageous for the prevention of exercise-induced bronchospasm.

There have been a few case reports of patients with preferential response to formoterol compared to salmeterol. One study describes a patient with a significant response to formoterol but not to salmeterol.[3] Another reports two asthma patients who experienced no effect on asthma symptom control and pulmonary function with inhalation of salmeterol, but a striking effect resulted when therapy was switched to inhaled formoterol.[4]

Foradil is administered as a dry powder and does not use a chlorofluorocarbons propellant. Salmeterol is available both as an aerosol and dry powder. Some patients may find the inhalation of dry powder difficult, especially if they are accustomed to aerosolized inhalers. Since the delivery system is self-actuated, drug delivery is sensitive to the patient's

inspiratory flow rate.[5] Formoterol may have a greater potential to cause side effects such as tremors and effect on Q-T interval compared to salmeterol.[6]

These drugs appear to be comparable in improving pulmonary function in asthmatics in single-dose trials.[2,6] In contrast to salmeterol formoterol has not been approved for the maintenance treatment of bronchospasm of chronic obstructive pulmonary disease, but it appears to be equally effective.[7,8] Both drugs are priced similarly with a 30-day cost of about $70.

• **Clinical implications.**

Long-acting beta agonists such as salmeterol and formoterol are recommended as alternatives to medium-dose inhaled corticosteroids in long-term management of moderate to persistent asthma.[9]

Formoterol provides a safe and effective alternative to salmeterol. Both are approved for use in adults and children, although salmeterol is approved down to age 4 compared to age 5 for formoterol.

• **Dosage.**

— For long-term maintenance care of asthma control, the usual dose is inhalation of the contents of one capsule every 12 hours.

— For prevention of exercise-induced bronchospasm the dose is one capsule at least 15 minutes before exercise.

— Doses should not exceed two capsules per day.

— Formoterol is available as 12 mcg capsules and is administered with the Aerolizer Inhaler.

• **Nursing considerations.**

In comparison with albuterol and placebo, patients treated with formoterol showed improved combined and nocturnal asthma symptom scores, fewer nighttime awakenings, fewer nights in which they required rescue medication, and higher morning and evening peak flow rates. Formoterol is not indicated for patients in whom asthma is managed by occasional use of inhaled, short-acting, beta$_2$-agonists. However, it can be used safely and concomitantly with beta$_2$-agonists, inhaled or systemic corticosteroids, and theophylline. Formoterol has no anti-inflammatory effect and cannot take the place of corticosteroids. Like similar drugs, formoterol fumarate should be used with caution in patients with cardiovascular disorders, especially coronary insufficiency, arrhythmias, and hypertension.

• **Patient education.**

Caution patients that formoterol capsules *must not* be taken orally and should be used *only* with the inhaler. A foradil capsule is placed in the well of the Aerolizer Inhaler, and the capsule is pierced by pressing and releasing the buttons on the side of the device. The formoterol fumarate formulation is dispersed into the air stream when the patient inhales rapidly and deeply through the mouthpiece. Formoterol is not intended to treat acute asthma symptoms, and patients should not exceed the recommended dose. Patients who require oral or inhaled corticosteroids should continue their treatment, even if they feel better after initiating or increasing the dose of formoterol. If the usual dose becomes less effective or the patient requires more inhalation of short-acting beta$_2$-agonist, a re-evaluation of the regimen is needed at once.

References

1. Foradil Product Information. Novartis Pharmaceutical; February 2001.
2. Barlow RA, RN Brogden. *Drugs* 1998; 55:303-322.
3. Noppen M, Vinckin W. *Respiration* 2000; 67:112-113.
4. Ulrik CS, Kok-Jensen A. *Eur Respir* 1994; 7:1,003-1,005.
5. Nielsen KG, et al. *Eur Respir* 1997; 10:2,105-2,109.
6 Palmqvist M, et al. *Am J Respir Crit Care Med* 1999; 160:244-249.
7. Celik G, et al. *Respiration* 1999; 66:434-439.
8. Cazzola M, Donner CF. *Drugs* 2000; 60:307-320.
9. National Institute of Health. *Guidelines for the Diagnoses and Management of Asthma. Expert Panel Report 2.* July 1997. ■

Tools can help prevent coronary artery disease

By **Joan Unger**, RN, MS, ARNP
and **William T. Elliott**, MD, FACP

As a result of a recently published report from the National Cholesterol Education Program (NCEP) in Bethesda, MD, nurses and physicians can incorporate tools into their practice for the primary prevention of coronary artery disease (CAD) in persons with multiple risk factors.

The report, titled Adult Treatment Panel III (ATP III), updates existing recommendations for the diagnosis and clinical management of high blood cholesterol. It includes new guidelines to help providers determine which patients require

treatment and updates targets for cholesterol levels. **(See New Features of ATP III, inserted in this issue.)**

The report suggests aggressive treatment for those with risk factors, including drug therapy to lower low-density lipoprotein (LDL) cholesterol to 100 mg / dL. Another significant change is the elevation of diabetes to the risk equivalent of CAD when considering lipid-lowering therapy. The guidelines suggest that anyone with an LDL cholesterol greater than 130, high-density lipoprotein (HDL) less than 40, or a triglyceride level greater than 200 should be considered for drug therapy. **(See Table 1, this page.)**

The expert panel recommends that a fasting lipid panel should be the standard screening exam obtained every five years in all adults age 20 years or older. The exam should include total cholesterol, LDL cholesterol, HDL cholesterol and triglycerides. If the test is nonfasting and the results show total cholesterol ≥ 200 mg / dL or HDL is < 40 mg / dL, a follow-up lipoprotein profile (after a nine- to 12-hour fast) is necessary for appropriate management based on the LDL. In addition it is important, in persons with elevated LDL cholesterol or other hyperlipidemia, to rule out diabetes, hypothyroidism, obstructive liver disease, chronic renal failure, and drugs such as progestins, anabolic steroids, and corticosteroids, that increase LDL and decrease HDL.

The clinical approach to primary prevention calls for multifaceted lifestyle changes to reduce the risk for CAD. The ATP III designates these as *therapeutic lifestyle changes (TLC)*. Nurses and other health care providers should encourage patients to:

- reduce intakes of saturated fats to < 7% of total calories;
- reduce cholesterol to < 200 mg per day;
- increase viscous (soluble) fiber to 10-25 g / day;
- control weight to lower cholesterol levels and reduce CAD risk;
- increase moderate physical activity.

ATP III's TLC Diet generally contains the recommendations included in the Dietary Guidelines for Americans 2000. One exception is that total fat is allowed to range from 25%-35% of total calories, provided saturated fats and *trans* fats are kept low. A higher intake of unsaturated far helps reduce triglycerides and raise HDL in persons with a metabolic syndrome.

At the end of six weeks, the LDL response is measured. If the goal has not been reached, other therapeutic options for LDL lowering, such as viscous fiber (10-25 g / day) and plant stanols / sterols (2 g / day), may be added. Plant stanols / sterols is a natural plant substance found in cholesterol-lowering margarines such as Benacol and Take Control.

Table 1

ATP III Classification of LDL (mg/dL)

Classification	LDL level
Optimal	< 100
Near or above optimal	100-129
Borderline high	130-159
High	160-189
Very High	≥ 190

Source: U.S. Department of Health and Human Services, Public Health Service, National Institutes of Health, National Heart, Lung, and Blood Institute, Bethesda, MD. Adapted from NIH Publication No. 01-3670; May 2001.

After maximum reduction of LDL with dietary therapy, the emphasis shifts to management of the metabolic syndrome and other lipid risk factors. A portion of the population whose risk for CAD is high will require LDL-lowering drugs in addition to TLC, but even when drugs are prescribed, it is important to maintain and reinforce attention to TLC.

The executive summary is available in the May 16 issue of *The Journal of the American Medical Association* (*JAMA* 2001; 285:2,486-2,497). More information also is available at www.nhlbi.nih.gov guidelines / cholesterol / index.htm.

Cholesterol-lowering therapy

Older patients may benefit more from cholesterol-lowering therapy than younger patients, according to an Australian study. More than 9,000 patients with a history of CAD were studied, of which 3,500 were age 65-75. Patients were randomized to pravastatin 40 mg / d or placebo and were followed for an average of six years. In patients 65-75 years of age, pravastatin therapy reduced:

- mortality by 21%;
- death from coronary heart disease by 24%;
- coronary heart disease death or nonfatal myocardial infarction by 22%;
- myocardial infarction by 26%;

• stroke by 12%.

For every 1,000 older patients treated over six years, pravastatin prevented 45 deaths, including deaths from myocardial infarction and strokes.

The rate of decrease was similar for younger and older patients, but because older patients were at a higher absolute risk of death and major coronary events, the benefit was greater for those ages 65-75 *(Ann Int Med* 2001; 134:931-940).

Migraine treatment

The Food and Drug Administration has approved a new triptan for the treatment of migraine. Pharmacia's almotriptan malate is approved for migraine in adults with or without aura. The drug, which will be sold under the trade name AXERT, is touted as being as effective as sumitriptan but with significantly fewer side effects, especially chest pain (company data). AXERT is not intended for prevention of migraine or for use in hemiplegic or basilar migraine. Safety and effectiveness of AXERT have not been established for cluster headache, which is present in an older, predominantly male population. The incidence of adverse effects (nausea, dry mouth, and paresthesia) was similar to that of placebo.

• **Dosage.**

AXERT comes in two doses: 12.5 mg and 6.25 mg. In clinical trials, AXERT 12.5 mg and 6.25 mg gave significant relief from migraine pain at two hours. Efficacy rates in comparison to placebo ranged from 57%-65% (12.5 mg) and 55%-56% (6.25 mg). If needed, the patient may take a second dose after two hours but should not exceed two doses within a 24-hour period.

• **Nursing considerations.**

AXERT should not be administered within 24 hours of treatment with ergotamine-containing or ergot-type medication such as dihydroergotamine, methysergide, or another 5-HT1 agonist. AXERT may cause coronary vasospasm. It also should not be given to patients with ischemic heart disease (angina pectoris, history of myocardial infarction, or documented silent ischemia) or who have symptoms or findings consistent with ischemic heart disease.

Because AXERT may increase blood pressure, it should not be given to patients with uncontrolled hypertension. Patients with renal or hepatic impairment should be started with 6.25 mg.

• **Patient education.**

AXERT is intended for acute treatment of migraine in adults and should not be used for prevention. It should not be taken in conjunction with other drugs prescribed for migraine. In studies, side effects occurred in only 1% of subjects, but encourage the patient to report unusual symptoms.

Allergy medicine and OTC status

A battle is shaping up in Washington over the status of three popular prescription allergy medications. Wellpoint Health, one of the nation's largest HMOs, has petitioned the Food and Drug Administration (FDA) to switch loratidine (Claritin-Schering-Plough), fexofenadine (Allegra-Aventis), and cetirizine (Zyrtec-Pfizer) to over the counter (OTC) status.

At issue is the relative safety of these "nonsedating" antihistamines compared to currently available OTC antihistamines such as diphenhydramine and hydroxyzine. The manufacturers argue the drugs should be available only by prescription and covered by third-party payers. They say the drugs are too new to be considered for OTC status and that allergic rhinitis requires a doctor's diagnosis.

An FDA panel has approved a prescription-to-OTC switch for the three drugs, but it is unclear whether the FDA has the ability to force the switch against the companies' wishes.

Beta-blockers and CHF

Do beta-blockers benefit patients with advanced congestive heart failure? Subsequent articles in the May 31 *New England Journal of Medicine* give conflicting results. In the first study, more than 2,000 patients with severe heart failure were randomized to carvedilol therapy or placebo for a mean period of 10.4 months. Over the study period, there were 190 deaths in the placebo group and 130 deaths in the carvedilol group, and a 24% decrease in the combined risk of death or hospitalization with carvedilol (*N Engl J Med* 2001; 344:1,651-1,658).

In the second study, 2,700 patients with severe heart failure were randomized to treatment with the beta-blocker bucindolol or placebo. The study was stopped early because no significant overall survival benefit was shown with bucindolol. (*N Engl J Med* 2001; 344:1,659-1,667). ■

Alendronate tablets available once-weekly

By **Joan Unger**, RN, MS, ARNP
and **James Chan**, PharmD, PhD

Merck & Co. has received Food and Drug Administration (FDA) approval to market once-a-week doses of alendronate (marketed under the trade name Fosamax) for the treatment and prevention of osteoporosis. Alendronate is a bisphosphonate that inhibits bone resorption. It has been available since 1995 as a once-a-day medication and has been widely used to treat and prevent osteoporosis in postmenopausal women. Alendronate inhibits the rate and extent of bone resorption by inhibiting osteoclast activity. The drug has a long half-life on bone surface, which allows for weekly dosing. In a comparative one-year study, 70 mg once weekly was as effective as 10 mg daily. Increases in bone mineral density (BMD) in the lumbar spine in those who completed the trial were 5.1% and 5.4% for the weekly and daily dosing respectively.[1,2] Increases in BMD at the total hip, femoral neck, trochanter, and total body were similar. Weekly and daily regimens appear to be comparable in efficacy as shown by BMD studies. In a one-year prevention trial, alendronate, 35 mg weekly and 5 mg daily, produced a 2.9% and 3.2% increase in BMD, respectively.[1]

Long-term studies on fracture rates have not been conducted with the weekly regimens. While complaints such as dyspepsia and abdominal pain have been associated with alendronate administration, the drug did not appear to be associated with serious upper gastrointestinal (GI) events in patients with no recent history of GI events.[3]

• **Dosage.**

The dose of alendronate for the treatment of osteoporosis is 70 mg once weekly. For prevention, the dose is 35 mg once weekly. Alendronate is not recommended for patients with renal impairment (creatinine clearance < 35 mL / min).[1] Cost of the daily and weekly regimens is the same.

• **Nursing considerations.**

Weekly alendronate 35 mg and 70 mg provide an alternative to the daily regimens for the prevention and treatment of osteoporosis and may be preferred by patients who cannot tolerate the daily dose or cannot follow the strict regimen. It also may improve compliance as patients need only follow the instructions once weekly instead of daily. Once-weekly dosing also reduces esophageal exposure to the drug. A trend toward a lower incidence of esophageal or gastric duodenal irritation was seen with the weekly dosing compared to daily dosing.[2]

Patients must take alendronate with specific instructions to reduce esophageal irritation. A retrospective database analysis reported that patients taking alendronate and who are elderly or are users of nonsteroidal anti-inflammatory drugs may have a greater risk of clinic visits and hospital admissions for acid-related GI disorders.[4]

• **Patient education.**

Alendronate should be taken upon rising with plain water (6-8 oz) at least one-half hour before the first food, beverage, or medication of the day. Patients should not lie down for at least 30 minutes and until after their first food of the day.[1] Patients also should receive supplemental calcium and vitamin D if they are not adequately supplied by the diet. Advise patients not to chew or suck on the tablets, as this may cause oropharyngeal ulceration. If they miss a dose, advise patients to take it the next morning after they remember and return to the originally chosen weekly schedule.

References

1. Fosamax Product Information. Merck & Co. October 2000.
2. Schnitzer T, et al. *Aging Clin Exp Res* 2000; 12:1-12.
3. Bauer DC, et al. *Arch Intern Med* 2000; 160:517-525.
4. Ettinger B, et al. *Am J Manag Care* 1998; 4:1,377-1,382. ■

Should you use antibiotics for acute bronchitis?

Source: Gonzales R, et al. *Ann Intern Med* 2001; 134:521-529.

The term "acute bronchitis" usually designates an acute respiratory tract infection in which cough, with or without phlegm, is a predominant feature. In the United States, about 5% of adults self-report an episode of acute bronchitis each year, and up to 90% of these persons seek medical attention. In 1997, adults in the United States made more than 10 million office visits for bronchitis. As a result, acute bronchitis consistently ranks among the 10 most common conditions leading to outpatient visits.

• **Evaluation of acute cough.**

A wide variety of infections and inflammatory disorders can lead to an acute cough illness. The American College of Chest Physicians defines

acute cough illness as lasting fewer than three weeks.[1] Acute upper respiratory tract infections account for approximately 70% of primary diagnoses, with asthma (6%) and pneumonia (5%) being the next most common. Previously undiagnosed asthma is a consideration in patients presenting with an acute cough. The diagnosis of asthma is difficult to establish because many patients with acute bronchitis will have transient bronchial hyper-responsiveness. The primary objective when assessing a healthy adult with uncomplicated acute cough is to exclude the presence of pneumonia. An evidence-based review concluded that absence of abnormalities in vital signs (heart rate >100 beats / min, respiratory rate > 24 breaths / min, or oral temperature >38°) and chest examination (rales, egophony, or fremitus) sufficiently reduces the likelihood of pneumonia to the point where further diagnostic testing usually is not necessary.[2]

• **Microbiology of acute uncomplicated bronchitis.**

As in community-acquired pneumonia, microbiological studies of uncomplicated acute bronchitis identify a pathogen in the minority of cases, ranging from 16%-40%.

Specific viruses most frequently associated with acute bronchitis are:

- influenza B;
- influenza A;
- parainfluenza;[3]
- respiratory syncytial virus;
- corona virus;
- adenovirus;
- rhinovirus.

To date, only *B. pertussis*, *M. pneumoniae*, and *C pneumoniae* (TWAR) have been established as non-viral causes of uncomplicated acute bronchitis in adults.

• **Nursing considerations.**

Routine antibiotic treatment of uncomplicated acute bronchitis is not recommended, regardless of the duration of cough. The one uncommon circumstance for which evidence supports antibiotic treatment of patients with uncomplicated acute bronchitis is suspicion of pertussis.

Influenza is the most common pathogen isolated in patients with uncomplicated acute bronchitis. The neuraminidase inhibitors zanamivir and oseltamivir have demonstrated some efficacy in reducing illness duration in adults with naturally acquired influenza A and B if treatment begins within 48 hours of symptom onset.[3]

In most cases, cough is the major symptom for which patients seek relief. Randomized, controlled trials have demonstrated a consistent benefit of therapy with albuterol vs. placebo in reducing the duration and severity of cough.[4] Preparations containing dextromethorphan or codeine probably have a modest effect on severity and duration of cough. Cough of more than three weeks duration, cough associated with underlying lung disease, or experimentally induced cough have been shown to respond to dextromethorphan or codeine. Elimination of environmental cough triggers such as dust and dander, as well as the use of vaporized air treatments in low-humidity environments, such as high altitude, also are reasonable options.

Consider discussing the lack of benefit of antibiotic treatment for treatment for uncomplicated acute bronchitis and the need for clinicians to stop prescribing antibiotics for this condition as a standard of practice. Mounting evidence indicates that patient satisfaction with the office encounter does not depend on receipt of antibiotic therapy but instead is related to the patient-centered quality of the encounter.[5]

Comment on Patient Education

By **David Ost**, MD, FACP
Assistant Professor of Medicine
NYU School of Medicine
Director of Interventional Pulmonology
Division of Pulmonary and Critical Care Medicine
North Shore University Hospital
Manhasset, NY

Most cases of acute bronchitis occur in otherwise healthy adults, in whom this acute cough illness can be called "uncomplicated acute bronchitis." The principles in this guideline are intended to apply to such patients, and do not necessarily apply to patients with chronic lung diseases such as chronic obstructive pulmonary disease.

Recommendations for discussing the management of acute bronchitis with patients include:

- Provide realistic expectations of the duration of the patient's cough, which typically will last for 10-14 days after the office visit.
- Refer to the cough illness as a "chest cold" rather than bronchitis.[6]
- Personalize the risk of unnecessary antibiotic use.
- Explain to patients why we need to be more selective in treating only those conditions for which a major clinical benefit of antibiotics has been proven.

• Alert patients to the current epidemic in antibiotic resistance among community bacterial pathogens, and explain the public health concern.

(Editor's note: Najma Usmani, MD, an internal medicine fellow at North Shore University Hospital, also contributed to this article.)

References

1. Irwin RS, et al. *Chest* 1998; 114:133S-181S.
2. Metlay JP, et al. *JAMA* 1997; 278:1,440-1,445.
3. Hayden FG, et al. *N Engl J Med* 1997; 337:874-880.
4. Melbye H, et al. *Fam Pract* 1991; 8:216-222.
5. Hamm RM, et al. *J Fam Pract* 1996; 43:56-62.
6. Gonzales R, et al. *Am J Med* 2000; 108:83-85. ■

Estrogen therapy linked to ovarian cancer

Source: Rodriguez C, et al. *JAMA* 2001; 285:1,460-1,465.

Rodriguez and colleagues from the American Cancer Society examined the association of postmenopausal estrogen use and ovarian cancer mortality in a prospective cohort study. The American Cancer Society Cancer Prevention Study II enrolled 676,306 postmenopausal in women using a baseline questionnaire in 1982. Deaths in this cohort through 1996 accounted for 107,810 (15.9%) of the original group. After exclusions (premenopausal, unavailable information, hysterectomy, ovarian surgery), 211,581 postmenopausal women were left for analysis, with a total of 1,497 ovarian cancer deaths.

Estrogen use (ever use, past use, current use) was based on responses to the baseline questionnaire. The risk ratio for ovarian cancer mortality was adjusted for age, race, oral contraceptive use, number of live births, body mass index, age of menarche and menopause, and tubal ligation. The statistically significant, increased adjusted risk ratios are presented in the table. **(See Table 1, below left.)** These numbers indicated 64.4 ovarian cancer deaths per 100,000 users of estrogen for 10 or more years, compared with 26.4 for never users. Rodriguez et al further concluded that some risk persisted for up to 29 years after discontinuing estrogen. Rodriguez et al considered a possible mechanism for their conclusion, suggesting that ovarian cancer is more affected by lower gonadotropin levels than higher levels. (This would not be consistent with the protective effect associated with oral contraceptives, or that estrogen directly stimulates ovarian cellular proliferation). ■

Table 1

Risk Ratio for Ovarian Cancer Mortality

	No. of Deaths	Rate Ratio (similar to Relative Risk)
Ever use	255	1.23 (1.06-1.43)
≥ 10 years of use	31	2.20 (1.53-3.17)

RN® Drug Alert (ISSN 0190-5066) is published monthly by American Health Consultants®, 3525 Piedmont Road, Building Six, Suite 400, Atlanta, GA 30305. Telephone: (404) 262-7436. First-class postage paid at Atlanta, GA 30304. POSTMASTER: Send address changes to **RN® Drug Alert**, P.O. Box 740059, Atlanta, GA 30374.

Subscriber Information

Customer Service: (800) 688-2421 or fax (800) 284-3291, (customerservice@ahcpub.com). Hours of operation: 8:30 a.m. to 6 p.m. Monday-Thursday; 8:30 a.m.-4:30 p.m. Friday.

Subscription rates: U.S., one year (12 issues), $99. Outside U.S., add $30 per year, total prepaid in U.S. funds. Two to nine additional copies, $80 per year; 10 to 20 additional copies, $60 per year; for more than 20, call (800) 688-2421. Missing issues will be fulfilled by customer service free of charge when contacted within one month of the missing issue date. **Back issues**, when available, are $9 each. (GST registration number R128870672.)

This continuing education offering is sponsored by American Health Consultants, which is accredited as a provider of continuing education in nursing by the American Nurses Credentialing Center's Commission on Accreditation. Provider approved by the California Board of Registered Nursing. Provider Number CEP 10864. Approximately 20 nursing contact hours.

Vice President/Group Publisher: **Brenda Mooney**, (404) 262-5403, (brenda.mooney@ahcpub.com).
Editorial Group Head: **Valerie Loner**, (404) 262-5475, (valerie.loner@ahcpub.com).
Senior Managing Editor: **Joy Daughtery Dickinson**, (229) 377-8044, (joy.dickinson@ahcpub.com).
Production Editor: **Nancy McCreary**.

AMERICAN HEALTH CONSULTANTS™
THOMSON HEALTHCARE

Editorial Questions

Questions or comments? Call **Joy Daughtery Dickinson** at (229) 377-8044.

NEWS BRIEFS

FDA approves oral contraceptive

By **William T. Elliott**, MD, FACP

Berlex' Yasmin, a new low-dose oral contraceptive, has been approved recently. It contains 30 mcg of ethinyl estradiol and 3 mg of the progestin drospirenone, and it is the latter agent that makes this combination unique. Drospirenone, an analogue of spironolactone, has diuretic effects and is ideal for women with premenstrual bloating and water retention.

Metered-dose inhalers

In a study from Scotland, discarded toilet paper tubes have been found to be effective spacers for use with metered-dose inhalers (MDIs). The cardboard tubes were compared to no spacer and the commercially available Aerochamber spacer device manufactured by Trudell Medical International. Both the cardboard spacer and Aerochamber performed better than using the MDI without a spacer, with the Aerochamber performing better, but not significantly so. Fowler et al conclude: "If a spacer is required for reasons other than increasing delivered drug dose, then the addition of a readily available cardboard tube will fulfill many of the required functions with no expense to the patient." (*Chest* 2001; 119:1,018-1,020).

Antifungal warnings

Janssen Pharmaceutica Products, L.P., manufacturer of the popular antifungal itraconazole (Sporanox), warns providers not to prescribe the drug to patients with congestive heart failure (CHF), a history of CHF, or in combination with the antiarrythmic dofetilide (Tikosyn). This came after the FDA cited a number of questionable CHF deaths among patients taking the drug. Janssen added erythromycin to the list of drugs known to interact with itraconazole and modified the interaction statement for calcium channel blockers. Nurses are urged to review the latest information on the company's web site: www.us.janssen.com. ■

CE*questions*

In this issue of *RN Drug Alert,* the reader will identify:

- the primary diagnostic concern in a healthy adult with uncomplicated acute cough.
- the recommended low-density lipoprotein (LDL) laboratory parameter consistent with the most recent drug treatment guidelines from the National Cholesterol Education Program (NCEP).
- the correct dose of a newly approved form of the osteoporosis drug, alendronate.

1. The primary objective in a healthy adult with uncomplicated acute cough is to exclude the presence of:
   A. congestive heart failure.
   B. pneumonia.
   C. tuberculosis.
   D. pulmonary embolism.
2. The Adult Treatment Panel III (ATP III) report released in May 2001 by the National Cholesterol Education Program (NCEP) suggests aggressive treatment for those with risk factors, including drug therapy to lower low-density lipoprotein cholesterol to:
   A. 160 mg/dL.
   B. 140 mg/dL.
   C. 120 mg/dL.
   D. 100 mg/dL.
3. The dose of alendronate for the treatment of osteoporosis is 75 mg once weekly. For prevention, the dose is:
   A. 10 mg once weekly.
   B. 35 mg once weekly.
   C. 40 mg once weekly.
   D. 75 mg once weekly.

ACUTE BRONCHITIS IN ADULTS

GENERAL INFORMATION:

What is it? Acute bronchitis (bron-ki-tis) is swelling and irritation of the windpipe (trachea) or the airways to the lungs. It occurs most often in the winter and usually starts as a cold. The cold then spreads from the nose and throat to the windpipe and airways. Bronchitis is usually not a serious illness. Most people may be treated at home.
Causes: It is usually caused by germs that are called viruses or bacteria (bak-teer-e-uh). The germs are spread in the air or by being around someone who is sick. Other causes may be allergies or breathing air that has chemical fumes, dust, or smoke. You may be more likely to get bronchitis if you have lung disease or smoke. Being sick with another illness may increase your chances of getting bronchitis.
Signs and Symptoms: The most common sign is a dry cough. Your cough may bring up sputum (phlegm). You may have a fever and chest pain. Other signs may be noisy breathing (wheezing) or trouble breathing.
Care: Most people with acute bronchitis may be treated at home. You may need cough medicine to help your cough and to thin the sputum. Antibiotic (an-ti-bi-ah-tik) medicine may be needed if your bronchitis is caused by bacteria. You may need to be put into the hospital for tests and treatment if your bronchitis does not get better.

CARE AGREEMENT:

You have the right to help plan your care. To help with this plan, you must learn about bronchitis and how it can be treated. You then can discuss treatment options with your caregivers. Work with them to decide what care will be used to treat you. You always have the right to refuse treatment.

Source: Klasco R and Auracher P (Eds): CareNotes™ System. MICROMEDEX Inc., Englewood, CO (Vol. 20 expires 9/2001).

BRONQUITIS AGUDA EN ADULTOS

INFORMACIÓN GENERAL:

¿Qué es? La bronquitis aguda es una inflamación e irritación de la tráquea o de las vías aéreas de los pulmones. Esta enfermedad ocurre con más frecuencia durante el invierno y generalmente comienza como si fuera un resfriado. El resfriado se extiende luego de la nariz y garganta a la tráquea y a las vías aéreas. Generalmente, la bronquitis no es una enfermedad grave. La mayoría de las personas pueden ser tratadas en el hogar.

Causas: La bronquitis es generalmente causada por gérmenes llamados virus o bacterias. Los gérmenes se propagan en el aire o por estar cerca de alguien que se encuentre enfermo. Otras causas pueden ser las alergias o respirar aire contaminado con vapores químicos, polvo o humo. Usted puede ser más propenso a contraer la bronquitis si tiene una enfermedad pulmonar o si fuma. Estar afectado por otras enfermedades puede aumentar sus riesgos de contraer bronquitis.

Signos y síntomas: El signo más común es una tos seca. Cuando usted tose puede expulsar un poco de flemas. Usted puede presentar fiebre y dolor en el pecho. Otros signos pueden ser, la sibilancia (respiración ruidosa) o dificultad para respirar

Cuidados: La mayoría de las personas afectadas por la bronquitis aguda pueden ser tratadas en el hogar. Usted puede necesitar medicamentos para aliviar la tos y aclarar las flemas. Es posible que usted necesite antibióticos si su bronquitis es causada por una bacteria. Si la bronquitis no mejora, puede ser necesario que usted se hospitalice para hacerle exámenes y tratamiento.

ACUERDOS SOBRE SU CUIDADO:

Usted tiene el derecho de participar en el plan de su cuidado. Para participar en este plan, usted debe aprender acerca de la bronquitis y el tratamiento. De esta forma, usted y sus médicos pueden hablar acerca de sus opciones y decidir que tratamiento se usará para su cuidado. Usted siempre tiene el derecho a rechazar su tratamiento.

Source: Klasco R and Auracher P (Eds): CareNotes™ System. MICROMEDEX Inc., Englewood, CO (Vol. 20 expires 9/2001).

New Features of ATP III

Focus on Multiple Risk Factors

- Raises persons with diabetes without coronary heart disease (CHD), most of whom display multiple risk factors, to the risk level of CHD risk equivalent.
- Uses Framingham projections of 10-year absolute CHD risk (i.e., the percent probability of having a CHD event in 10 years) to identify certain patients with multiple (2+) risk factors for more intensive treatment.
- Identifies persons with multiple metabolic risk factors (metabolic syndrome) as candidates for intensified therapeutic lifestyle changes.

Modifications of Lipid and Lipoprotein Classification

- Identifies low-density lipoprotein (LDL) cholesterol < 100 mg/dL as optimal.
- Raises categorical low high density lipoprotein (HDL) cholesterol from < 35 mg/dL to < 40 mg/dL, because the latter is a better measure of a depressed HDL.
- Lowers the triglyceride classification cutpoints to give more attention to moderate elevations.

Support for Implementation

- Recommends a complete lipoprotein profile (total cholesterol, LDL cholesterol, HDL cholesterol, and triglycerides) as the preferred initial test, rather than screening for total cholesterol and HDL alone.
- Encourages use of plant stanols/sterols and viscous (soluble) fiber as therapeutic dietary options to enhance lowering of LDL cholesterol.
- Presents strategies for promoting adherence to therapeutic lifestyle changes and drug therapies.
- Recommends treatment beyond LDL lowering for persons with elevated triglycerides ≥ 200 mg/dL.

Source: U.S. Department of Health and Human Services, Public Health Service, National Institutes of Health (NIH), National Heart, Lung, and Blood Institute. NIH Publication No. 01-3670; May 2001.