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October 2, 2007

Cardiovascular News Update

Dear Colleague,

Westside Medical Associates of Los Angeles (WMALA) in conjunction with Westside Medical Imaging (WMI) would like to provide you with this weekly update on important new developments in cardiovascular care.

Revised Guidelines for Antibiotic Prophylaxis

Cardiac Conditions Associated with the Highest Risk of Adverse Outcome from Endocarditis for Which Prophylaxis with Dental Procedures is Recommended

- Prosthetic cardiac valve
- Previous infective endocarditis
- Congenital heart disease (CHD)*
    - Unrepaired cyanotic CHD, including those with palliative shunts and conduits
    - Completely repaired CHD with prosthetic material or device either by surgery or catheter intervention during the first 6months after the procedure**
    - Repaired CHD with residual defects at the site or adjacent to the site of a prosthetic device (which inhibit endothelialization)
- Cardiac transplantation recipients who develop cardiac valvulopathy

*Except for the conditions listed above, antibiotic prophylaxis is no longer recommended for any other form of congenital heart disease.

**Prophylaxis is recommended because endothelialization of prosthetic material occurs within 6 months after the procedure.

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Revising Infective Endocarditis (IE) Prevention Guidelines

Recommendations for GU or GI tract Procedures	Primary Reasons for Revision of the IE Prophylaxis Guidelines
• The administration of prophylactic antibiotics solely to prevent endocarditis is not recommended for patient who undergo GU or GI tract procedures.	• IE is much more likely to result from frequent exposures to random bacteremias assocaited with daily activities than from bacteremia caused by a dental, GI tract, or GU tract procedure. • Prophylaxis may prevent an exceedingly small number of cases of IE, if any, in individuals who undergo a dental, GI tract, or GU tract procedure. • The risk of antibiotic-associated adverse events exceeds the benefit, if any, from prophylactic antibiotic therapy. • Maintenance of optimal oral health and hygiene may reduce the incidence of bacteremia from daily activities and is more important than prophylactic antibiotics for a dental procedure to reduce the risk of IE.

GI = gastrointestinal; GU = genitourinary.

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Regimens for a Dental Procedure

Situation	Agent	Regimen - Single Dose (30-60 Minutes Before Procedure)	
		Adults	**Children**
Oral	amoxicillin	• 2 gm	• 50 mg/kg
Unable to take oral medication	• ampicillin or • cefazolin or • ceftriaxone	• 2 g IM or IV • 1 g IM or IV	• 50 mg/kg IM or IV • 50 mg/kg IM or IV
Allergic to penicillins or ampicillin (oral)	• cephalexin*† or • clindamycin or • azithromycin or • clarithromycin	• 2 g • 600 mg • 500 mg	• 50 mg/kg • 20 mg/kg • 15 mg/kg
Allergic to penicillins or ampicillin (unable to take oral meds)	• cefazolin or • ceftriaxone† or • clindamycin	• 1 g IM or IV • 600 mg IM or IV	• 50 mg/kg IM or IV • 20 mg/kg IM or IV

*Or other first or second generation oral cephalosporin in equivalent adult or pediatric dosage.

† Cephalosporins should not be used in an individual with a history of anaphylaxis, angioedema, or uriticaria with penicillins or ampicillin. IM = intramuscular; IV = intravenous.

Actos and Avandia may increase diabetics' chances of heart failure. Avandia (rosiglitazone) and Actos (pioglitazone) boost diabetics' "chances of heart failure," according to research reported in the *Lancet*. Dr. Richard Nesto, chair of the department of cardiovascular medicine at the Lahey Clinic Medical Center, in Burlington, Mass., and researchers "analyzed data from seven previous trials that investigated heart failure," and found that "patients taking either product had a 72 percent greater risk of heart failure." The researchers "attributed the higher heart failure rates to possible drug-related fluid build-up and diastolic dysfunction." The study authors said that the "data indicate that these drugs should not be used in patients with heart failure." They also "said the products should be used cautiously [in] patients with cardiovascular disease who don't have heart failure."

Exercise recommendations from the American College of Sports Medicine and American Heart Association

Benefits of regular physical activity include reductions in the risk of diabetes, hypertension, cardiovascular disease (including stroke), dyslipidemia, obesity, anxiety, and depression. Currently, older Americans are the least fit of any age group.

In a study of Medicare enrollees, an estimated 14% of the men and 23% of the women were not able to walk 2-3 blocks. This age group is the fastest growing demographic segment in the United States, and has significant medical expenditures.

2. Physical activity recommendations for older adults pertain to all adults ages 65 or older, and to those ages 50-64 years with clinically significant chronic conditions and/or functional limitations. Recommendations are similar to those for adults under 65 years of age; however, intensity recommendations have been adapted to accommodate a wide range of aerobic fitness levels.

3. Physical activity recommendations include a minimum of 30 minutes/day of moderate intensity activity 5 days per week or a minimum of 20 minutes/day of vigorous activity 3 days/week. Moderate intensity activity can be completed in 10-minute intervals throughout the day. On a 10-point scale, moderate intensity is a 5-6 of perceived effort, whereas vigorous activity is a 7-8.

4. The intensity level for older adults is relative to the individual's aerobic fitness and thus varies by person. These amounts of aerobic activity recommended should be in addition to routine daily activities such as cooking or shopping.

5. If conditions or baseline fitness do not permit the patient to achieve minimum levels of recommended physical activity, older adults should maintain regular physical activity consistent with their abilities and avoid sedentary behavior.

6. Benefits of physical activity appear to have a dose-response relationship, such that reductions in the risk of cardiovascular disease have been observed with as little as 45-75 minutes per week of walking.

7. Muscle strengthening activities are recommended at least 2 times per week and should include 8-10 exercises, which involve major muscle groups (with 10-15 repetitions). For those older adults at increased risk for falls, flexibility and balances exercises should be incorporated into these activities.

8. Physical activity has been observed to reduce risk of falls (and fall injuries) by as much a 35%-40%. Several studies have noted balance exercises to be an effective component of fall prevention.

9. An activity plan for an older adult should tailor recommendations to the person's abilities and conditions and should include a stepwise plan for gradual increases in physical activity to achieve recommended levels of physical activity.

.**Westside Medical Associates of Los Angeles (WMALA) and Westside Medical Imaging (WMI) are premier centers in cardiac diagnosis and treatment.**

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