

MED-INFO

A Health Magazine Connecting Northwest Hospital with Our Community

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Vertebroplasty and Kyphoplasty Eradicate Pain of Compression Fractures

Sitting at her kitchen table, 83 year-old Si Y Choi dabs at her eyes with a Kleenex as she recounts the treatment she believes saved her life.

A little over a year ago, Choi, a tiny woman with a shy manner and a radiant smile, was bedridden by excruciating pain from multiple compression fractures in her vertebrae.

More than 750,000 people in the US suffer from this condition. There are a number of causes, including invasive tumors of the spine and traumatic compression fractures from falls or accidents. But the most common cause is osteoporosis, where increasingly fragile bones can fracture as a result of something as simple as reaching for and lifting a heavy object.

In Choi's case, a number of factors led to her fractures. A car accident more than 20 years ago crushed one of her vertebrae and, although it healed on its own at the time, aging and the onset of osteoporosis re-fractured it and five of her other vertebrae.

Spinal compression fractures generate intense, localized pain, which becomes much worse with movement. Like Choi, many people with compression fractures are literally immobilized by the pain.

Having known her as an active, tireless, hardworking woman who cooked, gardened and helped raise her grandchildren, Choi's daughters, Joy and Grace, were distraught at seeing their mother so helpless.

"She wouldn't eat and she couldn't sleep and there was nothing we could do to make her feel better," says Joy.

"At times there was so much pain, I thought I couldn't live anymore," says Choi. "All my life I've had some kind of pain or another, but this kind of pain I didn't think I could survive."

Choi tried a number of medications, but none was effective. That's when Choi's primary care physician suggested vertebroplasty or Kyphoplasty, two new treatments for repairing vertebral compression fractures.

"With compression fractures, when you move, the fracture moves," says Ray Jensen, MD, an interventional radiologist with Via Radiology, a Northwest Hospital partner. "To fix the fractures and eradicate the pain, you need to solidify the fragments again."

According to Jensen, vertebroplasty and Kyphoplasty essentially put a cast *inside* the bone instead of around the bone, as traditional casting does.

Vertebroplasty is used to fix fractured vertebrae that have more or less retained their structure. During the procedure, a needle is inserted into the fractured vertebra and it is injected with a type of cement that, when hardened, fuses the fragments and makes the vertebra about ten times stronger than it originally was.

Kyphoplasty is similar, but is used more effectively when compression fractures have actually collapsed or "wedged" the vertebra. During Kyphoplasty, a balloon is inflated at the site of the fracture, returning the vertebra to its original shape before the cement is injected.

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HOW THE PROCEDURE WORKS

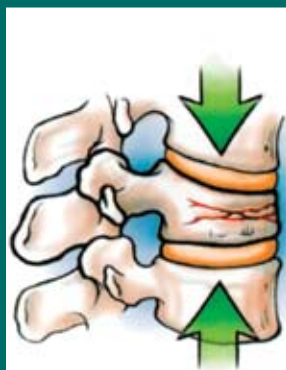


Image 1:
Vertebral Compression Fracture, causing pain and spine deformity.

Image 2:

Initial Entry: A biopsy needle is guided into the fractured vertebra through a small incision in the skin.



Image 3:

Stabilization: Acrylic bone cement is injected into the vertebra, filling the spaces within the bone.

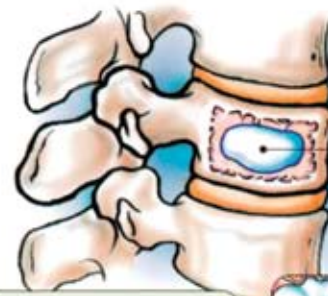


Inset: Magnified view of the interior vertebra with the cement filling in the spaces.



Image 4:

Post operative: Restored vertebra with hardened cement, stabilizing the vertebral structure and relieving pain.



Inset: Magnified view of the restored interior vertebra.





“I couldn’t imagine a life without pain and now I have it. Every day is wonderful. I will never forget what they did for me.”

*-Si Y Choi
Vertebroplasty &
Kyphoplasty patient*

An MRI determined that Choi had a number of compression fractures, some severely “wedged.” In a series of three treatments, Jensen fused ten of Choi’s vertebrae with a combination of vertebroplasty and Kyphoplasty. Secured with the cement, these “solidified” vertebrae should not fracture again.

Choi says she had an immediate rapport with Dr. Jensen, who held her hand, comforted her before the procedure and visited her the night she stayed in the hospital. “He gave me confidence and hope even before the surgery, and the staff was wonderful at the hospital too. Everyone was so nice, it felt almost like home.”

Following the procedures, Choi experienced an immediate and lasting cessation of pain. According to her daughters, on the night after her first procedure, she had the first real night of deep, peaceful sleep in more than a year and awoke the next morning a completely different person.

Jensen says that the surgery is so effective, about 80% of patients go from narcotic painkillers to simple Tylenol or Motrin and many others recover completely, with even residual pain fading over time. Some patients also participate in physical therapy following the procedure, particularly those who have been immobile and need to recover some strength.

“Anyone who has ever experienced back pain before knows that it can be unbearable,” says Jensen. “Kyphoplasty and vertebroplasty are breakthrough, minimally invasive treatments that, for people like Mrs. Choi, can be life-altering.”

Choi is again an active, busy woman. She laughs easily, something her son-in-law Scott says everyone missed hearing before the surgery. Rarely in one place for long, she cooks traditional Korean food for her family, attends church, reads voraciously and routinely beats her family members at Rummikub, her favorite game. Her appetite has returned and her daughters say she even wants to try new foods – something she never wanted to do before. It’s a clear sign that Choi has returned to her life with enthusiasm and gusto.

“I don’t think I would be alive if it weren’t for this procedure,” she says. “I couldn’t imagine a life without pain and now I have it. Every day is wonderful. I will never forget what they did for me.”

For more information on compression fractures, vertebroplasty and Kyphoplasty, visit the Society of Interventional Radiology website at www.sirweb.com or contact Via Radiology at www.viaradiology.com or (206) 306-1011.

SAVE THE DATE!

Relay for Life - May 5th & 6th
@ Woolsey Stadium in Shoreline.

Join Northwest Hospital & Medical Center in supporting the Shoreline/ North Seattle American Cancer Society Relay For Life. Register online today at www.relayforlife.org

23rd Annual ‘Swing Fore Your Life’ Golf Tournament & Auction - May 7th

@ a Private Golf Club in North Seattle

Please join Northwest Hospital for a day of golf at one of the best courses in town followed by an auction, dinner and awards ceremony. If you participate in one golf tournament a year, this is the one! Call (206) 368-1647 for more information.

Race for The Cure - June 16th

@ Qwest Field

Join the Seattle Breast Center and Northwest Hospital Team in The Komen Race for the Cure. Register online today at www.komenpugetsound.org.
Deadline: May 11th



The Med-Info newsletter is published bi-monthly as a community service by the Marketing & Public Relations Department.

To contact us about the newsletter, e-mail newsletters@nwhea.org or call (206) 368-1645.

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Preventing VTE: Awareness Saves Lives

“DVT,” “PE” and “VTE” may look like so much alphabet soup to the average person, but knowing what these letters mean and how they can affect you could save your life.

DVT, or deep vein thrombosis, is the formation of a blood clot in one of the deep veins in the body – most often in the legs. These clots are dangerous because they can break loose and travel through the bloodstream to the lungs, blocking the blood flow in an artery and causing a pulmonary embolism, or PE. Pulmonary embolism is a serious condition that can result in death. DVT and PE are included under the umbrella of VTE, or venous thromboembolism, which is often used to describe them both.

According to the American Heart Association, up to 2 million Americans are affected annually by DVT. Of those who develop pulmonary embolism, between 60,000 and 200,000 will die – more deaths than from breast cancer and AIDS combined. DVT can also cause long-lasting problems. It may damage veins and cause limbs to ache, swell, change color and even develop sores.

Certain individuals may be at greater risk for developing DVT, although DVT can occur in almost anyone. Risk factors include:

- Cancer
- Certain heart or respiratory diseases
- Prior DVT
- Advanced age
- Acute medical illness with restricted mobility
- Inherited or acquired predisposition to clotting
- Obesity
- Patients undergoing major surgery
- Pregnancy
- Restricted mobility caused by long-distance travel
- Use of birth control pills
- Postmenopausal hormone replacement therapy
- Trauma
- Hospitalization

The good news is, DVT and PE are highly treatable and preventable with proper and immediate medical care. Treatment for DVT usually involves taking anti-clotting medications called anticoagulants, such as heparin and warfarin (sold under the brand name of Coumadin). Heparin is given through a vein (by IV) or as an injection. Warfarin is given as a pill. Treatment usually involves taking these medications for at least three months or longer to prevent existing clots from growing and to prevent new clots from forming.

Keeping active by moving or exercising the legs regularly also helps decrease the risk of VTE. Taking a walk each day, for example, or flexing and pointing your feet every 20 minutes on long plane flights can help. For those who are less mobile, compression stockings or other devices to maintain blood circulation are also good options.

VTE & HOSPITALIZATION

The risk of developing VTE is particularly common among hospitalized patients, especially following surgery. VTE in the hospital can be caused by many factors, including trauma to the

veins during surgery, IV injections or other interventions, changes in blood coagulation and circulatory problems from bed rest, frailty or immobility.

Numerous studies have made it clear that providing treatment to prevent DVT in hospital patients before it ever occurs can significantly decrease the number of patients who eventually develop it, experience recurrences or have a pulmonary embolism.

In fact, more than 50% of surgical patients with a previous history of VTE who do not receive preventative care will develop DVT after surgery. In addition, nearly one in five surgeries results in VTE if preventative measures are not taken, and that number increases to more than 50% in total hip and total knee replacement surgeries without preventative treatment. Spinal surgery, pelvic surgery, and neurosurgery also place patients at particularly high risk of VTE.

Treating VTE preventatively is even more critical because more than 25% of patients with DVT don't show any symptoms before pulmonary embolism occurs, and by then it is often too late.

At Northwest Hospital & Medical Center, preventing VTE among hospitalized patients is an ongoing commitment. Every patient that enters the hospital is assessed for VTE risk. Medical staff members are intensively trained to recognize, evaluate, intervene and treat VTE and to collaborate on the care of each patient.

A special set of orders developed by a committee of Northwest Hospital physicians, nurses and pharmacists guides the patient's care team in applying appropriate prevention and treatment, including medication, physical activity, and equipment that helps encourage blood circulation. For example, Northwest Hospital uses new, pneumatic compression devices which are wrapped around the patient's legs and periodically massage them to increase blood flow. The devices are used routinely on post-surgery patients.

Because DVT often recurs and can threaten patients even after they return home from the hospital, Northwest Hospital staff ensures that discharge instructions are included to help patients and their families continue to treat or prevent DVT at home.

“Clots in veins and their associated problems in the hospital and later in life - continue to be a major focus of prevention for all medical practitioners,” says Terence Quigley, MD, Chief of Surgery at Northwest Hospital. “Northwest puts as much effort into VTE prevention as any hospital I've ever been associated with and my patients benefit greatly.”



For more information on DVT, PE and VTE, visit www.dvt.net or The Coalition to Prevent Deep-Vein Thrombosis at www.preventdvt.org.

CHILDBIRTH EDUCATION

Childbirth, parenting, and new baby classes are offered in conjunction with Gracewinds Perinatal Services. All classes are held on the Northwest Hospital campus. Please call Gracewinds Perinatal Services at (206) 781-9871 or visit www.gracewindsprenatal.com/nw-classes for scheduling and registration information.

Childbirth Prep Series

A four- and seven-week course that is designed to give expectant parents the tools and information needed during childbirth. This course is also available in a condensed weekend format.

Cost: Four Week, \$115 per couple
 Seven Week, \$200 per couple
 Weekend, \$125 per couple

New Family Skills

This important class addresses the specific changes that affect new parents.

Costs: \$40 per couple

Newborn Care Class

This course is an excellent primer for first time parents, grandparents and baby-sitters. Costs: \$40 per couple

Infant Safety/CPR

A class designed to give new parents, grandparents and baby-sitters the skills to help prevent accidents, to perform infant CPR and to relieve an obstructed airway. This class does not provide a CPR certification card.

Cost: \$40 per couple

Breast-feeding Basics

This class is designed to educate parents on proper feeding techniques and positioning. Cost: \$40 per couple

Foundations for Fatherhood

A class for expectant dads. Taught by an experienced father, this popular class addresses topics and issues associated with fathering. Cost: \$30

Comprehensive Education Package
 Purchase all six classes and save \$70.
 Package Cost: \$245 per couple

PRENATAL SERVICES

Baby Your Back

Back pain is a frequent complaint of pregnant women and has many causes. Baby Your Back is a two-hour class for expectant mothers taught by a licensed physical therapist. It is offered the second Thursday of each month at Northwest Physical Therapy Services, located in Northwest Hospital & Medical Center's Outpatient Medical Center. Cost: \$10. Call (206) 368-6032 to register. Healthcare provider referral required.

WELLNESS

Living Well with Diabetes

This program has been formally recognized for excellence by the American Diabetes Association. Participants will gain information and skills to manage diabetes in this four-session series offered monthly. Note: Physician referral is required for class. Day and evening classes available. For more information contact your physician, or call (206) 368-1564 to receive a brochure.

Qigong for People With Parkinson's

An ancient form of exercise derived from China combining physical postures with breathing techniques. Taught by certified qigong instructor. This 6-week class starts on January 29th. Registration required. Call (206) 368-5935.

Weight Loss Surgery Education

Is Weight Loss Surgery Right For You? Join us for a free informational seminar to learn more about: weight loss surgery

options and risks; patient selection criteria; nutritional requirements; and insurance coverage. Question and answer segment to follow each talk. All sessions are free and are held on the Northwest Hospital Campus. Call (206) 368-1350 to reserve your space today. April 4 & April 19; and May 10 & 23, 6:30 to 8:30 p.m.

FOR OLDER ADULTS

AARP Driver Safety Program

Feeling less confident behind the wheel? AARP is offering the popular Driver Safety Program for drivers 50 years of age and older. Graduates may be eligible for multi-year discounts on their auto insurance. The class is offered on two consecutive Saturdays from 9:00 a.m. - 1:00 p.m. on June 23 & 30. The classes will be held on the Northwest Hospital campus. A \$10 fee is payable to AARP on the 1st day of class. Participants must attend both days of the class to complete the course. To register for the Driver Safety Program, call (206) 368-1564. Or, call AARP at (888) 227-7669.



APRIL 2007							MAY 2007						
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29	30						27	28	29	30	31		

Classes, Lectures, Support Groups and Research Studies

March - May 2007 (Continued)

SUPPORT GROUPS

The Journey Through Grief

In this safe, confidential, non-judgmental environment you will: recognize the normal aspects of grieving and the grief work tasks; receive support and give support to others experiencing a similar loss; consider ways of providing self-care; and develop coping strategies for getting through difficult times. The group meets on the second and fourth Tuesdays of the month. A telephone conversation is required before attending. Please contact the spiritual and grief counselor at (206) 368-1891.

Mended Hearts

For cardiac patients, family members and health professionals. This group provides help in coping with the emotional aspects of recovering from heart diseases, and an opportunity to offer personal insights to help others in the coping process. Offered: Third Thursday of each month, 7 - 9 p.m. Call: 206-368-1564

EMERGENCY SERVICES EDUCATION

CPR Training

Learn lifesaving skills from Medic II personnel. Offered on the third Tuesday of each month, 7-10 p.m. Registration required. Call (206) 368-1564 for more information. Cost: Donations are greatly appreciated and made out to Medic II CPR.

CANCER LIFELINE CLASSES & SUPPORT GROUPS AT NORTHWEST HOSPITAL & MEDICAL CENTER

Cancer Lifeline at Northwest Hospital is located in the Professional Building in Suite 3. All classes and groups are free and open to the public. Call (206)

297-2500 for more information or to register.

Drop in Time

Drop by for information on our programs, have a cup a tea, and check out our new library! You can even explore your creative side with a variety of art supplies available. Refreshments are provided. Feel free to bring lunch. Tuesdays, March 6 - April 24, 1-4 p.m. and Saturday, April 14, 10:30-2 p.m.

Brain Cancer Support Group

Second Wednesdays of the month: April 11; May 9, 4:30-6 p.m.

Breast Cancer Support Group

First and third Wednesdays of the month: April 4 & 18; May 2 & 16, 4:30-6 p.m.

Colorectal Cancer Support Group

First Wednesdays of the month: April 4; May 2, 7-8:30 p.m.

Lung Cancer Support Group

Second and fourth Thursdays of the month: April 12 & 26; May 10 & 24, 7-8:30 p.m.

Reclaiming Your Life

Wondering where to go after you have finished cancer treatment? Come to this 8-week group for women who are at least three months past completion of treatment. Intake interview required. Call (206) 297-2600.

Beginning Soaring Crane Qigong

Gentle movements and visualization increase focus, energy and well-being. Please register. Wednesdays, March 14 - April 25, 2:30-3:45 p.m.

Gentle Yoga

Enjoy easy stretches, postures and guided meditation. Please register. Tuesdays, March 13 - April 24, 6-7:30 p.m.

NEW! Belly Dancing

Stretch and tone your entire body while having fun with the ancient art of belly

dance. Physician's release is required for those in treatment within the last year. Please register. Tuesdays, March 13 - April 24, 9:30-10:30 a.m.

Lebed Method

This gentle and fun exercise program combines easy stretches, strengthening and aerobic movement with great music! Appropriate during or after cancer treatment and for anyone with (or at risk for) lymphedema. Please register. Fine to start this class at any time during the series. Mondays, March 12 - April 23, 12-1:00 p.m.

Stay after class to speak with Northwest Hospital & Medical Center lymphedema therapists about how to prevent and treat lymphedema on Apr 23, 1-1:30 p.m.



Focus On Fall Prevention New Patient Protocol Helps Assess Fall Risk and Prevent Injury

Each year, the Joint Commission on Accreditation of Healthcare Organizations (JCAHO) devises a list of Patient Safety Goals to guide healthcare providers in improving the safety and quality of patient care. At Northwest Hospital & Medical Center, these goals are an important part of the daily routine, from staff training, to case reviews, to dozens of small working groups dedicated to understanding and achieving a wide variety of patient safety objectives.

About a year ago, one such working group came together to address the 2006/2007 JCAHO Patient Safety Goal of reducing the risk of patient harm resulting from falls and implementing fall prevention and reduction programs.

The result of this group's efforts is the Fall Prevention Protocol, introduced at Northwest Hospital in late 2006. The Fall Prevention Protocol helps medical staff more effectively identify and assess patients who are at risk for falls, prevent falls, protect patients from injury and enhance patient safety.

The process calls for an evaluation of each patient at the time he or she is admitted – and every eight hours after that – using the Morse Fall Scale, a nationally recognized tool that assesses fall risk. Using the scale, the staff determines whether patients are at low, moderate or high risk for falls and assigns care plans appropriate for each level of risk.

High-risk and moderate risk patients receive special care plans to ensure all staff are aware of their status, whether they are in their rooms, walking around the unit, or traveling through the hospital for tests or procedures. These patients wear purple hospital bracelets, magnets are placed by their doors, and stickers are put in their charts to identify them as high-risk.

In addition, the team considers more than 60 strategies when designing care plans for high- or moderate-risk patients. These include visual supervision, the use of special low hospital beds, different

techniques for placing tubes and dressings to prevent disconnection, providing night lights and ensuring clear paths from bed to bathroom, among others. Fall prevention information is also provided to patients upon discharge to help them continue to prevent falls at home.

“Since the introduction of the Fall Prevention Protocol we have seen a definite decrease in the number of patient falls,” says Nancy Schuman, clinical nurse specialist in Northwest's neurosurgery department and a member of the small working group on fall prevention. “The process has made everyone more aware and watchful and has given us more effective methods of preventing falls from happening.”

FALL PREVENTION BEGINS AT HOME

Fall prevention is also important at home, where the risk can be greater among those who live alone, have medical conditions or a history of falls, or are taking medications that affect their hearts or central nervous systems.

Each year in the U.S., nearly one-third of older adults experience a fall, and almost two million of these are treated in emergency rooms for injuries ranging from cuts and bruises to broken bones or traumatic head injuries.

According to Schuman, there are many things you can do to prevent falls at home, including:

- Starting an exercise program. Exercise techniques such as Tai Chi or yoga that increase strength and improve balance are especially good.
- Asking your doctor or pharmacist to review your medicines – both prescription and over-the-counter to reduce side effects and interactions.
- Having your eyes checked by an eye doctor at least once a year.
- Improving the lighting in your home.
- Reducing hazards in your home that can lead to falls and adding balance aids.



Many people who fall, even those who are not injured, develop a fear of falling. This fear may cause them to limit their activities. Because this also reduces mobility and physical fitness, it can actually increase the risk of falling. To help these patients regain confidence and build skills they need to avoid falling, Northwest Hospital offers the S.A.G.E., or Safety and Gait Enhancement program.

Patients in the S.A.G.E. program see a physical therapist, who evaluates leg strength, range of motion, balance and gait and then designs customized physical therapy treatment and a home exercise program to meet each patient's individual needs. These programs emphasize strengthening, flexibility, balance, posture, shoe selection, safe walking, and techniques to safely rise from chairs. Patients in the program typically meet with the therapist once or twice a week from four to eight weeks.

Staying in good physical condition can reduce the risk of falling, as well as reduce the chance of serious injury should a fall occur,” says Schuman.

Additional information on fall prevention can be found at the American Geriatrics Society website at www.americangeriatrics.org, Centers for Disease Control and Prevention at www.cdc.gov or the National Safety Council at www.nsc.org.

New Program Highlights Osteoporosis and Exercise



Osteoporosis Screening at the Shoreline YMCA

Numerous studies have shown that specific weight-bearing exercises can be beneficial in building bone or minimizing bone loss. In March, Northwest Hospital & Medical Center's Physical Therapy Services and Community Outreach teams rolled out a new "Strong Bones, Strong Bodies" program with two free, hour-long sessions at the Shoreline YMCA. "Strong Bones, Strong Bodies" sessions will be offered at community centers, fitness clubs, health fairs and other venues. The sessions are designed to help women determine whether they are at risk for developing osteoporosis and to provide safe exercise guidelines.

Osteoporosis, the thinning of bone tissue and loss of bone density over time, is the most common type of bone disease, and a major health concern to approximately 44 million Americans. As bones become more fragile, they are more likely to break – typically at the hip, spine or wrist – causing pain, deformity and loss of height, and sometimes requiring surgery.

The goal of "Strong Bones, Strong Bodies" is to raise awareness of osteoporosis and the importance of safe exercise in preventing such fractures. During the sessions, nurses and physical therapists measure bone density by scanning the heel to determine bone loss and fracture risk. Following the screening, session participants speak one-on-one with a physical therapist about their current exercise program and get recommendations for safe changes based on their screening results.

"In addition to taking calcium or other medications, you can exercise in such a way as to actually help build healthy bone," says Marti McGinly, physical therapist at Northwest Physical Therapy Services' Osteoporosis Program. "At the same time, there are also ways of exercising, such as twisting or lifting weights incorrectly, that do more harm than good if you have osteoporosis or are at risk for it."

Both women and men who want more assistance in building a customized approach to exercise can come to Northwest Hospital's Osteoporosis Program. Physical therapists will do a thorough musculoskeletal evaluation, including posture, body mechanics and balance, and will develop an exercise program specifically tailored for each patient. Patients participating in the program need a physician referral.

For more information on osteoporosis, call Northwest Physical Therapy Services at (206) 368-6032 or explore the National Osteoporosis website at www.nof.org.

HOW WOULD YOU ANSWER THESE QUESTIONS?

- Is your diet lacking in calcium?
- Do you smoke or use alcohol excessively?
- Do you have an inactive lifestyle?
- Do you use medications such as steroids or thyroid hormones?
- Do you have a thin or small frame?
- Are you of Caucasian or Asian descent?
- Do you have a family history of fractures or osteoporosis?

If you answered yes to any of these questions, you may be at risk for developing osteoporosis.

Source: National Osteoporosis Foundation



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