Understanding Lung Cancer Screening

The purpose of any screening program is to detect early signs of a disease in people who are most likely to develop this disease. For lung cancer, the risk factors are cigarette smoking, age and certain occupational exposures. Screening is important in a high risk population because it can help detect cancer early and improve the success of treatment.

Any screening program, however, will detect some ‘false positive’ cases, which first appear to show early signs of illness but turn out to be normal. This is especially true of screening for lung cancer. The initial low-dose CT scan taken on the mobile unit may show a white spot in the lung, called a nodule. Most nodules we detect in the WHPP Early Lung Cancer Detection Program are actually small areas of infection or scar tissue. In the majority of cases, this can be determined on the initial low dose CT scan. However, in other cases, a second full-dose CT scan at just the level of the nodule (called a nodulography) will be done and can show right away that the nodule is just scar tissue or is calcified and therefore not of concern. In some cases, however, the only way to determine if a suspicious area on a CT scan is a “false positive” is to repeat the CT scan at certain time intervals (such as 3, 6 or 12 months) to see if there are any changes in the nodule. Most of the nodules we follow up as part of the WHPP Early Lung Cancer Detection Program will not increase in size or may actually shrink on follow up. If a nodule does increase in size, you will be advised to follow-up immediately with your personal doctor. This nodule would then be considered suspicious for lung cancer.

Your doctor will arrange for the necessary consultations and procedures to find out whether a nodule is truly a lung cancer and to treat it appropriately. The most common procedure for diagnosing a lung cancer is a lung tissue biopsy. This involves taking a piece of lung tissue out of the lung and examining it under a microscope. We have met with and/or discussed these matters with the appropriate medical specialists in each community. We appreciate their commitment to you and to us to keep us informed about each case.

If you are not at high risk of lung cancer due to age, smoking and/or occupational exposures, the likelihood of a false positive scan is much greater and you may go through many unnecessary and unpleasant diagnostic procedures. This is why we do not recommend nor offer the screening program to you.

The screening CT scan done on the mobile unit is not as detailed as a regular diagnostic or full dose CT scan of the chest. If you have had a regular CT scan in the past year, you should not have a low-dose screening scan. Similarly, if you have a major illness or current cancer (including lung cancer) and are under close medical observation, or if you have a critically reduced breathing test result, you will not benefit from the screening and may suffer complications from the other diagnostic tests. Since we began the WHPP Early Lung Cancer Detection Program in November 2000, we have answered many of your questions and had discussions with your physicians. We look forward to continuing to serve you.

Written by Albert Miller, M.D. and Amy Manowitz

Visit The WHPP Website . . . www.pace-worker.org

WHPP Early Lung Cancer Detection (ELCD) Program Kick-Off a Success

In October 2000, the PACE Worker Health Protection Program conducted the first early lung cancer detection screenings on the CT scanner mobile unit and held ribbon-cutting ceremonies at the local union halls of the three gaseous diffusion sites. The kick-off ceremonies were a great success thanks to the local union staff that organized each event. All the events were extremely well-attended. Senators, US Congressmen, and their representatives, DOE staff, local WHPP clinic staff and the PACE and Queen’s College staff participated in this ground-breaking occasion. Many local retirees attended to get valuable information on the Program.

The ELCD toll-free number (1-866-228-7226) has been ringing steadily since it was installed in early October. So far, 1200 participants have been scanned at the three gaseous diffusion plant sites (as of 4/30/01).

Lori Brannon, an experienced CT technician, travels with the mobile unit and performs all of the CT scans. Mike Church, former president of PACE Local 3-550, is responsible for driving the truck to each site and also coordinates on-site registration procedures. At each site, the PACE Local Coordinators and the Retiree Coordinators who make up the Ground Team register participants when they come for their scans, and are available to answer any questions that arise.

In the US, lung cancer is the leading cause of death from cancer in both men and women. Unfortunately, most cases of lung cancer are discovered by chest x-ray at a late stage, when treatment is least effective. The WHPP Early Lung Cancer Detection Program uses a new technology – helical low dose or spiral CT scans – that could detect as many as four times the number of lung cancers as a chest x-ray would. And of equal importance, the low-dose CT scan usually detects lung cancer at the earliest stage when treatment is most effective.

The statistics regarding early detection are very dramatic. In the absence of screening, just 12 out of 100 people diagnosed with lung cancer will survive at least five years. If you look at lung cancers detected in the early stages before they have spread to the lymph nodes and other organs, the survival rate jumps to as high as 70%. In other words, it is likely that 70 of every 100 people diagnosed at an early stage will survive for at least five years.

As these statistics show, early detection is essential for increasing the chances of surviving lung cancer. That is why the PACE Worker Health Protection Program is so pleased to be able to offer to its participants low-dose, spiral CT, a medical technology that is not available for screening outside large metropolitan areas.

The program targets gaseous diffusion plant workers with the greatest risk of developing lung cancer based on age, smoking history, and occupational exposure. The CT scan procedure is painless and takes only a few minutes. If you are interested in participating in the program (and have already been through the WHPP medical screening program), call the toll-free number: 1-866-228-7226. The Early Lung Cancer Detection Program staff will review your chart and set up an appointment for you.

Note: Low dose CT screening does not detect all lung cancers and does not eliminate the possibility that lung cancer may appear in the future.

Written by Amy Manowitz
Hello in the New Millenium from the Worker Health exams. Hundreds more are interested and standing by nationwide who have completed their 4,000 workers participated in the screening. Now you are among exam. Since our first newsletter issue in Fall 2000, we people have called our toll-free number opinion about whether some of their health problems first time, providing former DOE workers (and some First, our Worker Health Protection Program and others (DOE) has taken serious steps to address these two occupation diseases, rather than make the necessary Employers often prefer to deny the existence of occupational diseases. The government is very slow illnesses. If they succeed in that effort, workers then contest valid claims; and that DOE then work with the contractors to help people with valid claims for occupational disease receive the appropriate workers compensation benefit. This Act is hardly perfect, and there will be problems in its implementation. But it does present a historical opportunity for DOE workers to gain a measure of compensation for illnesses that were caused by having worked at DOE facilities. Our Worker Health Protection Program will make strenuous efforts to make this new program work and to pressure DOE, Department of Labor, Congress and others to make sure that this new program serves the needs of workers in the DOE complex. We need to recognize that the Department of Energy (DOE) has taken serious steps to address these two traditionally insurmountable problems for workers. First, our Worker Health Protection Program and others like it at other facilities in the DOE complex are, for the first time, providing former DOE workers (and some current workers) with an outside objective expert opinion about whether some of their health problems are due to their past history of occupational exposures. Simple as this is, this really is the first time in any industry in the United States that a comprehensive program to provide workers with proper occupational disease diagnosis is being conducted.

The second element of the DOE response to the problem of occupational diseases in the DOE complex is the recent passage of the occupational illness benefits program by Congress in late 2000. The Energy Employees Occupational Illness Program (EEOICAP) Act provides payment and medical benefits to DOE workers with radiation-related cancers and chronic beryllium disease. In addition, silicosis is covered for Amchitka and Nevada Test Site Workers. For other occupational illnesses produced by toxic agents, the Act requires that DOE set up objective physician panels to review claims concerning occupational illnesses; that DOE not contest valid claims; and that DOE then work with the contractors to help people with valid claims for occupational disease receive the appropriate workers compensation benefit. This Act is hardly perfect, and there will be problems in its implementation. But it does present a historical opportunity for DOE workers to gain a measure of compensation for illnesses that were caused by having worked at DOE facilities. Our Worker Health Protection Program will make strenuous efforts to make this new program work and to pressure DOE, Department of Labor, Congress and others to make sure that this new program serves the needs of workers in the DOE complex.

Chances are you have already been a participant in the WHPP medical screening, and have completed your exam. Since our first newsletter issue in Fall 2000, we have more than doubled the number of people who have participated in the screening. Now you are among over 4,000 workers nationwide who have completed their exams. Hundreds more are interested and standing by to get their free exam.

At the three gaseous diffusion facilities, almost 4,500 people have called our toll-free number (1-888-241-1199) wanting to participate! That number includes about 1,200 callers from Paducah, KY; over 1,300 callers from Portsmouth, OH; and almost 2,000 callers from the Oak Ridge, TN area.

At the Idaho National Engineering & Environmental Laboratory (INEEL), a site added to the Program in Spring of 2000, over 800 interested people have contacted us and screening exams continue at three clinics, 2 in Idaho Falls and 1 in Pocatello. We have screened over 600 participants so far.

**Message from Dr. Markowitz, WHPP Project Director**

Ringing in the New Year: The 2nd Annual WHPP Information Exchange

The second Annual WHPP Information Exchange Meeting was held at the Drury Inn in Nashville, Tennessee for three days on January 18 – 20, 2001. PACE International Union leads the labor-university consortium that established the Worker Health Protection Program, and PACE organizes the annual Nashville meetings.

Nearly all the key PACE team members were in attendance, many of them workers who have also been participants themselves in the medical screenings. Several of the program staff from Queens College-City University of New York also came to Nashville, to listen to presentations on workers’ compensation issues and to discuss local site issues. Sylvia Keding, PACE Program Director, presided over the agenda. After welcome and introductions Robert E. Wages, Executive Vice President of PACE, opened Day One of the meeting with a panel discussion of how to deal with abnormal medical results and possible legal remedies. The PACE site coordinators and retirees from the three gaseous diffusion plants and Idaho reported on program progress in their area.

During Day Two, we heard Dr. Steve Markowitz, Project Director at Queens College, talk about the medical screening program and some new features. Amy Manowitz gave an update on the new Early Lung Cancer Detection screening, which is being offered at the gaseous diffusion sites. Mark Griffin discussed approaches for assessing individual exposure records.

The annual meeting concluded on Day Three with a discussion of goal-setting for the future.

This annual meeting provides the program staff, who are spread across the country, with a chance to exchange ideas and discuss problems. Although we are in contact by telephone, fax or e-mail almost daily, there’s nothing like face to face contact! The annual meeting also is a reminder of what a privilege it is for us to work on a really important, unique program with people who are deeply dedicated to helping their fellow workers.

**Written by Kim Knowlson**

**Message From David Fry, PACE Local Coordinator, INEEL**

In April 2000, the PACE Worker Health Protection Program (WHPP) for former Idaho National Engineering and Environmental Laboratory (INEEL) workers started here at Idaho Falls. As of April 1, 2001, just one year later, nearly 700 former INEEL employees have completed or are enrolled to participate in our educational workshops and the medical screening program.

Enthusiasm for the WHPP in Idaho has grown because it is the first program for former workers to provide the early detection of certain diseases. For example, one participant came through the program and was found to have lung cancer. He had no symptoms and he looked healthy and he had been receiving annual physicals since his retirement. However, he had not had a chest x-ray for several years (Medicare doesn’t pay for routine chest x-rays). Because the cancer was discovered in its early stages, surgery was performed and this participant has a very good chance of survival. Another participant was found to have colon cancer; again he had no symptoms of any kind. Surgery was performed within days of his exam and he will be a survivor. Both of these individuals feel very fortunate to have had the opportunity to participate in the WHPP and, hopefully, they will be able to enjoy many more years of retirement.

Many WHPP participants have told us, “This is the first physical exam I’ve had since retirement from the site.” Some of the former workers who have had routine physicals have said, “This was the most thorough physical I have ever had.” Each participant receives a results letter from Queens College written in layman’s terms describing their health condition. The program is completely confidential; however, at the request of the participant, copies can be sent to their private physician and retained by the clinic where the exam was performed. No one else knows the results of the exams.

Educational workshops are offered every other Friday morning at 9:00 AM at the PACE Union Hall in Idaho Falls. At the workshops, we help former workers to understand the effects of the hazardous materials they may have been exposed to and the latency periods associated with certain occupational exposures. We encourage former workers to complete the medical, family history and occupational questionnaire completely and accurately. This is important because many former workers have changed occupations and/or the area they worked in at the site several times. We also recommend that prior to seeing the doctor, participants write down all of their questions and concerns about their health and take them to the exam. The examining physicians will answer questions and the physical examination records are sent to Queens College with the questionnaires.

Gaylon Hanson, J.C. Colvin and I work on this project together. It has been very rewarding work. It is a good feeling when someone’s life has been saved as a result of participating in the program. We have had spouses and/or children call or stop us on the street and say “Good program” and express their appreciation.

**Written by David Fry**
Noise At Work and Hearing Loss

What causes hearing loss?

Although hearing loss can result from aging and certain medical conditions, the main cause of hearing loss for workers is excessive noise in the workplace. When workers are exposed to loud levels of noise over a period of time, they can experience what is called noise-induced hearing loss. Because many workplaces did not adequately control noise in the past, thousands of workers already have noise-induced hearing loss. The situation has improved since workplace noise regulations were passed thirty years ago, but the fact is that millions of workers are still at risk for hearing loss.

How is noise measured?

The loudness or intensity of sound is measured in decibels (dB). The decibel scale is used to describe a wide range of sound levels. On this scale, a soft whisper would measure 30 dB, and a rock concert would measure about 120 dB. Sound levels at 85 dB (approximately the sound of a loud vacuum cleaner) and above, in practical terms, may damage your hearing. If you have to shout over background noise to make yourself heard, or you experience difficulty in understanding speech, especially if there is competing background noise. Also, tinnitus (a ringing sound in the ear) may occur.

How does noise lead to hearing loss?

Sound waves travel through the eardrum – vibrating the ear drum which passes the vibration through the middle ear along to the cochlea, the snail-shaped part of the inner ear. The tiny hair cells lining the cochlea bend in response to vibration. This transmits a signal to the brain. (See Figure 1 below.)

Permanent hearing loss occurs in the cochlea that bend in response to vibration are so damaged they cannot recover, like grass that has been trampled over too many times. You may first experience a temporary loss of hearing from which you recover by the time you go to work the next day but over time it may become permanent.

Many people with noise-induced hearing loss complain of gradual deterioration in hearing. A common complaint is difficulty in understanding speech, especially if there is competing background noise. Also, tinnitus (a ringing sound in the ear) may occur.

How is hearing loss measured?

Hearing is usually tested using an audiometer. This device generates sound tones at different frequencies (measured in Hertz). Typically you sit in a booth or closed room and are asked to listen to a tone at a particular frequency at varying decibel levels. The procedure is repeated at several different frequencies. The decibel level at which you first hear a particular frequency is plotted on a graph called an audiogram. The right ear and left ear are charted separately. The louder the volume has to be turned up for you to hear a particular tone, the more hearing loss there is in that test frequency. An example of an audiogram is shown below. (See Figure 2 below.) The further below “0” the line is, the greater the impairment. A hearing loss of 25 dB or more is normally considered hearing impairment.

Can a doctor tell whether my hearing loss is from noise rather than aging?

When hearing loss has occurred because of exposure to noise, the audiogram will show that the individual has lost the most hearing at the 4,000 Hertz frequency. This hearing loss will appear as a notch or dip, in the audiogram at 4,000 Hertz frequency as shown on the graph below. In addition to your work and personal history, this is how the doctor can tell from the audiogram that your hearing loss is related to noise.

Figure 1

Figure 2

Written by Lyndon Rose, M.D. and Amy Manowitz

Historic Compensation Legislation Passed for Atomic Workers

The Energy Employees Occupational Illness Compensation Program Act of 2000 was passed in October 2000, after a grassroots bipartisan effort. The Act is the first federal compensation program since the passage in 1979 of the Black Lung legislation. It will provide compensation and payment to employees of DOE, its contractors and subcontractors, and employees of companies that provided beryllium and radioactive materials to DOE. Workers and survivors of deceased workers are eligible to apply for a $150,000 tax-free payment and future medical benefits.

Compensation Benefits Funding

Compensation benefits are funded through an entitlement or “direct spending”. This means that benefits will not have to be approved by Congress each year and are not subject to annual appropriation pressures. The estimated costs for benefits over the next ten years are $1.16 billion for DOE nuclear workers’ compensation.

Coverage of Radiation - Related Cancers Under the Compensation Bill

Covered employees as described above and their survivors are eligible for benefits if:

● The employee developed one of the cancers specified in the legislation (see box at right) after beginning employment at a DOE or an atomic weapons facility and

● The employee’s cancer was “at least as likely as not” related to this employment. This will be determined by reviewing each individual’s exposure data and medical history in accordance with guidelines to be developed by the National Institute for Occupational Safety and Health.

Comp Legislation Provides for Special Exposure Cohort

The legislation establishes a Special Exposure Cohort for which there is a presumption of causality. This means that if the employee was monitored with dosimetry badges and develops one of the specified cancers (see box), he or she is automatically assumed to have developed that cancer as a result of his or her job exposures and thus is eligible for compensation. Furthermore, if an employee was not badged but worked in a job that had exposures similar to a job that is or was badged, the presumption of work-relatedness for his or her cancer would also apply.

Members of this cohort, or their survivors, are eligible for $150,000 lump sum and future medical benefits if the employee:

● Was exposed to beryllium at a DOE or beryllium-provider facility and

● Contracted chronic beryllium disease (CBD) or

● Died as a result of CBD

The program will also provide employees who are (continued on page 4)
Historic Compensation Legislation

(continued from page 5)

sensitized by beryllium with regular medical examinations to check for the presence of CBD. The bill does not define how often the medical examinations are to be performed. That will be determined by regulations set by the Department of Labor and is an area that demands worker activism.

Chronic Silicosis

Coverage for silicosis only applies to those who are employed by their employers or their survivors if the employee was present for at least 250 work days during the minimum work days or months at a DOE facility located in Nevada or Alaska for tests or experiments related to atomic weapons. Those diagnosed with chronic silicosis whose claims are accepted will receive medical benefits (up to a maximum of $150,000 lump sum payment).

Provisions for Other Occupational Diseases

DOE contractor employees with occupational diseases not covered by the federal program can apply to DOE’s Office of Worker Advocacy for help in obtaining state workers’ compensation benefits. The Office will forward a worker’s application to an independent panel of physicians appointed by the US Secretary of Health and Human Services. That panel would decide whether the employee’s illness or death was due to exposure to a toxic substance at a DOE facility. If the illness or death was determined to be related to work at a DOE facility, DOE could, to the extent permitted by law, direct a contractor not to contest such claims. There is a caveat you should be aware of in this program. Over the years, DOE headquarters operations have given over their authority to DOE field offices who may be reluctant to force the contractors to pay for claims since this would divert money away from environmental management or defense programs.

Other Workers Covered by the EEOICPA Act of 2000

The law also increases benefits for uranium miners and millers covered under the Radiation Workers Compensation Act of 1990 (RECA) from $100,000 to $150,000, and provides medical benefits. The estimated costs for expanding the RECA program benefits over the next ten years are $396 million.

Written by Sylvia Kieding

Paducah Exposure Assessment Report Released by the DOE

In December 2000, the former Energy Department released results of a study of possible past radiation exposures to workers at the Paducah Gaseous Diffusion Plant in Paducah, Kentucky. The study, which was part of Secretary of Energy Bill Richardson’s worker health and safety initiative at the Paducah site, was jointly prepared for the DOE by researchers at the University of Utah and the Paper, Allied-Industrial, Chemical and Energy Workers International Union (PACE). “This report identifies the type of work which, in the past, posed increased exposure included ash handling, cylinder heels cleaning, dehydrics processing, pulverizer operation, flange grinding and bathhouse filter changing. The report further concluded that up to 4,000 workers may have received annual exposures which approached or exceeded the current regulatory limits.”

Former Assistant Energy Secretary David Michaels called the 180-page report a “groundbreaking study” that has “important implications for the future for workers to get compensation.” The investigators strongly recommended that additional work should be performed to validate the electronic database records against the paper records and urged that additional record searches be conducted to identify any bioassay records that require transcription (see box for definition of bioassay). The DOE has not yet committed to funding additional tests. If you are interested in getting a copy of the report, you can visit the DOE Office of Worker Advocacy website—http://www.whpp.doe.gov/advcas/.

DOE WORKERS MUST APPLY FOR COMP BILL BENEFITS

Workers must file for federal compensation under the Energy Employees Occupational Illness Act; there is no automatic claim procedure under the Energy Employees Occupational Illness Act; there is no automatic claim procedure. That will be determined by regulations which will provide the $150,000 benefit to eligible workers. The claim forms for applying for federal compensation will be available on July 31, 2001 and information will be accessible through the DOE Office of Worker Advocacy on how to apply and where. Again, if you do not file a claim, you will not receive the compensation benefit.

The statute and how it will be put into effect (for example, which federal agency will handle the forms) is in a state of flux but readers of the WHPP Health Watch will be kept abreast of new developments.

Any questions, contact the DOE Office of Worker Advocacy hotline at 1-877-447-9756.

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he passage of the Energy Employees Occupational Illness Compensation Program Act (EEOICPA) by Congress in late 2000 required a lot of hard work, flexible thinking, and political persuading at every level. The work of organized labor, especially PACE, was crucial, including helping the union locals throughout the country, the Nashville leadership, and the Washington D.C. Legislative Office as well.

We need also to recognize former Secretary Bill Richardson and former Assistant Secretary David Michaels for their seminal contributions to this effort. Both have left government with the transition to the new Bush Administration and are no longer in the public eye. Former Secretary Richardson deserves great credit for carrying the issue of workers compensation and benefits for workers to the highest levels within the Clinton Administration, for working with Congress to obtain a reasonable legislation, and for supporting his staff in their efforts to move on this issue.

On a day to day basis, David Michaels, Ph.D, former Assistant Secretary of Environmental Safety and Health, was, without question, the most important person in the Clinton Administration in making this Act (EEOICPA) a reality.

We knew Dr. David Michaels before he became Assistant Secretary in January, 1999. He had been a friend of the Oil, Chemical and Atomic Workers International Union for over 20 years. He had run a very successful program at Albert Einstein Medical School in New York introducing medical students to occupational health. Many of these medical students subsequently decided to devote their lives to protecting workers through practice of occupational medicine. Dr. Michaels subsequently directed a national asbestos screening program for sheet metal workers through sheet metal workers union; established a occupational safety and health center in New York; and moved on to become a professor teaching epidemiology and continuing occupational and community-based studies in New York City.

Those of us who knew Dr. Michaels during this previous life always understood that he had the intelligence, knowledge, and dedication to be in charge of environmental safety and health in a huge agency like the Department of Energy. But none of us could have guessed that he would have been as effective and successful as he was in his two years in that Department. Despite innumerable distractions and bureaucratic inertia, Dr. Michaels kept focused throughout his tenure on the need of DOE workers for compensation and how to make that happen. He used his personal skills and considerable intelligence to convince, cajole, and otherwise pressure other Administrative officials, Congressional staffers, and members of Congress themselves into forming a consensus about the need for a compensation program and what a compensation program should look like for DOE workers. He gained admirers from both parties and within the permanent government in DOE and on the Hill. Dr. Michaels had no political ambitions beyond his service as Assistant Secretary and what he might be able to do in the short period of time that he knew he would have. He knew what the right thing was and wanted to do it, even if he had to make compromises to achieve a consensus and to get the final Act passed. For this, we acknowledge the leadership displayed by Dr. Michaels and owe him a debt of gratitude. May he continue to serve the public as well in the future.

Written by Steven Markowitz, MD

Herman Potter Takes WHPP Grant Administration Job

Herman Potter, a longtime health and safety activist at the Portsmouth Gaseous Diffusion Plant in Portsmouth, Ohio, has taken Jim Hendrick’s job as Worker Health Protection Program grant administrator based out of the Nashville PACE headquarters. Mr. Hendrick’s career out of government for him a debt of gratitude. May he continue to serve the public as well in the future.

Written by Steven Markowitz, MD

4 Health Watch

Tribute to David Michaels and Bill Richardson

Dr. David Michaels

Written by Mark Griffon

A bioassay is a method of determining the kind and amount of radioactive material in the human body, by direct measurement (such as counting the alpha and beta emissions or by analysis of materials excreted from the body (such as urinalysis).