New insulin "analogs" increase therapeutic choices... but can sometimes cause confusion due to similar names... check out our quick reference chart of commonly prescribed insulins and the differences between each product. See page 2

Useful information for your community practice...
- New FDA-required labels on all estrogen and estrogen and progestin combination products... warnings emphasize risks and alternative therapies
- Manufacturers to remove ephedra due to liability concerns... and are now focused on developing "ephedra-free" line extensions for popular products like "Diet Fuel."
- Evidence to suggest that ophthalmic beta blockers may cause systemic adverse events... patients with lung problems may be more susceptible. See pages 3 and 4

Monthly feature: Humira™ (adalimumab)... a new drug approved for the treatment of rheumatoid arthritis that offers more convenient dosing. See pages S1 and S2

FAST FACTS... Coenzyme Q10 may have promising role in delaying effects of Parkinson's disease... Nonoxynol-9 may actually increase sexually transmitted disease; FDA has proposed new warnings for vaginal contraceptive products containing nonoxynol-9... New Oxycontin® ads will now feature box warnings; will highlight the drug's limited indication for post-operative use and a warning about inappropriate use as a "PRN" analgesic. See page 4

Try our "monster" of a challenge

One of your favorite patients stops by the pharmacy to ask you about hormone replacement therapy. She had severe hot flashes and night sweats when she started menopause and was taking estrogen and progestin, until she had a hysterectomy two months ago. Her doctor changed her medication to an estrogen-only product, and she is wondering why the doctor changed the medication.

Can you explain why the patient was changed to an estrogen-only product? See answer page 4
Newer forms of insulin have been introduced and more are under development. Genetically modified insulins... such as Humalog®... have a faster onset and allow patients to eat more spontaneously. It's important to keep up with changes, for example... Lantus®, a long-acting (24-hour) insulin, is the first clear, long-acting insulin, an important point when discussing insulin therapy with diabetes patients. It's also a good idea to be aware of sound-alike/look-alike drugs... be careful with the "lins" vs. the "logs"... the "logs" offer a faster onset of action.

The following chart provides a brief overview of the most commonly dispensed insulin products.

<table>
<thead>
<tr>
<th>Category/Source</th>
<th>Name</th>
<th>Appearance</th>
<th>Onset of action</th>
<th>Duration of action</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Porcine</strong></td>
<td>Iletin® II Regular</td>
<td>clear</td>
<td>30 to 60 minutes (Short-acting)</td>
<td>4-12 hours</td>
</tr>
<tr>
<td></td>
<td>Iletin® II NPH (N)</td>
<td>cloudy</td>
<td>1 to 2 hours (Intermediate-acting)</td>
<td>16 to 24 + hours</td>
</tr>
<tr>
<td></td>
<td>Iletin® II Lente (L)</td>
<td>cloudy</td>
<td>1 to 3 hours (Intermediate-acting)</td>
<td>Slightly &gt;24 hours</td>
</tr>
<tr>
<td><strong>Recombinant</strong></td>
<td>Humulin® R</td>
<td>clear</td>
<td>30 to 60 minutes (Short-acting)</td>
<td>6-10 hours</td>
</tr>
<tr>
<td></td>
<td>Novolin® R</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Velosulin® BR</td>
<td>clear</td>
<td>30 to 60 minutes (Short-acting)</td>
<td>8 hours</td>
</tr>
<tr>
<td></td>
<td>Humulin® N</td>
<td>cloudy</td>
<td>1 to 2 hours (Intermediate-acting)</td>
<td>16 to 24 + hours</td>
</tr>
<tr>
<td></td>
<td>Novolin® N</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Humulin® L</td>
<td>cloudy</td>
<td>1 to 3 hours (Intermediate-acting)</td>
<td>16 to 24 hours</td>
</tr>
<tr>
<td></td>
<td>Novolin® L</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Humulin® U</td>
<td>cloudy</td>
<td>4 to 6 hours (Long-acting)</td>
<td>24 to 28 hours</td>
</tr>
<tr>
<td><strong>Recombinant</strong></td>
<td>Humulin® 70/30</td>
<td>cloudy</td>
<td>30 to 60 minutes</td>
<td>10 to 16 hours</td>
</tr>
<tr>
<td></td>
<td>Novolin® 70/30</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Humulin® 50/50</td>
<td>cloudy</td>
<td>30 to 60 minutes</td>
<td>10 to 16 hours</td>
</tr>
<tr>
<td><strong>Recombinant</strong></td>
<td>Humalog®</td>
<td>clear</td>
<td>15 to 30 minutes (Rapid-acting)</td>
<td>3-6.5 hours</td>
</tr>
<tr>
<td></td>
<td>Novolog®</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Lantus®</td>
<td>clear</td>
<td>1.1 hours (Long-acting)</td>
<td>24 hours</td>
</tr>
<tr>
<td><strong>Recombinant</strong></td>
<td>Humalog® 75/25</td>
<td>cloudy</td>
<td>30 to 60 minutes</td>
<td>Up to 24 hours</td>
</tr>
<tr>
<td></td>
<td>Novolog® 70/30</td>
<td>cloudy</td>
<td>30 to 60 minutes</td>
<td>15 to 18 hours</td>
</tr>
</tbody>
</table>
The FDA has requested that all manufacturers of estrogen and estrogen/progestin drug products change their product labeling to provide more guidance to physicians and patients on the risks, benefits, and appropriate uses of these products. Pharmacists can help patients reduce their risk for adverse events... such as breast cancer... by reminding patients of the FDA recommendations on the new label, which recommend that women taking these products:

❖ Undergo a yearly breast exam
❖ Perform monthly breast self-examinations
❖ Receive periodic mammography examinations scheduled based on their age and risk factors.

The new labeling also strongly encourages practitioners to prescribe the lowest effective dose and the shortest duration of treatment when treating patients with estrogen and progestin.

Some of the changes included in the new labeling include:

❖ A new black box warning highlighting the increased risk for heart disease, heart attacks, strokes, and breast cancer.
❖ A statement affirming the short-term use for severe vasomotor symptoms, such as hot flashes.
❖ Recommendations for using topical estrogens as first line treatment for vulvar and vaginal atrophy.
❖ Recommendations for non-estrogen treatments for prevention of postmenopausal osteoporosis.

For additional information about these recommendations and the label changes, access the following page on the FDA web site:

www.fda.gov/cder/drug/infopage/estrogens_progestins/default.htm

Ephedra slowly vanishing from the market?

Patients might be asking questions about ephedra... as increasing numbers of manufacturers stop production of ephedra-containing products due to liability concerns. Lawsuits are forcing insurance companies that write policies for manufacturers to decline coverage for ephedra manufacturing and sales. For example, a jury recently awarded $4.1 million in damages allegedly suffered by four individuals who used Metabolift® products containing ephedra. Twinlab, maker of Metabolift®, Diet Fuel®, and other ephedra-containing supplements announced that it will no longer sell products containing ephedra. On December 20, Health & Nutrition Systems, makers of other diet aids, such as Carbcutter® and ThinTab® products, also announced that they would no longer produce ephedra-based products... and it is likely additional companies will follow suit.

Be on the lookout for products with the same name and a new "ephedra-free" mark... many of these products are well known brands and their manufacturers are attempting to switch the consumer to an alternate formula; often substituting caffeine for ephedra. Other ingredients that may cause adverse events may be included in these products... "ephedra-free" does not mean the product can be taken safely by everyone.
**Fast Facts**

Coenzyme Q₁₀ may have promising role in delaying effects of Parkinson's disease. New research shows that Coenzyme Q₁₀ may slow the progression of Parkinson’s disease. A small study found that patients taking the drug had less disability than those taking a placebo, especially patients using higher doses. Coenzyme Q₁₀ was safe and well tolerated at dosages of up to 1200 mg per day, but more studies will be needed to determine the drug’s therapeutic value.

Nonoxynol-9 may actually increase sexual transmission of disease. The FDA has proposed new warnings for vaginal contraceptive products containing nonoxynol-9... emphasizing that nonoxynol-9 does not protect against HIV or other sexually transmitted diseases (STD). Recent research has shown that nonoxynol-9 may increase the risk of contracting an STD because it can cause vaginal irritation... compromising the protective membrane in the vagina.

New Oxycontin® ads in professional journals will prominently feature box warnings. FDA believes previous ads in some medical journals didn't adequately convey safety risks associated with Oxycontin®. The Oxycontin® boxed warnings will highlight the drug's limited indication for post-operative pain and a warning about inappropriate use as a "PRN" analgesic.

**Solution to the OTC/Rx challenge**

If you answered "the patient no longer has a uterus... therefore, she does not need the progestin" - congratuations, you're correct!  

Some women may need to take estrogen to control severe menopause symptoms, such as hot flashes... however, estrogen stimulates growth of the uterine lining, which can lead to uterine or endometrial cancer.

Progestin counteracts the effects of estrogen on the uterine lining and prevents overgrowth. Women who have had their uterus removed no longer need the progestin and are therefore prescribed medications that only contain estrogen.

While the researchers continue to study the magnitude of systemic side effects caused by orally and nasally inhaled corticosteroids... a new study has found that ophthalmic preparations of beta-blockers may also cause systemic adverse events... specifically lung problems. While it is well established that systemic beta-blockers are contraindicated in patients with asthma or COPD... the new study found that elderly patients using ophthalmic beta-blockers to treat glaucoma had an increased risk for developing obstructive airway disease. When dispensing these drugs to a patient known to have asthma or COPD, pharmacists may want to discuss the possible adverse effects on lung function and make sure the patient contacts their doctor if they develop any difficulty in breathing.

New evidence suggests that ophthalmic beta blockers may cause significant systemic adverse events.

While the researchers continue to study the magnitude of systemic side effects caused by orally and nasally inhaled corticosteroids... a new study has found that ophthalmic preparations of beta-blockers may also cause systemic adverse events... specifically lung problems. While it is well established that systemic beta-blockers are contraindicated in patients with asthma or COPD... the new study found that elderly patients using ophthalmic beta-blockers to treat glaucoma had an increased risk for developing obstructive airway disease. When dispensing these drugs to a patient known to have asthma or COPD, pharmacists may want to discuss the possible adverse effects on lung function and make sure the patient contacts their doctor if they develop any difficulty in breathing.

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Visit our website at www.nacdsfoundation.org

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Through educational and research initiatives, the NACDS Foundation supports programs that advance the chain pharmacy industry for the benefit of the public it serves. In addition to its own initiatives, the NACDS Foundation supports other educational and charitable causes across the country.

References for information included in the Practice Memo are available by request: cppm@nacds.org.
Humira™ (adalimumab) was recently approved by the FDA for reducing signs and symptoms of moderate to severe rheumatoid arthritis (RA) as well as inhibiting the progression of structural damage in adults with moderate to severe RA who have had inadequate response to one or more disease-modifying anti-rheumatic drugs (DMARDs). Humira™ is a recombinant human monoclonal antibody that blocks tumor necrosis factor (TNF), and is also classified as a biologic DMARD.

**Many patients may use Humira with other drugs**

Humira is an injectable drug that is indicated for use every two weeks by subcutaneous injection (SC). The recommended starting dose is 40 mg given every other week. Patients will often continue to use other drugs to treat their disease, and may use methotrexate, other DMARDs, and other medications, such as analgesics.

Some patients who use Humira without other drugs, such as methotrexate, may use a once weekly dose regimen. Elderly patients may need more careful monitoring when using Humira, since they have a higher incidence of infections and malignancies. Humira is not approved for treating patients younger than 16 years of age.

**Administration, dosage forms, and storage information**

Since Humira is given SC, patients must be properly trained and demonstrate proficiency in self-injection to receive maximum benefit and minimize adverse events. Since irritation at the injection site is the most common adverse event reported, it is important that patients inject correctly and rotate the injection site.

Humira comes in kits that contain two single-use pre-filled glass syringes containing 40 mg of adalimumab in 0.8 ml, and two alcohol preps, as well as a patient information booklet. The syringes are specially designed for ease of use by patients who may have limited dexterity in the hands due to RA. Humira must be refrigerated at all times and should also be protected from light.

**Humira Medicare Assistance Program**

Medicare-eligible seniors without prescription drug coverage will be able to obtain Humira at no cost through their health care provider until a Medicare Drug Benefit is enacted. There are no income requirements; however, patients must contact the Humira Resource Center at 800-448-6472 to determine their eligibility and evaluate other sources of prescription drug funding before they are enrolled in the Humira assistance program. Pharmacies will not dispense the free supplies of the drug to patients enrolled in the program. Patients will receive the free drug from their physician’s office.
There are no significant drug interactions with Humira, which can be given with other medications used to treat RA, including methotrexate and other DMARDs.

Some adverse events, while not common, can be very serious. These include tuberculosis, bacterial or fungal infections; onset or worsening of CNS diseases, such as multiple sclerosis (MS); increases in certain types of cancers, such as lymphomas; and autoimmune symptoms similar to Lupus.

Patients taking Humira should not receive any live vaccine.

Patients should have a TB test before using Humira. If a patient has a positive TB test, they should be treated following CDC guidelines before initiating therapy with Humira.

**Patient counseling information for Humira**

- Humira is administered by subcutaneous injection, typically every two weeks; patients should rotate injection sites. Additional information and guidance on administering the injections can be obtained through a health care professional, www.humira.com, or by calling 800-4HUMIRA.

- The rubber needle protector on Humira syringes is made of natural latex and should not be touched by patients allergic to latex.

- Humira syringes should be inspected before using; if any coloring or particulate matter is found in the syringe, it should not be used.

- Humira syringes do not contain preservatives, so patients should never attempt to save the drug or reuse the syringe.

- Patients should be instructed on where to obtain proper syringe disposal containers and how to use them.

- The effects of Humira on fetal development are unknown. Patients should consult their doctor if they become pregnant, intend to conceive, or breastfeed while taking Humira.

**Monitoring for adverse events**

Patients on Humira should contact their doctor or pharmacist if they develop or experience any of the following:

- A severe viral or bacterial illness
- A severe cut or sore
- Dry cough, unexpected weight loss, fever
- Numbness or tingling
- Chest pains or shortness of breath
- A photosensitive rash on cheeks and arms

Patients should not initiate Humira therapy if they:

- Have an active infection
- Have not been tested for tuberculosis (TB)
- Have not been treated for TB if they have a latent infection
- Are scheduled for major surgery

**Supported by an unrestricted educational grant from Abbott Laboratories**