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NOVEMBER IS NATIONAL DIABETES MONTH

The ABCs of Diabetes Control

Linda Leber, RN, CDE

November is National Diabetes Month and the Kentucky Department for Public Health is joining forces with the National Diabetes Education Program (NDEP) and the American Diabetes Association (ADA) to inform the public that good diabetes management is more than blood glucose control. Blood pressure and cholesterol control are also crucial to help prevent heart attacks and strokes, the top two killers of people with diabetes. The sad fact is that 75 percent of people with diabetes die from heart disease and stroke, and they often die younger than those who do not have diabetes. (1)

The latest statistics show diabetes increasing nationwide at an epidemic rate: 49 percent from 1990 to 2000. ADA projections indicate a 165 percent increase by the year 2050. (1) In Kentucky, over 290,000 (9.7%) adult Kentuckians have diabetes, one third of whom are undiagnosed. (2) Type 2 diabetes is linked to obesity and physical inactivity (3), making one in every two adult Kentuckians at risk for developing diabetes. (4) Kentucky ranks second in the nation in the number of overweight adults based on reported height and weight and first in the nation in the percentage of adults who report no physical activity in the last month. (2) The good news, according to the recently announced conclusions of the Diabetes Prevention Program clinical trials, is that it is possible to prevent or delay type 2 diabetes with increased physical activity and weight loss. (5) Prevention of diabetes as well as its complications, including cardiovascular disease, is a major responsibility of public health and health care providers across the Commonwealth.

The vast majority of people with diabetes are not aware of their very high risk of cardiovascular disease. People with diabetes can live longer and healthier lives with even modest improvements in controlling blood glucose, blood pressure, and cholesterol. "People with diabetes know how important it is to control their blood glucose, but too little attention is paid to the role of blood pressure and cholesterol," said Allen M. Spiegel, M.D., NDEP spokesperson and director of the National Institute of Diabetes and Digestive and Kidney Diseases at the National Institutes of Health (NIH). "Research shows that aggressively treating these three risk factors can save lives." (1)

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To communicate the importance of more comprehensive care for people with diabetes in simple language, the NDEP has developed the "ABCs of Diabetes". The A stands for the A1C, or hemoglobin A1C test, which measures average blood glucose over the last three months. (According to Charles M. Clark, Jr., Chairman of the NDEP Steering Committee, the full name of the test is difficult to remember and can be referred to by several different names. To reduce the confusion, NDEP is encouraging the health care community to use the simpler term A1C.) B is for blood pressure, and C is for cholesterol. The NDEP, ADA and the Department for Public Health are promoting the following recommended targets:

- A1C – less than 7 percent. Check at least twice a year.
- Blood pressure – below 130/80. Check at every doctor's visit.
- Cholesterol (LDL) – below 100. Check at least once a year.

The same steps needed to control blood glucose work for controlling blood pressure and cholesterol: stay at a healthy weight, follow a healthy diet, get daily physical activity, and take prescribed medications. Those at risk for developing diabetes should follow these preventive measures to decrease their chances of developing diabetes. Risk factors for the development of diabetes are:

- Age 45 or older
- African American, Hispanic/Latino, American Indian, Asian American, Pacific Islander
- Overweight
- High blood pressure
- Family history of diabetes
- History of gestational diabetes or having a baby more than 9 pounds at birth

The NDEP and ADA are distributing a new brochure for people with diabetes that includes a wallet card to help them track their ABC numbers. It is free, and part of a new, national public education campaign, *Be Smart About Your*

The ABCs of Diabetes Control (continued)

Heart: Control the ABCs of Diabetes. To get the free brochure with wallet card, call 1-800-438-5383 or visit NDEP's Web site at <http://ndep.nih.gov> or contact the ADA at 1-800-DIABETES or visit www.diabetes.org/makethelink. For more information, call the Kentucky Diabetes Network at 502-564-7996.

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Kentucky Department for Public Health Bioterrorism Activity Update (continuation from Page 6)

joined KyEM in briefing local officials in each of the Commonwealth's 15 Area Development Districts. Topics discussed in the meetings included preparedness, incident procedures and anthrax precautions.

"We think these meetings have been of considerable benefit in providing officials with information they can pass along to their constituents to help promote peace of mind within their communities," said W. R. Padgett, Director of the Kentucky Division of Emergency Management.

"Many of the concerns the public is now expressing can be alleviated with good information."

Useful Websites on Bioterrorism

Kentucky Department for Public Health:
<http://publichealth.state.ky.us>

Kentucky Homeland Security:
<http://homeland.state.ky.us>

Kentucky Division of Emergency Management:
<http://kyem.dma.state.ky.us>

CDC Bioterrorism Website:
<http://www.bt.cdc.gov>

American College of Physicians:
<http://www.acponline.org/bioterr/>

Association of Infection Control Practitioners:
<http://www.apic.org.bioterror/>

Infectious Disease Society of America:
<http://www.idsociety.org>

John Hopkins Center for Civilian Biodefense:
<http://www.hopkins-biodefense.org/faq.html>
(for archived materials) <http://www.jama.ama-assn.org>

US Army Medical Research Institute of Infectious Diseases:
<http://www.usamriid.army.mil/education/bluebook.html>

ARTHRITIS: A Major Public Health Challenge

Linda Lancaster, RN, MPA

Arthritis and rheumatic conditions are among the most common chronic conditions and are the leading cause of disability in the nation among Americans. Forty-three million Americans or one out of every six people are affected by arthritis. (1) Arthritis often limits the everyday activities of more than seven million Americans, deprives people of their freedom and independence, and affects the lives of family members and other caregivers.

Arthritis is a serious, often misunderstood, and costly public health problem. In 1997, there were 39 million arthritis-related physician visits and more than 500,000 hospitalizations in the United States. The estimated medical care costs for people with arthritis total \$65 billion annually. (2)

The Centers for Disease Control and Prevention (CDC) defines arthritis from the Behavioral Risk Factor Surveillance Survey (BRFSS) as those 18 years of age and older reporting chronic joint symptoms (CJS) or doctor diagnosed arthritis. According to the 2000 Kentucky Behavioral Risk Factor Surveillance Survey (KBRFSS), 39.4% of Kentucky's population 18 and older report having arthritis. Of the 36 states that included the arthritis questions in their 2000 BRFSS, Kentucky had the highest reported rate of arthritis. (3)

Arthritis Conditions

The term "arthritis" means inflammation of a joint (swelling, redness, heat and pain) caused by tissue injury or disease. Surrounding muscle, tendons, skin and internal organs can be affected as well. Arthritis, rheumatic diseases and related musculoskeletal conditions encompass more than 100 diseases and related conditions. Some common forms of arthritis include:

Osteoarthritis, a degenerative joint disease in which the cartilage that covers the ends of bones in the joint deteriorates, causing pain and loss of movement as bone begins to rub against bone. It is the most prevalent form of arthritis. Osteoarthritis affects 20.7 million Americans, mostly after age 45.

Fibromyalgia, in which widespread pain affects the muscles and attachments to the bone. This disease affects 3.7 million Americans, mostly women.

Rheumatoid arthritis is an autoimmune disease in which the joint lining becomes inflamed as part of the body's immune system activity. Rheumatoid arthritis is one of the most serious and disabling types of arthritis, affecting 2.1 million Americans, mostly women.

Gout, which affects mostly men, is usually the result of a

defect in body chemistry. This painful condition most often attacks small joints. Fortunately, gout almost always can be controlled with medication and changes in diet. Gout affects 2.1 million Americans.

Ankylosing spondylitis is a type of arthritis that affects the spine. As a result of inflammation, the bones of the spine fuse together. Spondylarthropathies which includes ankylosing spondylitis, psoriatic arthritis and Reiter's Syndrome affect 412,000 Americans.

Juvenile arthritis is a general term for all types of arthritis that occur in children. Children may develop juvenile rheumatoid arthritis or childhood forms of lupus, ankylosing spondylitis or other types of arthritis. Juvenile arthritis affects 285,000 children nationwide under age 17 and juvenile rheumatoid arthritis (JRA) affects up to 50,000 children.

Systemic lupus erythematosus (lupus) is a serious disorder that can inflame and damage joints and other connective tissues throughout the body. This disease affects 239,000 Americans. (3)

How Arthritis Affects Individuals***Physical Health***

Arthritis is a threat to a person's physical, psychological, social, and economic well being. Physical symptoms of arthritis include pain, loss of joint motion and fatigue. Because of these symptoms, people with arthritis may be significantly less physically active than the rest of the adult population. Inactivity may create higher risk for a variety of other diseases, including heart disease, diabetes, high blood pressure, colon cancer, overweight, depression and anxiety. In fact, in severe forms, arthritis can shorten life expectancy. The two million Americans with rheumatoid arthritis, for example, are at risk for premature death because of systemic complications of the disease and complications of its treatment.

Mental Health

Psychological stress, depression, anger, and anxiety often accompany arthritis. People with arthritis may experience difficulty coping with pain and disability, which can lead to feelings of helplessness, and changes in self-esteem and self-image.

Social Well Being

People with arthritis frequently experience decreased community involvement. Economic implications of arthritis include the potential for inadequate access to health care and financial burdens. Increased medical and health care costs and income loss resulting from work limitations contribute to financial burdens. Arthritis is second only to heart disease as a cause of work disability.

ARTHRITIS: A Major Public Health Challenge (continued)**Population Disparities**

Arthritis is a leading health problem among all groups of people; however, population disparities do exist. Although arthritis increases with age, in Kentucky 75% of those affected with arthritis are under age 65. Arthritis affects women more often than men and according to national estimates is the leading chronic condition and cause of activity limitation among women. (4)

According to the KBRFSS, 39.7% of whites and 34.4% of African Americans 18 and older have arthritis; however, African Americans reporting CJS have greater rates of activity limitation (64.9%) compared to whites (53.5%). Additionally, the KBRFSS reveals that the lower the educational level, the more often people report having arthritis and report an increased rate in activity limitation. Access to health care and information, risk behaviors and genetics may all play a role, however, research is needed to fully understand the risks and causal factors associated with these disparity issues.

Risk Factors for Arthritis

The impact of certain risk factors that may lead to arthritis is the subject of ongoing research. Risk factors for which an individual has no control, fixed or non-modifiable factors, include gender, age and genetic predisposition. Modifiable risk factors for arthritis over which an individual may have control are overweight and obesity and physical inactivity. Other contributing factors associated with increased risk of arthritis include joint injuries, infections and certain occupations with repetitive knee bending or repetitive joint movements.

Gender

Nationally, at least 26.4 million women have arthritis, the leading chronic condition among women, and by the year 2020, an estimated 36 million women will be affected. (4) In Kentucky 41% of adult women report having arthritis compared to 37.4% of men .

Genetic Predisposition

Research indicates certain genes may play a role in the immune system and genetics may be associated with the development of some forms of arthritis such as rheumatoid arthritis, ankylosing spondylitis and lupus. The exact role of genetics and the interaction of other factors, such as the role of hormones and environmental factors, have not been determined. Research continues to investigate these and other causes of the many forms of arthritis. (5)

Overweight and Obesity

Based on the new definition of body mass index, 58.5% of all Kentucky adults report being overweight or obese. According to the KBRFSS, higher percentages of African Americans

(compared to whites) and men (compared to women) are overweight or obese, and these risk factors increase with age. People having arthritis report an even higher rate of overweight and obesity (66%). Maintaining an appropriate weight or reducing weight to an appropriate level lowers a person's risk for some forms of arthritis.

Overweight or obese individuals are at an increased risk for the development of osteoarthritis. Obesity is a major risk factor for the development and progression of osteoarthritis of the knee and is associated with an increased prevalence of hip osteoarthritis. In addition, an increase in weight is significantly associated with increased pain in weight-bearing joints. The Framingham Study on weight loss and symptomatic knee osteoarthritis in women concluded that weight loss reduces the risk for symptomatic knee osteoarthritis. (6) Obesity also increases the chance of an individual having additional risk factors for other conditions including high blood pressure, elevated cholesterol levels and diabetes. (7)

Physical Inactivity

Forty-one (41) percent of Kentucky adults report that they are physically inactive, and the rate of inactivity increases with age.

For the person with arthritis, an appropriate exercise program may enhance quality of life. In Kentucky, only 27% of people with arthritis report participating in regular exercise. Inactivity may increase arthritis problems. A comprehensive exercise program for persons with arthritis includes flexibility, strengthening and aerobic activities.

Inadequate physical activity is a primary contributing factor to other conditions. Engaging in regular physical activity may reduce the risk of development of cardiovascular disease by improving blood cholesterol and blood pressure levels, lowering body weight and improving diabetes management. (1)

Arthritis Management

Research shows that early diagnosis and appropriate management can help reduce the consequences associated with many types of arthritis. Medication, education, physical activity and surgery are four effective treatment strategies that can make a difference.

Interventions can be directed to people with arthritis at all stages of the disease. Measures taken by the health care provider and the patient can improve the current health status of the individual and delay or prevent additional complications. People affected by arthritis need support in accessing the resources they need to cope with their disease. (8)

ARTHRITIS: A Major Public Health Challenge (continued)

Early and specific diagnosis is so important for children to assure appropriate intervention and treatment, in that there are a variety of treatments available. Children may be affected through their autoimmune system or spine, have connective tissue diseases or have disorders such as fibromyalgia. Inflammation of the eye, limited jaw movement, oral health, developmental delays, weight gain because of medications, loss of appetite, fatigue, pain and the emotional aspects associated with having a chronic disease are challenges the child and their parents face. Early diagnosis and treatment are keys to slowing or preventing joint and tissue damage.

KID'S NOW, the Governor's initiative to address issues related to early childhood supports early diagnosis, individualized intervention and treatment of conditions that affect any child's ability to learn. Young children at risk or having developmental delay or disabilities and their families will find support through KID'S NOW programs. An enhanced statewide child care system, home visitation, early hearing and vision screening, and early intervention can provide special supports to children and their families.

Lessening the Burden of Arthritis

Healthcare providers are often times the first line of communication to the person with or at risk for arthritis. Healthcare providers can greatly enhance and extend the reach of arthritis related messages to local communities. They have an excellent opportunity to educate people on prevention strategies and the importance of early diagnosis and treatment.

There are thirty-three rheumatologists in Kentucky. The majority of these physician specialists are located in Louisville and Lexington with only six other cities having full-time rheumatology offices and six bi-monthly clinics. In Kentucky, there are two pediatric rheumatologists, one located in Louisville and one in Lexington. It is important that all health care providers stay current on the burden of arthritis, recognize it as a serious chronic condition and fully understand its impact on disability and quality of life. By staying current on new research and appropriate management strategies, referring patients to local exercise and self-help programs and examining the individuals overall mental and physical health, health professionals can improve the lives of the people they serve with arthritis.

Vision for the Future

Emerging surveillance data in Kentucky show that arthritis is a major public health issue in the state, affecting 39.4% of adults. In addition, disabilities from arthritis result in enormous health care costs for individuals, their families and the state. Kentucky can expect the impact of arthritis to increase dramatically as the "baby boomers" age.

The Kentucky Partners for Arthritis Action, a statewide

consortium of more than 35 agencies and individuals interested in arthritis recently developed a Kentucky Arthritis Plan of Action (Plan). This Plan is a state-based framework for beginning to address an array of arthritis issues to include: enhanced epidemiology and surveillance of arthritis in Kentucky, enhanced communication and education of the public and individuals about arthritis and enhanced arthritis programs and policies. Under the leadership of the CDC, Kentucky Department for Public Health and Kentucky Chapter of the Arthritis Foundation, the Kentucky Partners developed this Plan.

It is imperative, if Kentucky is going to reduce the burden of arthritis, that health agencies, medical societies, academic institutions, nonprofit organizations, health professionals, patients, and volunteers work together to improve the health and quality of life of Kentuckians affected by this disease.

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Kentucky Department for Public Health Bioterrorism Activity Update

Brennan O'Banion

Currently, the Division of Laboratory Services is receiving an average of 22 “suspicious” packages or unknown substances per day with 759 submissions through November 18, 2001. Approximately 31% of those have either had no substance to test or zero credibility to warrant any testing. To date there are still **NO** samples containing *Bacillus anthracis*, the etiological agent of anthrax. The Division of Epidemiology and Health Planning is responding to the majority of consultations on bioterrorism and suspected incidents. Between October 9 and November 19, 2001, the division staff received and responded to over 500 consultation calls in addition to its normal work load.

To address continuing questions concerning appropriate procedures and recommendations for suspicious packages and unknown substances, the Kentucky Division of Emergency Management, in association with other state agencies, directed a series of “road shows” across the state earlier this month. Their primary purpose was to educate and define, for the local agencies, what the state is currently doing to increase our ability to respond to a unique situation such as this, as well as provide information on what can and should be done at the local level. A press release from Governor Patton’s website for Homeland Defense about this series of presentations can be found below.

FRANKFORT, KY (November 13, 2001) — The Kentucky Division of Emergency Management (KyEM) has just concluded a series of 15 meetings across the state designed to inform local government officials, educators and emergency service providers of the status of the terrorism threat and response in Kentucky.

The series of meetings began November 5 and ran through November 13. Presenters from the Kentucky State Police, the Kentucky Cabinet for Health Services, the state Emergency Medical Services (EMS) board, the Kentucky Community and Technical College System (KCTCS) and the Kentucky Center for School Safety

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