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# THE PRN

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Western Memorial Regional Hospital.

Pharmacy Hours:    *Monday - Friday*        0800-2100hrs  
                                  *Saturday & Sunday*        0830-1630hrs  
                                  *Stat Holidays*                0900-1300hrs



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## Pharmacy Related News

**Y**ou've probably heard the rumor that: "Chocolate is heart healthy". Well, there is some truth to this ..... but maybe not exactly what you'd like to hear. Eating ***DARK*** chocolate daily seems to lower blood pressure, reduce LDL cholesterol, and improve insulin sensitivity. Unfortunately you are **NOT** likely to get these benefits from most store bought chocolate goodies. The benefits are only seen with pure cocoa and dark chocolate ..... which taste very bitter due to their high content of flavanols. Thus, while the data with flavanols from cocoa looks promising: its very preliminary. Keep this in mind when tempted by those Christmas treats.

Other interesting items in this issue include:

- ▶ product availability
- ▶ requests and reminders
- ▶ drug information
- ▶ drug interactions
- ▶ a little funny

### **I. Discontinued and Backorders**

- ▶ Tetracaine (Pontocaine.®) ophthalmic solution in the 15ml size is discontinued. Individual minims are still available.
- ▶ All Hydrocortisone (Cortate ®) ointments in **ALL** strengths are discontinued. The creams are still available.
- ▶ Erythromycin 333mg capsules (Eryc ®) are unavailable possibly until the end of 2005.

- ▶ Esmolol injection (Brevibloc ®) is on backorder until the end of December 2005.
- ▶ Streptokinase Injection (Streptase ®) is on backorder indefinitely - there is no known release date

### **II. REQUESTS AND REMINDERS**



#### **A. Shortcuts to avoid shorts**

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Just a reminder to transfer all medications including refrigerated items like TPN, with patients when they are moved. Pharmacy does **not** get notifications of transfers and patients are often missing medications when they change locations.

#### **B. Diltiazem by any other name is **NOT** the same.....**

Diltiazem is the latest pharmacy chameleon: you never know what formulation your patients will present as their "med from home". Currently available on the market are *regular* release tablets, *sustained* release capsules, *controlled delivery* capsules and *extended* release tablets! Unfortunately these formulations are **not** bioequivalent. For example, **Tiazac XC**® has an extended -release delivery system designed to deliver maximum antihypertensive effect in the morning if given at bedtime. Accordingly **Tiazac XC**® should be administered at bedtime and not chewed or crushed. It may be given with food or without but should be taken consistently. Given these specifics, **Tiazac XC**® **cannot** be substituted with another diltiazem formulation.

It is **extremely** important to specify the diltiazem dosage form and strength when ordering, especially if it's a patient's medication from home. If possible, in this situation, indicating the **BRAND** would be very helpful to Pharmacy for order-entry. Please remember that SR,CD, and XC are not all the same (Diltiazem SR is actually formulated for twice daily dosing!)

The final word on diltiazem formulations:  
frustrating - YES  
bioequivalent - NO

An extra minute is all it takes to ensure your patients maintain consistent therapy.

### III. DRUG INFORMATION

#### A. *Penicillin Allergy and Cephalosporins* by Darrin Park & Wayne Hicks

*The following is intended to guide in interpretation of the significance of penicillin allergy in a patient ordered a cephalosporin antibiotic. It is not intended to replace the judgement of the prescribing clinician.*

Penicillins and cephalosporins have demonstrated cross reactivity in vitro but the incidence of clinically relevant cross-reactivity is much lower. Many issues exist as to the significance of this finding.

Assessment of previous reactions to *B-lactam* antibiotics is important in assessing any new orders for cephalosporins:

1. Please assess the nature of the penicillin allergy in consultation with the patient and document
2. Ensure physician is aware of any significant allergies.

The following information may be used as a guide:

\*\* For patients with non-severe or questionable non-severe allergy to penicillin:

- cephalosporin may be used at the discretion of the attending physician particularly where cephalosporin therapy is more suitable than the alternative. Risk of severe reactions is considered to be rare and administration of cephalosporins is not uncommon.

\*\* For patients with previous SEVERE reactions to penicillin (ie. anaphylaxis, urticarial reactions- particularly those mediated by IgE):

- alternate therapy with non-*B-lactam* agents should be considered

Note that the selection of cephalosporin therapy in a penicillin allergic patient should be guided by the history of the previous reaction as well as the suitability

of non-*B-lactam* therapy to treat the infection (particularly in serious, life threatening infections).

Serious reactions with cephalosporins can occur in any patient although the incidence of the same is considered rare relative to reactions occurring with penicillin.

Reference: Information adapted from Principles and Practice of Infectious Disease (Mandel et al, 5th edition Churchill Livingstone @2000)

#### B. Ampicillin oral is on the way out .....

In the past, Western Regional Integrated Health Authority pharmacy sites have stocked both oral ampicillin and oral amoxicillin preparations. Ampicillin and amoxicillin are similar in activity, however, oral amoxicillin is generally preferred over oral ampicillin due to the following advantages:

1. More rapid and complete absorption
2. Absorption unaffected by food
3. Less incidence of GI side effects

Cost differences in these **two** medications are negligible – however, different sites have been required to stock both ampicillin and amoxicillin oral formulations (depending on preference of the local prescribers).

Many areas such as ER stock a number of medications as wardstock including both oral ampicillin and amoxicillin formulations. With the increasing number of new medications available, it is desirable to reduce unneeded stock in many areas to “make room” for newer medications - particularly those needed on an urgent or stat basis.

Therefore, RMAC approved the deletion of oral ampicillin from the drug formulary upon the depletion of inventory. To facilitate this, the following automatic substitution has also been approved :

**Ampicillin \_\_\_\_\_ mg po q6h → Amoxicillin \_\_\_\_\_ mg po q8h in the same dosage form**

**Please note that this interchange applies to oral dosage forms only** (liquid and capsules). Ampicillin is the only product available for iv or im use and thus the 500 mg and 1g ampicillin vials will remain on the formulary.

C. **Latex Allergy**  
*by Angie Park - Pharmacy Student*

Working in a healthcare field, it's important to know the basic facts regarding latex allergies. The incidence of latex allergy in individuals with increased exposure is 5-17%. Thus, the chance that healthcare workers may experience an allergy is significant. While the most prominent source of latex allergy is latex gloves, latex can also be found in tourniquets, syringes, catheters, injection ports, rubber tops of multi-dose vials and masks. Contact with any one of these items may result in one of 3 different possible reactions.

i) Non-allergic irritant contact dermatitis:

This is the most common reaction and is **not** an actual allergy. It's characterized by redness, scaling, dryness and itching which is primarily on the back of the hands.

ii) Allergic contact dermatitis:

This is localized type IV or cell-mediated delayed hypersensitivity reaction. This reaction is caused by the chemical antigens added during processing natural latex and not due to the actual latex itself. Products labeled "hypoallergenic" are low in these chemicals. Manifestation includes redness, itching and vesicle formation and these symptoms begin several hours after exposure with maximum effects at 24-48 hours.

iii) Allergic IgE mediated reaction:

This allergy is a Type I hypersensitivity reaction (IgE mediated) and can begin within minutes of exposure. Individuals show symptoms of rashes, hives, flushing, itching, sneezing, sore throat, bronchospasm, chest tightness and wheezing to name a few. All symptoms are variable in their severity.

Although we, as health care providers, are at risk of a latex allergy, it is important to remember patients may experience this allergy as well. Any patient having undergone multiple surgeries or having a great amount of contact with latex is at risk. Knowledge of both your own as well as your patient's latex allergy status is very important.

In managing a latex allergy, ideally latex products should be completely avoided. Be aware of syringes, tip caps, containers, mini-bags, transfer sets and infusion sets. Although there is limited information on vial stoppers, reactions have been reported. To avoid these

reactions you can try one of these literature recommendations:

- 1) remove the vial stopper-  
Useful only if the benefits outweigh the risks for potential dosing errors, dilution problems, contamination and waste
- 2) Use a one-stick policy -  
only puncture the vial once and change the needle before administration to the patient.

These procedures do not eliminate the possibility that latex proteins may leach from rubber vial stoppers into the drug solution during storage. It is best to use latex-free products whenever possible for patients with latex allergies.

The *lilac* pages of the CPS contain a list of selected parenteral products that do not contain natural rubber latex. The list is not exhaustive and should only serve as an initial screening tool. For information on specific drug products, call the Pharmacy Department, or contact the Manufacturer.

D. **PANTO IV - BLUE IS NEW!!!**

Please be advised that pantoprazole sodium (Panto<sup>®</sup> IV) for injection has been reformulated. The new vials can be identified by the **blue** cap on the vial. (old product had a **grey** cap).

As a result of the reformulation, intravenous infusions for continuous Panto<sup>®</sup> IV orders can now be prepared by diluting 80mg of pantoprazole in 100ml of D5W or 0.9% NS and infusing at 10ml/hr (8mg/hr) for a 10-hr infusion time. Formerly, the recommended stability for Panto<sup>®</sup> IV was 6 hours regardless of means of administration. This 6 hour stability limit still applies to any old (grey cap) vials still in circulation.

*Please note:* the new and old formulations of Panto<sup>®</sup> IV should **not** be mixed.

Any questions, please contact the Pharmacy Department.

IV. **DRUG INTERACTIONS**  
*by Angie Park - Pharmacy Student*

**Pantoprazole and Warfarin**

Sometimes drug interactions are not unveiled until the post marketing research stage. At this point, it is

important to investigate the severity and cause of any interactions.

Pantoprazole (Pantoloc<sup>®</sup>) is a proton-pump inhibitor used frequently at WMRH due to our auto-sub policy. It has been shown recently that pantoprazole and warfarin when used concurrently may result in an increased international normalized ratio (INR) and prothrombin time. Manufacturer recommendations are that INR and prothrombin time be monitored after initiation, termination, or irregular use of pantoprazole. Warfarin dosage adjustments may be needed to maintain the desired level of anticoagulation.

Although no bleeding events have been reported in a clinical or research setting, it is important to be aware of this interaction when patients present with this drug combination. So, be on the lookout and ensure INR levels are monitored!

## CONDOLENCES

Pharmacy wishes to express our deepest sympathy to the family and friends of Dr. Barry May. Dr May was a great asset to the region and was a dedicated and respected physician. He was a great supporter of the Pharmacy Department and he will be sadly missed.

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## GOOD BYE & GOOD LUCK ☺

Best of luck to our pharmacy student, *Angie Park*, who has returned to her studies after a full summer working with us. Enjoy your last year in school

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## WELCOME ABOARD ☺

“Welcome Aboard” to **Bob Pitcher**, our newest staff member who has accepted the position of full-time pharmacist. Congratulations, Bob!

## V. LAST LAUGH



Mahatma Gandhi, as you know, walked barefoot most of the time, which produced an impressive set of calluses on his feet. He also ate very little, which made him rather frail, and with his odd diet, he suffered from bad breath. This made him..... are you ready?

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A super calloused fragile mystic hexed by halitosis.

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