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Arthritis Education Manuals for Nurses and Patients

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Arthritis Education Manual for Nurses

Session 1

Introduction, Rationale, Education of Knee Anatomy

GOALS:

- Introductions, develop alliance and collect patient information
- Basic information about sessions
- Teach basic bony anatomy
- Teach basic ligamentous and cartilaginous anatomy
- Teach the basic functional role of various anatomical structures

MATERIALS:

Packet/Binder, Pens, Pencils

OUTLINE:

A. Introduction (time = 10 minutes) (0:05)

1. Therapist welcomes and introduces self and describes his/her position as a clinician educator specializing in arthritis.

2. **(Handout 1-1) -** There will be 8 sessions lasting about one hour
   a. Expectation is that each session will be conducted on time.
   b. In case of being late, or missing the session, call the clinician as soon as possible.
   c. Here are telephone numbers (other than home) where the clinician can be reached or message can be left.

3. I want to assure you that our sessions will be kept confidential. First, you will be identified only by the study number you were assigned when you agreed to participate in the study. What we discuss in our sessions will be kept in strict confidence. For quality assurance purposes, a clinical supervisor may sit in or review the recorded sessions. The recordings will be protected so that no one except the study investigators will have access to them.

4. **(Handout 1-2)** Over the next 8 sessions, you will learn a number of educational principles that can help you to better understand the anatomy of your knee, how your knee works, and how knee replacement surgeries are done. We will also discuss the typical

pattern of recovery following surgery and other issues related to arthritis that may be of help to you.

5. In each session I will teach you something that you may not know about arthritis and knee replacement surgery. We will also revisit and review the previously learned skills and recommend some homework assignments (the patient manual) on an ongoing basis.

B. Patient History and Knee Replacement Surgery (time = 15 minutes) (0:25)

1. Prior to discussing the basic anatomy of the knee, I would like to spend a few minutes finding out some more information about you, your knee arthritis, and its impact on your life.

- Is your surgery date scheduled yet?
- When did you first develop knee pain?
- What type of treatments have you tried in the past?

2. Tell me a bit more about yourself.

- How has your knee been affected by your arthritis?
- What functional activities have become problematic for you?
- Job/work
- Leisure activities
- Physical activities
    - What is a typical day like for you?
    - Assess patient's overall activity levels and functioning

3. What is your general understanding of the surgery and what your recovery might entail?

Clinician goal: simply get to know the patient and their general understanding of knee anatomy, function and general understanding of knee arthroplasty and recovery following surgery.

4. Summary Statement: Therapist briefly provides a summary of knee anatomy and function.

5. Statement of rationale: In this training you will be learning about your knee, about arthritis and treatment of arthritis and about knee replacement surgery.

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C. Basic Bony Anatomy of the Knee (time = 10 minutes) (0:35)

(Handouts 1-3 through 1-4b) I want to give you a brief overview of the anatomy of the knee.

Bones are the supporting framework for the body that allows us to bear weight and keep the body from collapsing. They also protect the organs and tissues. The skeleton consists of 206 bones.

1. To better understand how knee problems occur, it is important that you understand some of the anatomy of the knee joint and how the parts of the knee work together normally.

2. First, let's define some common anatomic terms as they relate to the knee before we talk about the structure
    - Draw an imaginary line through the middle of your body.
    - Medial-closer to the midline. The medial side of your knee is the side closest to the other knee.
    - Lateral-side of the knee that is away from the other knee.
    - Anterior-the front of the knee.
    - Posterior-the back of the knee.

3. The knee is the largest joint in your body.

4. The knee joint is made up of four bones that are connected by muscles, ligaments and tendons.

    - The femur is the large bone that is in your thigh.
    - The tibia is the larger shin bone.
    - The fibula is the small one that sits next to it.
    - The patella or kneecap is the small bone in front of your knee. It slides up and down in a groove in the femur as your knee bends and straightens.

5. The knee joint is a synovial joint. Synovial joints are enclosed in a capsule and contain a fluid called synovial fluid that lubricates the knee joint.

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D. The Ligaments and Cartilage of the Knee (time = 20 minutes) (0:55)

(Handout 1-4b) I want to give you a brief overview of the ligaments, cartilage, tendons, muscles, nerves and blood vessels of the knee.

1. Ligaments are like strong ropes that connect bones and provide stability to joints. In the knee there are four main ligaments.

    - On the inner (medial) side is the medial collateral ligament.
    - On the outer (lateral) side is the lateral collateral ligament.
    - The two other main ligaments are found in the center of the knee. These ligaments are the anterior cruciate ligament and the posterior cruciate ligament.
    - These paired ligaments are called cruciate ligaments because the ACL crosses in front of the PCL.
    - The medical collateral (MCL) and lateral collateral (LCL) prevent the knee from moving too far side to side.
    - The ACL and PCL control the front to back motion of the knee.

2. Two structures called menisci lie between the femur and the tibia. These structures act as "cushions" or "shock absorbers" and also help provide stability to your knee. There is a medial and lateral meniscus. When either meniscus is damaged it is referred to as a "torn cartilage."

3. Another type of cartilage in the knee is called articular cartilage.

    - Articular cartilage is a smoothly shiny material that covers the bones in the knee joint.
    - Anywhere that two bony surfaces have contact, there is articular cartilage.
    - In your knee, articular cartilage covers the ends of the femur, the femoral groove, the top of the tibia and the underside of the patella.
    - Articular cartilage allows the bones of your knee to move easily as your knee bends and straightens.

4. Tendons connect muscles to bones.

    - The quadriceps muscles on the front of the thigh attach to the top of the patella by the quadriceps tendon. This tendon covers the patella and continues down to form the patella tendon.
    - The patella tendon attaches to the front of the tibia.

- The hamstring muscles are on the back of your thigh and attach the tibia at the back of the knee.
- The quadriceps muscles are the main muscles that straighten your knee.
- The hamstring muscles bend your knee.
- The major nerves (tibial, peroneal, and femoral) provide sensation and allow the muscles to work.
- The popliteal artery is the major blood supply to the knee and this is in the back part of the knee.

E. Final Comments and Closure (time = 5 minutes) (0:60)

1. Ask for comments, questions, or other reactions.

2. Clarify any confusion about the content discussed.

3. Remind patient about reading assignment for Session 2 (review session 2 handouts).

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Session 2

What to Expect Following Knee Replacement Surgery

GOALS:

- Present the in-hospital recovery
- Present the at-home process of recovery and temporal sequence of recovery at home
- Discuss self-management, smart recovery and hints and aids for recovery

MATERIALS:

1. Patient Manual

Outline:

A. Overview of Session (time = 2 minutes) (0:02)

1. Preview goals for the session

B. Review of Content from Previous Sessions (time = 8 minutes) (0:10)

1. Assess patients understanding of content from Session 1.
2. Any updates regarding your upcoming knee replacement surgery?

C. Preparing for Knee Replacement Surgery
(Handout 2-1) (time = 20 minutes) (0:30)

1. Ideally, you will need a few weeks to prepare for your upcoming knee replacement to ensure a smooth surgery and speedy recovery.

2. Steps for preparing include:
    - Understanding the procedure
    - Assemble your medical information
    - Get into shape
    - Medical preparation
    - Final preparation before going to the hospital

3. Talk to your doctor to make sure you understand what to expect before, during and after surgery. Make sure to ask about when you will be admitted, the type of anesthesia you will receive, and type of implant that will be used. It is also important to discuss how long you will stay in the hospital and rehabilitation. The more you know, the better you will be able to participate in your recovery following your surgery.

Ask questions, voice concerns, and speak up when you do not understand something.

4. Before surgery it will be important to assemble your insurance information and designate a family member to receive information. Prepare your medical documents including a list of your doctors, medical conditions, surgeries, medications, and allergies.

5. Getting in optimal shape physically can affect both the outcome of your surgery and your recovery time. Cut down or quit smoking and limit your alcohol intake. Eating a healthy diet is important in preparing for your surgery. Begin your post-surgical exercises to strengthen you upper body and legs. Becoming familiar with your exercises will make them easier to perform after surgery.

6. Plan ahead for returning to your home after surgery by asking a family member or friend to pick you up and stay with you for a few days following your surgery. Planning ahead will minimize your stress and optimize your outcome.

7. To prepare medically you will likely need to have a physical by your medical doctor, finalize any dental work and have your pre-admission testing done at the hospital.

8. To prevent infection, it is recommended that you shower daily with an antibacterial soap beginning two weeks prior to surgery.

9. Check with your doctor regarding any medications you may need to stop prior to your surgery.

10. When you pack for the hospital, the most important item to bring is a pair of comfortable shoes and loose-fitting clothes to wear.

D. Your Recovery in the Hospital

(Handout 2-2) (time = 15 minutes) (0:45)

1. On the day of your surgery you may begin in the pre-op area where a nurse will prepare you for surgery, you will likely see your surgeon and meet your anesthesiologist. Following surgery you may stay in the recovery room prior to moving to your hospital room.

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2. To prevent complications you may begin getting out of bed the day of your surgery. A physical therapist may work with you over the next few days teaching you how to walk with a walker or crutches, assisting you with exercises and teaching you how to climb stairs safely.

3. To keep your lungs clear and prevent pneumonia you may be asked to do deep breathing exercises and use a breathing device every hour while you are awake.

4. Preventing blood clots after surgery will likely be a major focus. It may be important to do ankle pumps 10 times every hour. You may have elastic stockings and sleeves that fill with air on your legs to help with blood flow. You doctor may also prescribe medication to decrease your chances of getting a blood clot.

5. The goal after surgery may be to control your pain with medications that will allow you to participate in physical therapy. Let's review the pain scale

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0	2	4	6	8	10
No pain		moderate	extreme		excruciating

It is important to take your pain medication every few hours to keep your pain controlled and improve your movement.

6. You may have IV fluids and a catheter in your bladder for 24 hours after your surgery. Your dressing may be changed daily.

7. A case manager may be meeting with you to order any equipment you need and arrange your home therapy.

E. Caring for Yourself at Home

(Handout 2-3) (time = 5 minutes) (0:50)

1. You may be required to take anticoagulant medication daily.

2. You should eat foods rich in fiber and drink plenty of water to prevent constipation.

3. You may be asked to take pain medication 30 minutes before exercise/walking.

4. You may be told to use an ice pack for 15-20 minutes after you exercise.

5. You may be told to continue using your walker or crutches, and elevated toilet seat to ensure your safety.

6. You may be told to note any changes to your incision such as redness, drainage or odor and that you call your physician if these occur.

F. Post-op Exercises

(Handout 2-4) (time = 5 minutes) (0:55)

Exercise is important to strengthen your knee. Each day you should continue your exercises and walking. Being active will likely help you become more mobile and improve your recovery.

1. Perform the exercises that the physical therapist taught you. You will likely gradually increase the number of repetitions you perform.

2. You may benefit by walking each day challenging yourself to go further.

3. You will likely work on straightening your knee.

4. Shower and dress yourself using adaptive equipment if needed.

5. You will likely gradually resume light household tasks as you are able.

G. Home Preparation for Session 3 (time = 5 minutes) (0:60)

1. Ask for comments, questions, or other reactions.

2. Clarify any confusion about the contents discussed.

3. Remind patient about reading assignment for Session 3 (review handouts 3-1 through 3-3).

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Session 3

Surgical Management of Knee OA

GOALS:

- Review the different surgical approaches for knee OA
- Describe the different types of knee replacement surgery and their indications.

MATERIALS:

Patient handouts

OUTLINE:

A. Overview of Session (time = 2 minutes) (0:02)

1. Preview goals for the session

B. Review of Content from Sessions 1 and 2 (time =13 minutes) (0:15)

1. Assess patient's understanding of content from first 2 sessions.

2. Determine their level of understanding of the upcoming surgery.

C. Different Types of Knee Surgeries Conducted on Patients with Knee Arthritis (Handout 3-1) (time = 20 minutes) (0:35)

1. The first course of treatment for OA of the knee is always nonsurgical conservative treatment. If conservative treatment does not relieve your pain and improve your function, your physician may recommend surgery. Your choice of treatment should be a joint decision between you and your doctor.

2. Surgical treatment for OA of the knee is done to reduce pain, increase function, and improve your overall symptoms.

3. Surgical treatment options include:
   Arthroscopy
   Synovectomy
   Resection
   Meniscectomy
   Osteotomy
   Arthroplasty
   Ligament reconstruction

4. Let's spend a few minutes discussing each surgical procedure.

5. Arthroscopy is a surgical procedure that uses small incisions and a tiny telescope called an arthroscope. This allows your doctor to see directly into your knee joint and see what kind of arthritis you have and how advanced your arthritis is. It can also be done to perform biopsies, remove loose cartilage, repair torn cartilage or smooth joint surface which has become rough. A major advantage is quick recovery.

6. A synovectomy is a preventative procedure that can be done to remove the inflamed synovium to reduce pain and swelling. Once joint damage has occurred and cartilage is lost, this procedure is contraindicated.

7. Resection is done to remove all or part of a bone.

8. Meniscal surgery repairs or removes a meniscal tear through the arthroscope. A torn meniscus causes pain, swelling and sometimes catching and locking and most do not heal on their own. Surgery restores motion and strength.

9. Ligament reconstruction to the ACL is done using a piece of tendon or ligament to replace the torn ACL. It is done with the arthroscope as an outpatient procedure followed by 4-6 months of physical therapy.

10. Osteotomy is done if damage to your knee cartilage is primarily in one section. The surgeon reshapes the tibia or femur to improve knee alignment to restore knee function and diminish pain. Unfortunately results make deteriorate over time and you may eventually need a knee replacement.

11. Arthroplasty is a joint replacement procedure. If your knee pain is severe and significantly limits your movement, you physician may recommend replacing you knee with an artificial joint. The goal of knee replacement is to return you to activities with less pain and greater freedom of movement.

D. Presentation of Different Types of Knee Replacement Surgery
(Handout 3-2 and 3-3) (time = 20 minutes) (0:55)

1. A painful knee can affect your ability to lead an active, full life. Over the last 25 years, advancements in artificial knee replacement have improved outcomes.

2. Total knee replacement
    - The knee prosthesis is made up of three parts: tibial component, femoral component and patellar component.
    - The tibial component replaces the top of the tibia with metal that attaches directly to the bone and a plastic spacer that provides a slick surface on top.
    - The femoral component replaces the bottom of the femur and the groove where the patella fits.
    - The patellar component replaces the surface of the patella where it glides in the groove of the femur. This part is generally made of plastic, but may be a combination of metal and plastic.
    - There are two types of artificial knee replacements-cemented and uncemented. A cemented prosthesis is help in place by a type of cement that attaches the metal to the bone. An uncemented prosthesis has fine mesh holes on the surface that allows you bone to grow into the mesh and attach the prosthesis to the bone.
3. Your knee replacement operation
    - Your surgeon will likely make an incision on the front of your knee to allow access to your knee joint.
    - Your surgeon typically cuts several pieces of bone from the end of your femur, surface of tibia and patella.
    - The metal component will be placed on the end of your femur.
    - The metal tray with the plastic spacer will be attached to the top of your tibia.
    - The patella components, if used, will be cemented in place behind your patella.
    - Lastly, the soft tissues will be sewn back together and then the skin will be repaired with stitches or staples.

4. Unicondylar knee replacement is also known as partial knee replacement.
    - This type of knee replacement is sometimes referred to as minimally invasive and is designed to replace only the portions of your knee joint that are most damaged by arthritis.

    - Unicondylar knee replacement alleviates pain and improves joint motion and function because both of the cruciate ligaments are preserved as well as other healthy parts of your knee.

5. Patellofemoral knee replacement restores knee function and relieves pain of kneecap arthritis and wear.

6. Each year, over 580,000 Americans undergo total knee replacement surgery. The results are generally excellent. A successful knee replacement and rehabilitation program can relieve your knee pain; help you move better at work, play and rest.

E. Home Preparation for Session 4 (time = 5 minutes) (0:60)

1. Ask for comments, questions, or other reactions.

2. Clarify any confusion about the content discussed.

3. Remind patient about reading assignment for Session 4 (review handouts for Section 4 in your manual).

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Session 4

Diagnosis and Causes of Arthritic Knee Pain: Joint Changes

GOALS:

- Teach how the diagnosis of knee arthritis is made
- Describe the joint changes that occur
- Describe how daily activities and other risk factors may influence joint damage

MATERIALS:

Patient handout

OUTLINE:

A. Overview of Session (time = 2 minutes) (0:02)

Preview goals for the session.

B. Review of Medical Status and Home Practice (time = 8 minutes) (0:10)

1. Any updates regarding the knee replacement procedure?

2. Any questions for first session?
    - Were you able to find time to read the assignment and review the patient manual for session 2?

C. Diagnosing Knee Arthritis (time = 15 minutes) (0:25)

(Handout 4-1 and 4-2)

1. Did you know that there are more than 100 types of arthritis?

    - Common arthritis symptoms of pain, inflammation and stiffness are usually caused by osteoarthritis.

    - Other types include rheumatoid arthritis and post-traumatic arthritis.

    - Rheumatoid arthritis is an inflammatory type of arthritis that can affect both of your knees and other joints.

    - Post-traumatic arthritis can develop after an injury, fracture or meniscus tears.

- No matter what type of arthritis you have, you will need a diagnosis before your doctor can recommend a treatment program for you.

2. During this session, we are going to focus on osteoarthritis. OA is the "wear and tear" type and is common as we age. Before we discuss the symptoms, let's start with an arthritis quiz.

Do you know the basics about arthritis?

- The most common type of arthritis is rheumatoid arthritis.
  True or False
  The correct answer is: ***False***

  The most common type is OA. It occurs from wear and tear on the joint cartilage as we age.

- A diet high in fiber has been shown to be effective in the treatment of OA
  True or False
  *The correct answer is****: False***

  While no specific diet is effective in treating OA, obesity is linked to OA of weight-bearing joints.

- People who have arthritis benefit from regular exercise
  True or False
  The correct answer is: ***True***

  Exercise can help rebuild your strength and keep your joints moving.

- Many doctors recommend that people who have arthritis take sedatives (sleeping pills) to deal with pain.
  True or False
  The correct answer is: ***False***

  Sedatives are not generally a part of arthritis pain management.

3. What causes OA? (Handout 4-2)

- It is mostly related to aging. With aging, the water content of the cartilage increases and the protein makeup degenerates. Repetitive use over years irritates and inflames the cartilage, causing knee pain and swelling. Eventually the cartilage begins to degenerate by flaking.

- In advanced cases, there is a total loss of the cartilage cushion between the bones of your knee joint. Loss of cartilage cushion causes friction between your femur and tibia, leading to pain and limitation of your knee.

- Inflammation can also stimulate new bone outgrowths known as spurs to form around your knee joint.

- Occasionally OA can be found in multiple family members.

- Secondary OA is caused by another disease or conditions such as obesity, repeated trauma or surgery to the joint structures.

D. Joint Changes Associated with Arthritis (time = 15 minutes) (0:40)

1. What are the symptoms of OA?

- The most common symptom is pain in your affected knee. Pain is usually worse later in the day.
- There can be swelling, warmth and creaking of your knee also.
- Pain and stiffness can occur after long periods of inactivity.
- When your arthritis is severe, pain can be felt at rest or with limited motion.
- Symptoms vary greatly from one person to another. Some patients can be debilitated by their symptoms while others have few symptoms despite degeneration apparent on x-rays.
- Symptoms can be intermittent. Some patients have years of pain-free intervals between symptoms.
- Progressive cartilage degeneration of the knee can lead to deformity and outward curvature of the knee known as being "bow-legged."
- You can also develop a limp. Limping can worsen as more knee cartilage degenerates.

- Severe OA of the knee is one of the most common reasons for total knee replacement.

2. How is OA diagnosed?
    - There is not a blood test to diagnose OA. Blood tests can serve to rule out other diseases that can cause secondary OA.
    - X-rays of your knee can show OA. Common x-ray findings include loss of cartilage, narrowing of the joint space, and bone spur formation.
    - Arthrocentesis can be done in the doctor's office. This is where a needle is inserted in your knee to remove joint fluid for analysis. Analysis of the fluid can show gout, infection, or other causes of arthritis.
    - To diagnose OA, your doctor will also discuss with you the location, duration and character of your symptoms as well as examining your knee.

E. Discussion of How Risk Factors May Lead to Further Joint Damage

(time = 15 minutes) (0:55)

1. Obesity, next to aging, is the most powerful risk factor for OA of the knees.

2. Steps you can take to help prevent the progression of OA include: weight control, injury prevention and exercise.

3. Maintaining a healthy weight is one of the most important things you can do to prevent OA of your knee.

    - Being overweight puts extra strain on your knee and may also alter the normal structure of the joint.
    - It is estimated that every 1 pound of body weight equals 4 pounds of stress at the knee joint. So, losing 5 pounds would take 20 pounds of stress off your knees.
    - Maintain a healthy weight to prevent or reduce your joint damage.

4. Protect your knee from serious injury or repeated minor injury to decrease your risk of damaging the cartilage. Minor injuries include frequent or constant kneeling or squatting.

5. Exercise can reduce knee pain and stiffness.
    - Light to moderate intensity physical activity can prevent a decline in your health and function.
    - In order to make it easier for you to exercise and stay active, you may use heat or cold therapy or pain relievers to help relieve pain.
    - You should choose partial or non-weight-bearing exercise such as biking, swimming, water exercise or weight lifting.

6. Research shows that modest weight loss combined with exercise is more effective in lessening pain and restoring function that either weight loss or exercise alone.

F. Home Preparation for Session 5 (time = 5 minutes) (0:60)

1. Ask for comments, questions, or other reactions.

2. Clarify any confusion about the content discussed.

3. Remind patient about reading assignment for Session 5 (review handouts for Section 5 in your manual).

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Session 5

Living with Knee OA: Exercise Approaches

GOALS:

- Explain approaches for use of exercise for fitness and healthy living
- Explain approaches for flexibility exercises
- Explain approaches for strengthening exercises
- Explain approaches to using exercises for weight control and aerobic fitness

A. Overview of Session (time = 2 minutes) (0:02)

1. Preview goals for the session

B. Review of Content from Previous Sessions (time = 18 minutes) (0:20)

1. Review with patient the content from session 4.

2. Ask about the patient's progression with the knee surgery process. If they have received the surgery, ask how they are doing or if they are still waiting to receive the surgery, ask when they are expecting to receive it.

C. Exercising with Osteoarthritis
(Handout 5-1) (time = 30 minutes) (0:50)

1. The best way to keep your knees healthy and prevent further injury is to have strong, flexible muscles.

2. Strengthening the muscles that support your knee will reduce the stress on your knee. The less strain you have on your knee, the better your chance for relieving pain and preventing further injury.

3. Stretching the muscles that you strengthen will be important in preventing injury and will build muscle. Gentle stretching after you strengthen will reduce your muscle soreness and keep your muscles flexible.

4. How should you get started on exercising?
    - Discuss exercise plans with your doctor.
    - Start strengthening exercises slowly and gradually increase the number of repetitions or add weight to an exercise.
    - Do not ignore pain. If an exercise hurts, stop.

- Do not overdo it. You may feel some soreness or stiffness but if it is difficult to move, you have overdone your exercise and you should rest your sore muscles.
- You may want to use ice packs after exercise.

5. Let me describe some strengthening exercises that you can do:
    - Straight-leg lift
    - Single-leg lift
    - Hamstring curls
    - Knee stabilization series
    - Wall squat
    - Step up

6. Now let me describe some stretching exercises:
    - Quadriceps stretch
    - Hamstring stretch

D. Home Preparation for Session 6 (time = 10 minutes) (0:60)

1. Ask for comments, questions, or other reactions.

2. Clarify any confusion about the content discussed.

3. Remind patient about reading assignment for Session 6 (review handouts 6-1 through 6-5).

Session 6:

Medical Management: Pain Versus Anti-Inflammation Medicine and Working with Your Doctor

GOALS:

- Teach basic principles of medical management
- Describe different medication options for patients with OA
- Teach basic principles of information gathering from a clinician

MATERIALS:

1. Patient manual

Outline:

A. Overview of Session (time = 2 minutes) (0:02)

1. Preview goals for the session.

B. Review of Content from Previous Sessions (time = 8 minutes) (0:10)

1. Assess patient's understanding of content from session 5
2. Any updates regarding your knee replacement surgery recovery?

C. Medical Management (time = 10 minutes) (0:20)
(Handout 6-1)

1. In the early stages of knee arthritis your doctor may recommend nonsurgical treatments and this may be relevant for your other knee and any other joints in which you may have early arthritic changes. These treatments include: lifestyle modification, exercise and supportive devices.

2. Simple lifestyle modifications can reduce your pain. Start by looking at your activities. Switching from running or jumping exercise to swimming or cycling can be helpful. Next you need to focus on good nutrition. Losing weight can reduce the stress to your knee which can decrease your pain and increase your function, especially with walking.

3. Physical therapy and exercises can help increase your motion and flexibility and strengthen your muscles.

4. Using a supportive device can improve your symptoms, decrease your pain and allow you to walk longer distances. Using a cane can be helpful. Make sure to place your cane in the hand on the opposite side of your knee pain.

5. Knee braces can assist with stability and function. Your doctor will typically recommend the type of brace that is best for your knee.

6. Other nonsurgical measures that can be used including heat or ice packs, water exercises and liniments or elastic bandages.

D. Medication Treatment (time = 20 minutes) (0:40)
(Handout 6-2)

1. There are dozens of medications available over-the-counter and by prescription that can be used to treat your knee arthritis. Your doctor can help to choose what drugs are best for you.

2. Topical pain relievers
   These over-the-counter drugs can provide quick pain relief with mild arthritis.

3. Nonsteroidal anti-inflammatory drugs (NSAIDs)
   These medications can be used to relieve joint swelling, stiffness and pain. These drugs include brands such as Motrin, Advil and Aleve.

4. COX-2 Inhibitors
   They are a special type of NSAID that is prescribed for moderate to severe knee pain. Celebrex is the most commonly used medication.

5. Narcotic pain relievers
   Narcotic pain medications relieve pain but do not decrease joint inflammation.
   These drugs must be taken carefully as you can develop dependency and they can cause constipation, urinary problems and sedation.

6. Corticosteroids
   Steroids are powerful anti-inflammatory drugs that can treat many forms of arthritis.
   Steroids can have many side effects especially when taken as a pill and used long term.

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Steroids can be injected into your knee if you have moderate to severe pain and significant swelling.

7. Hyaluronic acid Injections
   There are several types of injections, known as viscosupplementation, that are used to treat OA of the knee. They are injected directly into your knee joint and can reduce you pain, increase your mobility and activity.

8. Glucosamine and Chondroitin Sulfate
   These are oral nutritional supplements that may relieve OA especially in the early stages. These medications must be taken for at least two months before the full effect is seen.

9. Disease-Modifying Antirheumatic Drugs (DMARDS)
   These drugs are used for the inflammatory types of arthritis such as rheumatoid arthritis, psoriatic arthritis and ankylosing spondylitis.

10. On the Horizon
    Orthopaedic surgeons continue to search for new surgery procedures such as cartilage transplants and also medications to slow the progression of osteoarthritis.

E. Getting Information about Arthritis from Your Doctor
(Handouts 6-3, 6-4 and 6-5) (time = 5 minutes) (0:45)

1. When you have arthritis, it is very important there is certain information that you need to give your doctor and information the doctor needs from you.

2. Make sure you share with your physician all the medications that you take regularly. For any new medication prescribed make sure you understand what it will do, how long it will take to work, how often you need to take it. What are the side effects and are there any medications you should avoid?

3. Discuss with your physician how you should follow up if your symptoms change. Does your doctor use email or phone or do you need to make an appointment to be evaluated?

4. Discuss with your physician an exercise program and weight and nutrition that need to be part of your treatment for OA.

5. To learn more about your OA, inquire about books and web sites that can provide you with the most up-to-date information.

F. Questions to Ask Your Doctor (time = 10 minutes) (0:55)
(Handout 6-4)

1. Let's take a few moments, after reviewing 10 common questions to ask your doctor, to make a list of 3 questions that you should ask your doctor regarding your arthritis, medication, treatment or knee replacement surgery.

2. Prompt the participant to share 1 or 2 of their questions. Discuss responses. (Handout 6-5).

G. Home Preparation for Session 7 (time = 5 minutes) (0:60)

1. Ask for comments, questions, or other reactions.

2. Clarify any confusion about the content discussed.

3. Review handout 7-1.

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Session 7

Potential Effects of OA on Other Joints, Sleep Issues, Nutrition

GOALS:

- Discuss the impact of a healthy lifestyle.
- Review the effect of arthritis on sleep.

MATERIALS:

1. Patient manual

Outline:

A. Overview of Session (time = 2 minutes) (0:02)

Preview goals for the session

B. Review of Content from Previous Sessions (time = 18 minutes) (0:20)

1. Assess patients understanding of content from session 6.
2. Any updates regarding your knee replacement surgery recovery?
3. Have you been exercising? Has it affected your recovery?
4. What lifestyle modifications have you made?

C. Effects of OA (time = 15 minutes) (0:35)
(Handout 7-1)

1. A healthy lifestyle and good habits may positively impact the course of your arthritis. Regular exercise, maintaining ideal body weight, stress reduction, being a non-smoker and getting good sleep are all parts of better living with arthritis.
2. Ask participants why they feel they should exercise?
3. If you have arthritis you can control your weight by eating a balanced diet and staying active. Obesity increases your risk for developing OA. If you have substantial OA in your knee, weight reduction can significantly improve your ability to rehabilitate after your surgery as well as decrease

your risk of surgical complications. For more information regarding nutrition you may want to meet with a nutritionist.

4. Vitamin C is important in developing normal cartilage. Vitamin C is commonly found in citrus fruits. Supplemental vitamin tablets are also available.

5. Vitamin D deficiency has been shown to increase your risk of joint space narrowing and progression of OA. Vitamin D supplementation can also help to prevent osteoporosis.

6. Low bone mineral density commonly found in people with osteoporosis can increase your risk for OA. Exercise and adequate calcium intake can help maintain your bone density.

D. Sleep Issues (time =15 minutes) (0:50)

1. Aches and pain of arthritis can disrupt your sleep. Pain keeps you awake and sleeplessness makes pain worse.

2. People with arthritis sometimes don't sleep well and not getting enough sleep can have an effect on your whole life.

3. Let's discuss some tips for getting a good night's sleep. Use each of the items below as prompts for discussion with the patient.

- Keep regular sleep habits
- Avoid caffeine and alcohol in the late afternoon and evening
- Avoid daytime naps
- Reserve your bed for sleeping
- Time your exercise
- Keep your bedroom dark, quiet and cool
- Avoid liquids and spicy meals before bed
- Wind down before bed

E. Home Preparation for Session 8 (time = 10 minutes) (0:60)

1. Ask for comments, questions, or other reactions.

2. Clarify any confusion about the content discussed.

3. Remind patient about reading assignment for Session 7 Review handout 8-1.

Session 8

Making Future Treatment Decisions, Wrap-up

GOALS:

- Teach strategies for future treatment decisions.
- Review of key take home messages from each session.
- Wrap things up with completion of training.

Outline:

A. Overview of Session (time = 5 minutes) (0:05)
(Handout 8-1)

B. Review of Key Take-Home Messages (time = 40 minutes) (0:45)
Begin with a discussion of each of the main topics covered in this educational program including, each of the following key elements:

Session #1
Bony Anatomy
Ligamentous anatomy

Session #2
Preparing for knee replacement surgery
What to expect in the hospital
Home Care
Post-operative exercise

Session #3
Knee surgeries for OA
Types of knee replacement surgeries

Session #4
Diagnostic criteria for arthritis
Causes of OA
Joint changes associated with OA
Risk factors for OA

Session #5
Exercises for OA
Role of exercise in OA rehabilitation

Session #6
Medical Management of OA

Medications for OA
Obtaining information from your doctor

Session #7
Effects of OA on lifestyle
Effects of OA on other joints
Effects of OA on sleep and nutrition

1. Let's test your knowledge from our sessions by taking an Osteoarthritis Quiz

   - **The goal of treatment is to cure osteoarthritis.**
     a. True
     b. False

     The correct answer is: False

     The bad news is that OA cannot be cured but treatment can ease your pain, improve knee function and possibly limit further damage.

   - **The most effective way to improve function when you're first diagnosed with OA of the knee is:**
     a. Bed rest
     b. Lose weight and do moderate exercise
     c. Narcotic pain relievers

     The correct answer is: Lose weight and do moderate exercise

     You doctor may recommend medications but it is a good idea to start with non-narcotics and anti-inflammatory medications. You should do moderate exercise to prevent weakness and stillness. Exercise also helps you to lose weight. Extra weight puts pressure on your joints and can lead to a faster progression of your OA.

   - **Which of these exercises can be harmful to your knee if you have OA?**
     a. Tennis
     b. Jogging
     c. Basketball
     d. All of the above

     The correct answer is: All of the above

You should avoid high impact sports and exercise that put pounding pressure on your knee. Instead, try walking, biking and swimming. If your knee joint pain lasts for more than two hours after your exercise, you are exercising too much.

- **Which of these options should not be considered as an initial treatment for OA of the knee?**
  a. Joint replacement
  b. Moderate exercise and weight loss
  c. NSAIDs
  d. Steroid injections

  The correct answer is: joint replacement

  Knee replacement is major surgery and should be performed after you have failed all conservative treatments. These include: weight loss, moderate exercise, pain relievers, cortisone injections, and using a cane, walker or brace.

- **How can you be involved in your care for OA of your knee?**
  a. Do what your doctor tells you to do without asking any questions.
  b. Call your family/friends and do what they recommend.
  c. Partner with your physician to learn about your condition and the treatment options that are available to you.

  The correct answer is: Partner with your physician to learn about your condition and the treatment options that are available to you.

  You must actively participate in your care. If is important that you learn how to keep your weight down and use medications, how to report your symptoms, how to keep your knees healthy when exercising and all aspects of your recovery following knee replacement surgery.

C. Final Comments (15 minutes) (0.60)

1. Summary and key talking points from each session (use these as prompts to discuss key issues with patients).
   - Knowledge of anatomy and function is important to understand arthritis. Parts of the knee include bones, joints, ligaments, tendons, muscles, nerves and blood vessels. The knee joint is made up of a thigh bone (femur), shin bone

(tibia) and knee cap (patella). Articular cartilage covers the ends of the bones.

- Knowledge of OA as a disease is helpful for understanding new material that you hear about or read. OA is the most common form of arthritis. OA is the "wear and tear" or degenerative arthritis. Causes of OA are unclear but factors include: aging, joint injury or stress, heredity, muscle weakness and obesity.

- Various surgical procedures can be performed on your knee based on your condition. Knee replacement is done to replace an arthritic joint with an artificial joint to allow you to return to activities with less pain and greater movement.

- You will probably need a few weeks to prepare for knee replacement to ensure a smooth surgery and speedy recovery. Your active participation in your recovery is necessary to ensure a successful outcome from knee replacement surgery. Exercise is very important to help you strengthen your knee and other muscles after surgery.

- The best way to live with OA to keep your knees healthy and prevent further injury is to have strong flexible muscles. Your doctor or physical therapist can recommend exercises that are rights for you.

- Medications can help relieve the pain of OA of your knee. Your orthopaedic surgeon will commonly recommend an over-the-counter or prescription drug that is best for your condition.

- When you have arthritis it is important to understand from your doctor what it is and how it is treated.

2. In Closing: Thank you for your participation. We hope that you found this information helpful. Do you have any feedback for us?

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Arthritis Education Manual for Patients

Handout 1-1

BASIC INFORMATION

There are 8 Educational Interventional Sessions, each of which will last for 1 hour. Every session is different so it is important that you participate in each session. In the course of our sessions, we invite you to share and discuss some personal matters. We assure you that our sessions will be confidential.

We would like to encourage you to ask questions during your sessions. If we don't have the answers to all of your questions, we will try to get an answer and discuss it in a later session.

If you will be late or miss a session, please call me Your nurse educator is _____ and you can call me at: _____.

DATE	TIME	SESSION
_____	_____	Session 1
_____	_____	Session 2
_____	_____	Session 3
_____	_____	Session 4
_____	_____	Session 5
_____	_____	Session 6
_____	_____	Session 7
_____	_____	Session 8

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Handout 1-2

Educational Intervention Sessions Overview

In these sessions, you will be learning basic anatomy of your knee and how you can manage your osteoarthritis. You will also learn how to prepare for knee replacement as well as recovering from surgery.

Session #	Topic
1	Introduction, Rationale, Education of Knee Anatomy
2	What to Expect Following Knee Replacement Surgery
3	Surgical Management of Knee OA
4	Diagnosis and Causes of Arthritic Knee Pain: Joint Changes
5	Living with Knee OA: Exercise Approaches
6	Medical Management: Pain Versus Anti-inflammatory Medication and Working with Your Doctor
7	Potential Effects of Osteoarthritis on Other Joints, Sleep Issues, Nutrition
8	Making Future Treatment Decisions, Wrap-up

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Handout 1-3

The Knee Joint

Bones are the supporting framework for the body that allows us to bear weight. Joints are where the ends of two bones are in proximity and move together.

Important parts of the knee include:

- Bones and joints
- Ligaments and tendons
- Muscles
- Nerves
- Blood vessels

Handout 1-4

Anatomy of the Knee

The Knee Joint:

- Is made up of the thigh bone (femur) and the shin bone (tibia). The knee cap (patella) is the bone in the front of the knee.
- Is a synovial joint. Synovial joints are enclosed in a capsule and contain a fluid called synovial fluid that lubricates the joint.
- The end of the femur joins the top of the tibia to create the knee joint.
- Two round knobs (femoral condyles) on the end of the femur rest on the top surface of the tibia to create the tibial plateau. The outside half is the lateral tibial plateau and the inside half the medial tibial plateau.
- The patella glides through the patellofemoral groove which is formed by the two femoral condyles.
- The smaller bone on the lower leg, the fibula is a small bone that connects to the side of the tibia.

Handout 1-4b

Parts of the Knee

Articular Cartilage-covers ends of bones

Ligaments-connect ends of bones

Tendons-attach muscle to bones

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Handout 1-5

The Ligaments and Cartilage of the Knee

Articular Cartilage:

- Is the material that covers the ends of the bones of any joint.
- Covers the ends of the femur, top of the tibia and the back of the patella.
- Is a slippery substance that allows the surfaces to slide against one another without damaging either surface.
- Functions include absorbing shock and providing an extremely smooth surface to facilitate motion.

Ligaments:

- Ligaments are tough bands of tissue that connect ends of bones together.
- The medial collateral ligament (MCL) and lateral collateral ligament (LCL) are two important ligaments found on either side of the knee joint.
- Inside the knee joint two ligaments stretch between the femur and tibia. These ligaments are the anterior cruciate ligament (ACL) in the front and the posterior cruciate ligament (PCL) in the back.
- The MCL and LCL prevent the knee from moving too far side to side.
- The ACL and LCL control the front to back motion of the knee.
- The ACL keeps the tibia from sliding too far forward and the PCL keeps it from sliding too far backward in relation to the femur.

Cartilage:

- Two special types of structures that sit between the femur and tibia are called menisci. These structures are often referred to as the cartilage of the knee
- Menisci differ from articular cartilage.
- The two menisci of the knee work like a gasket to spread the force from the weight of the body over a large area and they help the ligaments with stability of the knee.
- The menisci protect the articular cartilage on the ends of the bones from excessive forces which can damage the surface, leading to degeneration over time.

All the ligaments of the knee are the most important structures that stabilize the joint. Remember ligaments connect bones to bones. The knee joint would be too loose without strong tight ligaments connecting the femur to the tibia.

Tendons:

- Attach muscles to bones.
- The patella tendon is the largest tendon around the knee. It connects the patella to the tibia.
- It covers the patella and continues up the thigh. There it is called the quadriceps tendon as it attaches the quadriceps muscles in the front of the thigh.
- The hamstring muscles on the back of the leg have tendons that attach in various places around the knee joint.

Muscles of the knee:

- The extensor mechanism allows us to walk and is the motor that drives the knee joint. Sitting in front of the knee joint, it is made up of the patella, the patella tendon, the quadriceps tendon and the quadriceps muscles.
- Four quadriceps muscles in the front of the thigh are the muscles that attach to the quadriceps tendon.
- When the quadriceps muscles contract, they straighten the knee.
- When the hamstring muscles in the back of the knee contract, the knee bends.

Nerves of the knee:

- The most important nerve around the knee is the popliteal nerve in the back of the knee. This large nerve supplies sensation and muscle control.
- The popliteal nerve travels to the lower leg and foot, splitting just above the knee to form the tibial nerve and peroneal nerve.
- The tibial nerve continues down the back of your leg.
- The peroneal nerve travels around the outside of the knee and down the front of the leg to the foot.

Blood vessels of the knee:

- The popliteal artery and popliteal vein are the largest blood supply to the leg and foot.
- The popliteal artery carries blood to the leg and foot while the popliteal vein carries blood back to the heart.

The knee supports your body's full weight when standing and much more than that during walking and running. Knee problems are fairly common among people of all ages. Understanding the basic parts of your knee can help you when knee problems occur.

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Handout 2-1

What to Expect Following Knee Replacement Surgery

Joint replacement surgery can relieve your pain and enable you to live a fuller, more active life. You will need a few weeks to prepare to ensure a smooth surgery and speedy recovery.

Steps for preparing

1. Understand the procedure.
2. Assemble your medical information.
3. Get in shape.
4. Plan ahead for your homecoming.
5. Medical preparations.
6. Final preparations before going to the hospital

Step 1*: Understand the procedure – common issues*

- Discuss with your doctor what to expect.
- Ask about admission to the hospital, type of anesthesia, type of implant, length of stay, and rehabilitation.
- The more you know, the better you will be able to deal with the challenges that joint replacement surgery will bring to your life.
- Ask questions, voice concerns and speak up if you do not understand.

Step 2: *Assemble your medical information – common issues*

- Designate a family member or friend to be your primary contact for your doctor and to communicate information while you are in the hospital.
- Prepare a list of doctors you currently see and the reasons you see them.
- Make a list of medical conditions, previous operations, allergies, adverse reactions to anesthesia and dietary restrictions.
- Make a list of medications you take. Include the name, dosage, frequency from the prescription bottle. Be sure to include vitamins, mineral supplements and over-the-counter medications.
- Be sure to bring your insurance cards to the hospital with you.
- Consider bringing a copy of any legal documents such as a living will or durable power of attorney to the hospital as well.

Step 3: *Get in shape – common issues*

- Cut down or quit smoking. Smoking can delay healing and slow your recovery.
- Do not have any alcohol for 24-48 hours prior to your surgery.

- Eat a healthy diet rich in protein and iron and low in fat.
- Begin your pre-surgical exercises.
- Exercises to strengthen your upper body will help you walk with a walk or crutches following surgery.
- Isometric exercises will help with strengthening your leg muscles.
- Familiarize yourself with the postoperative exercises and practice them to make them easier to perform after your surgery.

Step 4: ***Plan ahead for your homecoming***

- Plan for someone to take you home from the hospital and to stay with you for several days or weeks after surgery.
- If you do the cooking—make meals ahead of time and freeze them or stock up on ready-made foods that you enjoy.
- Place items you will use regularly at arm level so you will not have to reach up or bend down to get them.
- Make sure you will be able to maneuver through your home with a walker or crutches.
- Remove any throw rugs or area rugs that can make you slip or fall. Fasten electrical cords around the perimeter of the room.
- Consider items you may need in your bathroom to ensure your safety such as a raised toilet, grab bar, and a shower chair.
- Set up your "recovery center" where you will spend a great deal of your time. Make sure you have a chair with arms to sit in. Have within easy reach your phone, TV remote, tissues, wastebasket, water, reading materials and medications.
- Consider applying for a temporary handicapped parking permit. You may obtain an application from your doctor's office.

Step 5: ***Medical preparations – commonly discussed issues***

√ Have a physical examination by your medical doctor to assess your health prior to your surgery.

√ Discuss blood donation with your surgeon and make your appointment to donate if needed.

√ Have your pre-admission testing done at the hospital. This will typically include an interview by a nurse to discuss your medical and surgical history as well as your medications. You may be asked to stop taking anti-inflammatory medications and Aspirin prior to your surgery. You will likely also have blood tests, EKG, urine sample and chest x-ray done at this time.

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√ Schedule any dental work in advance of your surgery. Do not have any dental work done in the first few weeks following your surgery.

√ Remember to notify your doctor if you get an illness, fever, cold or rash prior to your surgery.

Step 6: ***Final preparations before going to the hospital***

√ Pack your bag:

* Include comfortable rubber shoes that slip on or tie.
* A knee-length robe and gowns or short pajamas.
* A loose-fitting sweatsuit or jogging suit.
* Personal care items you may need. Leave cash, credit cards and jewelry at home.

√ Do not eat or drink anything after midnight the night before your surgery.

√ Do not shave the area of your surgery.

√ Do not wear makeup, lipstick, or nail polish to the hospital.

√ Take a shower or bath the night before surgery to reduce the risk of infection.

Handout 2-2

Your Recovery in the Hospital

Your active participation in your recovery is necessary to ensure a successful outcome. The following are some common situations that may or may not apply to you.

Day of Surgery

- You will probably be taken to the pre-op area where the nurses will get you ready for your surgery.
- An IV may be started and you will discuss your anesthesia with an anesthesiologist.
- You may be taken to the operating room for surgery.
- After surgery, you may be taken to the recovery room for several hours.
- Nurses will take care of you and when you are stable, you will be transported to your hospital room.

Activity

- Activity helps to prevent possible complications.
- You may begin getting out of bed the day of your surgery with the help of a nurse or physical therapist.
- Therapists will teach you how to walk safely with a walker or crutches, movements you need to avoid, and exercises to strengthen your muscles.
- Each day you may be asked to increase your activity by walking and performing your exercises.
- You may be instructed on your rehabilitation program to continue after you go home.

Breathing

- You may have an oxygen tube in your nose for a day or two.
- It is important to do deep breathing and coughing exercises each day.
- You may be asked to use a breathing device to help fully expand your lungs and get oxygen to your tissues.

Circulation

- You may be asked to perform your leg exercises to help your blood circulate. You may be resuming the exercises you did at home before your surgery and your therapist will teach you new ones as well.
- You may have elastic stockings applied to both of your legs and/or sleeves wrapped around your legs or feet. These sleeves fill with air and then relax to help with blood flow in your legs.
- You may be given medication daily to decrease your chance of getting a blood clot.
- You may be asked to keep the foot of your bed flat and do not place a pillow directly under your affected knee.

Discomfort

- You will likely have some pain following surgery.
- The goal is to control your pain with medications to allow you to participate in your physical therapy.
- You may receive pain medication through your IV, a spinal, nerve block or pain pills.
- An ice pack may help to lessen your pain and swelling
- Your pain will likely lessen over time.

Food/Fluids

- You may have IV fluids until you are eating and drinking well.
- You may start with a liquid diet and progress to solids.

Going to the Bathroom

- You may have a tube in your bladder to drain urine for a day or two. After that, you will be going to the bathroom with help.
- You may experience constipation following surgery due to anesthesia and pain medication. Drink plenty of fluids; eat whole grains, fruits and vegetables. A stool softener can be helpful.

Wound Care

- You may have a bulky dressing on your knee and possibly a drainage tube.
- Your incision may have staples, sutures or steri-strips.

Day After Surgery to Discharge

- Your surgeon will likely see you daily to check your incision and progress with PT.
- Your knee dressing may be changed each day.
- Continue to perform your breathing exercises.
- You may work with the therapists to practice exercises, walk, and learn how to climb the steps. You should repeat the exercises several times throughout the day to help gain strength.
- Generally pain medication is taken every few hours.
- You may be discussing your discharge needs with the case manager who will arrange your home therapy.
- Once you meet your physical therapy goals and you are medically ready, you may be discharged to your home.

Handout 2-3

Suggested Ideas for Caring for Yourself at Home

Anticoagulant Medication

- You may have been given a prescription for an anticoagulant medication to prevent clots from forming. Take this medication as prescribed by your doctor.
- You may also need lab work done while you are taking your medication to ensure it is working properly.
- Contact your doctor if you notice nosebleeds, blood in your urine or if you bruise easily.

Body Changes

- You may have a decrease in your appetite. Make sure you drink plenty of fluids.
- Constipation may result from the pain medication. Eat foods rich in fiber and take a stool softener if needed.

Discomfort

- Take pain medication as prescribed by your surgeon.
- Taking medication, as prescribed, about 30 minutes before your therapy/exercise session.
- As your discomfort lessens, you may start to decrease how many pain pills you are taking and how often you are taking them.
- An ice pack may be applied for 20 minutes several times a day to help with discomfort.
- Change positions every 45 minutes during the day to avoid stiffness.
- You will likely be told not to place a pillow directly under your knee. You may use it under your entire leg for elevation.

Equipment: Common Issues

- Use your walker, crutches or cane to help you with walking.
- Use your elevated toilet seat and shower bench if needed to ensure bathroom safety.
- Use your adaptive equipment to assist you with bathing and dressing.

Incision Care/Dressing Changes

- You may need to change your dressing daily. Be sure to wash your hands prior to changing your dressing.
- Call your surgeon if you notice any changes to your incision such as: redness, warmth, odor, increased drainage or opening of the incision.
- Your sutures or staples if you have them, will typically be removed 10-14 days after your surgery by home healthcare.

Handout 2-4

Post-op Exercises

Exercise is very important to help you strengthen your knee and other muscles. Each day you should continue your walking program, challenging yourself to go farther every day. Being active will likely help you to become more mobile. The following is a typical pattern of recovery and these goals may or may not apply to you.

Activity Goals for week 1-2:

- Walk at least 300-500 feet using your walker or crutches.
- Go up and down a flight of stairs one foot at a time once per day.
- Bend your knee 90-105 degrees.
- Work on getting your knee completely straight. Place a towel roll under your ankle twice a day for about 15 minutes.
- Shower and dress yourself.
- Gradually resume light household tasks if able.

Activity Goals for week 3-4:

- Complete any remaining goals from week 1-2.
- Switch from walker or crutches to a cane or one crutch as instructed.
- Walk the distance of 4 blocks.
- Go up and down a flight of stairs one foot at a time several times a day.
- Bend your knee 90-105 degrees.
- Work on straightening your knee by placing your foot on a stool for 20-30 minutes several times a day.
- Resume light household tasks.
- Return to light work duties if cleared by your surgeon.

Activity Goals for week 5-6:

- Complete any remaining goals from weeks 1-4.
- Walk with cane or crutch 4-8 blocks of distance.
- Go up and down stairs normally (not one foot at a time).
- Bend your knee 90-105 degrees.
- Work on straightening your knee using a stool.
- Drive if cleared by your surgeon.
- Resume all light household duties.

Activity Goals for week 7-12:

- Complete any remaining goals from weeks 1-6.
- Walk without cane or crutch 8-16 blocks of distance.
- Go up and down stairs with a rail.
- Bend your knee 90-105 degrees.
- Work on straightening your knee using a stool.
- Resume all household duties and low impact activities.

√ Review all exercises with your physical therapist.
√ Perform your exercise as prescribed.
√ You may do your exercises on both legs.
√ Do not hold your breath while exercising.

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Handout 3-1

Surgical Management of Knee OA

Arthroscopy:

- Allows the doctor to see directly into the joint through an instrument called an arthroscope. This is a thin tube with a light on the end that is connected to a closed-circuit television.
- Can be done to look inside a joint to find out what kind of arthritis exists and how much damage there is inside.
- Can be done to perform procedures such as a biopsy, removal of a loose piece of cartilage, repair of a torn cartilage or smoothing of a joint surface which has become rough.
- Advantage of this type of surgery is quicker recovery.

Synovectomy:

- Removes the inflamed synovium to reduce pain and swelling with rheumatoid arthritis and prevents or slows down the destruction of joints.
- The synovium may grow back and may have to be removed again.
- If joint damage has occurred and cartilage is lost, this procedure is contraindicated.
- Is a preventative procedure that needs to be done to limit inflammation before damage has occurred.

Resection:

- Is the removal of part or all of a bone; performed commonly in the feet when walking is painful and difficult.

Meniscectomy:

- Most meniscal tears do not heal on their own. Tears on the inner part often require surgery.
- A torn meniscus can cause pain, swelling, and sometimes catching and locking.
- Meniscal surgery repairs/removes menisci tear by arthroscopy.
- Restores motion and strength.

Ligament Reconstruction:

- ACL reconstruction is done using a piece of tendon or ligament to replace the torn ACL.
- The surgery is often done with the arthroscope.
- Surgery is generally done as an outpatient and is followed by 4-6 months of physical therapy.

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Osteotomy:

- Used for uneven damage of the joint where there is a correctable deformity and no inflammation.
- The surgeon reshapes the shinbone (tibia) or thighbone (femur) to improve knee alignment.
- Healthy bone and cartilage is realigned to allow your knee to glide freely and carry weight evenly on a more normal compartment.
- Osteotomy can delay the progression of OA and relieve pain.

Knee Replacement Surgery:

- Done to replace an arthritic joint with an artificial joint to stop the bones from rubbing together and to decrease pain.
- Goal is to return you to activities with less pain and greater freedom of movement.

Handout 3-2

Total Knee Replacement

The knee prosthesis is made up of three parts: tibial component, femoral component, and patellar component.

Tibial Component

- Replaces the top of the tibia.
- Is made of two parts-the metal that is attached directly to the bone and the plastic spacer that provides a slick surface.

Femoral Component

- Replaces the bottom of the femur and the groove where the patella fits.
- This component is made of metal.

Patellar Component

- Replaces the surface of the patella where it glides in the groove on the femur.
- Is usually made of plastic but may be a combination of metal and plastic.

There are two types of artificial knee replacements: cemented and uncemented. The kneecap part of the prosthesis is most commonly cemented. The decision to use a cemented or noncemented prosthesis is made by the surgeon based on your age, lifestyle and his experience.

Cemented prosthesis-held in place by a type of cement that attaches the metal to the bone.

Uncemented prosthesis-has a fine mesh of holes on the surface that allows bone to grow into the mesh and attach the prosthesis to the bone.

The Operation

- The surgeon makes an incision on the front of your knee to allow access to your knee joint.
- The knee joint is opened and a cutting guide is placed on the end of the femur to ensure that the bone is cut in proper alignment.
- The surgeon will cut several pieces of bone from the end of the femur.
- Next, the surface of the tibia is prepared using another type of cutting guide.
- Then the surgeon will remove the articular surface of the patella.
- The metal femoral component is placed on the end of the femur.
- The metal tray with the plastic spacer is attached to the top of the tibia.
- The patella component is cemented in place behind the patella.
- The soft tissues are then sewn back together and then the skin is repaired with stitches or staples.

Handout 3-3

Unicondylar Knee Replacement

- Less invasive knee replacement that replaces only the portions of the joint that are most damaged by arthritis.
- Alleviates pain and improves joint motion and function because both of the cruciate ligaments are preserved as well as other healthy parts of your knee.
- Incision used is usually smaller than total knee replacement. This surgery is sometimes referred to as minimally invasive.

Patellofemoral Knee Replacement

- Restores knee function and relieves pain of knee cap arthritis and wear.

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Handout 4-1

Arthritis of the Knee

Three basic types of arthritis may affect your knee:

Osteoarthritis is the most common form of arthritis and most often affects middle-aged and older people. Osteoarthritis (OA) is often referred to as degenerative or wear and tear arthritis. Doctors have many ways to treat OA of the knee so you have less pain, better movement and improved quality of life.

Rheumatoid Arthritis is an inflammatory type of arthritis that can occur at any age. This type can destroy the joint cartilage and generally affects both of your knees.

Post-traumatic Arthritis is similar to OA and can develop after an injury, fracture or meniscus tears.

Handout 4-2

Osteoarthritis:

- Is a degeneration of the articular cartilage which is the smooth lining that covers the ends of the bones. The cartilage decreases friction and gives them joint freedom of movement.
- The layer of bone below the articular cartilage is the subchondral bone.
- When the articular cartilage degenerates (wears away) bone underneath is uncovered and rubs against bone. Bone spurs or osteophytes which are small outgrowths in the joint.

Causes of Osteoarthritis:

- Can be caused by a previous knee injury or from years of repeated strain of the knee.
- Fractures of the knee joint, ligament tears and meniscal injuries can cause abnormal movement and alignment. This can lead to wear and tear on the joint surfaces.
- Scientists believe genetics can make some people more prone to developing degenerative arthritis.
- Obesity is linked to OA of the knee. Losing 10 pounds can decrease the risk of future knee OA by 50%.

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Symptoms of Osteoarthritis:

- Develops slowly over several years.
- Symptoms are pain, swelling and stiffness.
- Your pain may increase after walking, stair climbing or kneeling.
- You may notice that you can walk fairly well but then after sitting and resting your knee becomes stiff and painful.
- Pain may cause a feeling of weakness resulting in locking or buckling.
- As your arthritis progresses, pain can interfere with your daily activities and eventually become continuous and affect sleeping.

Diagnosis:

- The diagnosis can usually be made with your history and examination by your doctor.
- Your doctor will perform a physical examination checking motion, swelling, tenderness and walking.
- X-rays can help with the diagnosis and may be the only test that is needed. This will help your doctor determine if your knee pain is from OA or other conditions such as a torn meniscus. X-rays will show a loss of joint space if you have OA.
- An MRI is a special test that uses magnetic waves to create pictures of your knee. An MRI is a painless study that shows bones, ligaments, articular cartilage and menisci.
- If the diagnosis is still unclear, arthroscopy may be needed to look inside of your knee.

Causes of Osteoarthritis:

- Cause is unclear. Factors include: aging, joint injury or stress, heredity, muscles weakness, and obesity.
- The cartilage that cushions the end of the bones deteriorates over time. The smooth surface becomes rough and causes irritation. Eventually the cartilage may wear down completely.
- With bone rubbing on bone the ends of your bones may become damaged and your joints will become painful.
- **Risk factors:**
    - √ Older age-greater than 40
    - √ Sex-more common in women than men
    - √ Bone deformities
    - √ Joint injuries-sports related

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Handout 5-1

Living with Knee OA: Exercise Approaches

If my knee hurts, why should I exercise?

The best way to keep your knees healthy and prevent further injury is to have strong, flexible muscles.

Strength

By strengthening the muscles that support your knee, you will reduce the stress on your knee joint. Strong muscles in the front of your thigh called the quadriceps and the back of your thigh, the hamstrings, help you knee joint to absorb shock. The less strain you have on your knee, the better your chance for relieving pain and preventing further injury.

Flexibility

Stretching the muscles that you strengthen will play an important part in preventing injury. Strengthening exercises will build muscle to help support your knee, but it can also tighten the muscles. Tight muscles can be more prone to injury. Gentle stretching after your strengthening exercise will reduce muscle soreness and keep your muscles long and flexible.

How do I start exercising?

Your doctor or physical therapist will recommend exercises that are right for you.

Start slowly. Building strength in your muscles takes time. Gradually increase the number of repetitions or add weight to an exercise.

Do not ignore pain. You should not feel pain during an exercise. You might feel some discomfort because you are working your muscles. If an exercise hurts, stop.

Do not overdo it. You should not feel pain after you exercise. It is typical to feel stiffness or sore the day after you exercise. If you are so sore that it is difficult to move, you have overdone your exercise. Rest your sore muscles.

Ask questions. Talk to your doctor or therapist if you have significant pain or if you are unsure of how many exercises to do or how often to do them.

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Strengthening Exercises

Straight-Leg Lift

You should feel this exercise mainly in the front of your thigh

Lie on your back with one leg bent and the other one straight. Tighten the thigh muscles in your straight leg and lift it slowly until it is about 12 inches off the floor. Hold for 3-5 seconds; slowly lower your leg back to the floor. Repeat and switch sides.

Do: keep your upper body relaxed. Tighten your stomach muscles to keep your lower back flat against the floor.
Do not: arch your back or lift your leg too high with a jerking motion.

Single-Leg Dip

You should feel this exercise in the front and back of your thigh, hip, and buttocks.

Place two chairs on either side of you for balance. Lift one leg slightly in front of you. Plant your weight on the other leg and slowly lower yourself down a few inches, pushing your weight onto the heel of your supporting leg. Hold for 3-5 seconds, slowly straighten up. Repeat and switch sides.

Do: sit back as if there was a chair behind you.
Do not: let the knee of your supporting leg move forward over your toes.

Hamstring Curls

You should feel this exercise on the back of your thigh

Hold on to the back of a chair for balance. Plant your weight onto your support leg and lift the other foot and bring the heel up toward your buttocks. Hold for 3-5 seconds. Slowly lower your leg. Repeat and switch sides.

Do: keep your knees close together
Do not: lock the knee of your supporting leg or bring your heel up past a 90 degree angle.

Knee Stabilization Series

You will feel these exercises on all sides of your thigh, hip and buttocks.

Hold onto the back of a chair for balance. Slightly lift one leg and plant your weight on your supporting leg. Tighten your thigh muscles in your lifted leg and slowly cross it over your supporting leg. Hold for 3-5 seconds. Slowly return to where you started and repeat. Turn and face the chair and slowly move leg forward and backwards.

Do: focus on your supporting leg as it is working hard.

Do not: lock the knee of your supporting leg. Do not arch your back or lean to either side.

Wall Squat

You should feel this exercise mostly in the front of your thighs.
Stand with your head, back and hips against a wall. Step your feet forward about 2 feet from the wall, shoulder width apart. Slowly slide down the wall until you are almost in a sitting position. Hold for 5-10 seconds, then slowly slide up and repeat.

Do: Keep your abdominal muscles tight and hold the position longer as you become stronger.
Do not: slide your hips down lower than your knees or let your knee move forward over your toes.

Step Ups

You should feel this exercise in the front and back of your thigh, your hip, and *buttocks.*
Using a 6-inch high stool or platform; step one foot onto the platform. Lift your other foot off the floor, letting it hang loosely off the platform. Hold for 3-5 seconds. Slowly lower your hanging foot to the floor then bring your stepping foot down. Repeat and switch sides.

Do: make sure when you step up that your entire foot is on the platform.
Do not: lock the knee that is stepping on the platform.

Stretching Exercises

Quadriceps Stretch

You should feel this stretch in the front of your thigh.
Hold on to a wall or the back of a chair for balance. Lift one foot and bring your heel up toward your buttocks. Grasp your ankle with your hand and pull your heel closer to your body. Hold the stretch for 30 seconds.

Do: keep your knees close together and hold your foot still when you feel the stretch.
Do not: arch or twist your back.

Hamstring Stretch

You should feel this stretch at the back of your thighs and behind your knees
Sit up tall with both of your legs extended straight in front of you. Keep your feet neutral-not pointed or flexed. Place your palms on the floor and slide your hands toward your ankles. Hold for 30 seconds.

Do: keep your chest open and back straight and reach from your hips. Stop sliding your palms forward when you feel the stretch.
Do not: round your back or try to bring your nose to touch your knees. Do not lock your knees.

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Handout 6-1

Medical Management

In its early stages, arthritis of the knee may be changed with nonsurgical treatments. These treatments fall into four major groups: lifestyle modifications; exercise; supportive devices; other methods.

Modification of Daily Routines

This can include losing weight, switching from running or jumping exercises to swimming or cycling, and minimizing activities that can aggravate the condition such as stair climbing. Simple weight loss can reduce knee loads and can result in reduced pain and increased function, particularly in walking.

Exercise

Exercises can help increase motion and flexibility as well as strengthening your muscles. Physical therapy and exercises can be effective in reducing pain and improving function. Your physician or physical therapist can develop an individualized exercise program for you that meets your needs and lifestyle.

Supportive Devices

Supportive devices such as a cane, wearing energy-absorbing shoes or inserts, or wearing a brace of knee sleeve can be helpful. Knee braces can be especially helpful if the arthritis is centered on one side of the knee. A brace can assist both stability and function. There are two types of braces. Unloader brace-shifts load away from the affected part of the knee. Support brace-helps support the entire knee load. Using supportive devices can improve symptoms, decrease pain on weight bearing and allow you to walk longer distances.

Other Methods

Other measures that may be helpful include application of heat or ice, water exercises, liniments or elastic bandages.

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Handout 6-2

Medication Treatment

Medications can help relieve the pain of OA of your knee. Your orthopaedic surgeon may recommend an over-the-counter or prescription drug that is best for your specific condition.

Anti-inflammatory medications such as aspirin, acetaminophen or ibuprofen can help reduce swelling in your knee joint. Simple pain relievers like Tylenol can be effective in reducing pain. Pain relievers are generally the first choice of therapy for OA of the knee.

What are NSAIDs?

Nonsteroidal anti-inflammatory drugs (NSAIDs) are the most commonly prescribed medications for treating arthritis. These drugs are available in both over-the-counter and prescription forms and includes brands such as Motrin, Advil and Aleve.

NSAIDs not only relieve pain, they also help reduce inflammation, lower fevers and prevent blood from clotting. NSAIDs can cause side effects including nausea, stomach upset, ulcer as well as changes in kidney and liver function.

Risks

Tell your physician if you have high blood pressure, asthma, kidney or liver disease or have had an ulcer in the past. You should discuss with your doctor the other medications you are taking as NSAIDs may intensify or counteract the effects of some medications.
You should take NSAIDs with food or milk and avoid drinking alcohol.

COX-2 Inhibitors

A COX-2 inhibitor is a special type of NSAID that is prescribed if you are experiencing moderate to severe knee pain. Celebrex is a commonly prescribed COX-2 inhibitor. These drugs reduce pain and inflammation so you can function better. If you are taking this type of drug, you should not take a traditional NSAID. Be sure to tell your doctor if you have had a heart attack, stroke, angina, blood clot or hypertension or if you are sensitive to aspirin, sulfa drugs, or other NSAIDs.

COX-2 inhibitors can have side effects including abdominal pain, nausea, and indigestion. These drugs are less irritating to the stomach than other NSAIDs, but abdominal bleeding can occur without warning.

Narcotic Pain Relievers

Narcotic pain medications relieve pain but do not decrease joint inflammation. These drugs must be taken carefully as you can develop dependency and they can cause constipation, urinary problems and sedation.

Glucosamine and Chondroitin

Glucosamine and chondroitin sulfate are oral supplements that may relieve the pain of OA, especially in the early stages. Although they are natural substances classified as food additives, they can cause side effects such as headaches, upset stomach, nausea, vomiting and skin reactions.

These substances can reduce swelling and tenderness and improve your mobility and function. If you take this type of medication, you must use for at least two months before the full effect is realized.

Corticosteroids

Corticosteroids are anti-inflammatory agents that can be injected into the joint. They are used for moderate to severe pain and can be useful if there is significant swelling. The effects of these injections may not be long-lasting and you should not be given more than four injections per year.

Viscosupplementation with Hyaluronic Acid

Viscosupplementation involves the injection of substances into the joint to improve the quality of the joint fluid.

Gold Salt Injections

Special medical treatments are used for rheumatoid arthritis including gold salt injections and disease-modifying drugs.

Alternative Therapies

Some forms of therapy are unproven but may be reasonable to try. Alternative therapies include acupuncture and magnetic pulse therapy.

On the Horizon

Orthopaedic surgeons continue to search for new ways to treat knee arthritis. Current research is focused on new drugs, cartilage transplants and other ways to help slow the progress of arthritis.

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Handout 6-3

Collecting and Providing Information to Your Doctor

When you have arthritis it is important to understand what it is, what its course may be and how it is treated.
The day before every doctor's visit you should make a list of any changes in your symptoms, concerns about medications, lifestyle issues and questions you may have.

Diagnosis and General Treatment

1. What is my diagnosis?
2. What are my treatment options?
3. What are the risks of treatment?
4. What is the likely course of my condition?
5. What complications could develop and can I prevent them?
6. Is surgery of any help now or in the future?
7. How will arthritis or treatment affect my other health problems?
8. Do I need special dental care?
9. Do I need to use a walker, cane, or crutches?

Medications

Make sure your physician knows all the medications and supplements your take regularly. For each medication prescribed you should know:

1. Brand and generic names.
2. What will it do and how long will it take to work?
3. How often do I take it?
4. What are the special instructions for taking it?
5. Are there any other-the-counter drugs I must avoid?
6. Is there food I should avoid?
7. What are the side effects?

Your Contact with Your Physician

1. If my symptoms change or I develop new symptoms how should I follow up with you-by phone or an appointment to see you?
2. If my symptoms change, how often should I come to you for a checkup?
3. When should I see you as opposed to my PCP?
4. Can I communicate with you by email?
5. Who covers for you when you are unavailable?
6. Are there other specialists I should see about my condition?

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Exercise and Physical Therapy

1. Do I need physical therapy?
2. What exercises can I do and how often?
3. Should I continue to exercise if I have pain?

Family and Daily Tasks

1. Will arthritis impair my ability to do my job or hobbies?
2. Will I need to make diet modifications?
3. Are there alternative medication treatments?

Learn More about Disease

1. What books or websites do you suggest I read?

Handout 6-4

10 Questions to Ask Your Doctor

1. What is my diagnosis and how can I learn more about it?
2. Does my type of arthritis only affect joints or does it affect other parts of the body?
3. What is the course of this form of arthritis? What is the long term outlook?
4. What are the treatment options? What are the risks of not treating?
5. If my symptoms worsen, what should I do? When should I contact you?
6. How and when should I exercise?
7. What is the best source of arthritis information?
8. What is the best way to lose weight and then to keep it off?
9. Will my children be affected?
10. What are the side effects of the medications, what medications to avoid? What about the medications I am on now?

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Handout 6-5

Notes

Answers to my questions:

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Handout 7-1

Potential Effects of OA on Other Joints, Sleep Issues, Nutrition

A healthy lifestyle and good habits may positively impact the course of arthritis. Regular exercise, maintaining ideal weight, stress reduction, being a non-smoker and getting good sleep are all parts of better living with arthritis.

Why Exercise?

√ increases your energy level
√ helps develop a better sleep pattern
√ helps with weight control
√ maintains a healthy heart
√ increases bone and muscle strength
√ decreases depression and fatigue
√ serves to improve self-esteem and self-confidence

What Makes People with Arthritis Overweight?

Many factors play a role in being overweight. You may not be able to control all the factors leading to being overweight, but you can change your diet and exercise habits. You gain weight when the number of calories you eat is more than your body uses. If you have arthritis you can control your weight by eating a balanced diet and staying active.

Sleep Issues

Disrupted sleep is often overlooked with arthritis. The combination of arthritis and sleep problems can be a two-way street. Poor quality of sleep and waking with pain can be a problem.

Tips for Good Sleep

- Keep regular sleep habits
- Avoid caffeine and alcohol in the late afternoon and evening
- Avoid daytime naps
- Reserve your bed for sleeping
- Time your exercise
- Keep your bedroom dark, quiet and cool
- Avoid liquids and spicy meals before bed
- Wind down before bed

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Handout 8-1

Making Future Treatment Decisions, Wrap-up

According to the Agency for Healthcare Research and Quality (AHRQ), osteoarthritis is the most prevalent form of arthritis in the U.S. It affects over 20 million adults with more than half of all people age 65 and over has evidence of osteoarthritis.

Research by AHRQ shows that patients with OA can:

- Become more active and responsible for their care
- Make informed decisions
- Help control the costs of health care
- Improve their quality of life

AHRQ research shows that patients will have better outcomes when they receive education and training about their condition because they become more involved in their care.

How can you be involved in your care?

The key to good management of OA is an effective physician-patient partnership so you can:

- Learn the proper use of medications
- Learn how to change your daily activities to lose weight and maintain weight loss, improve symptoms or slow disease progression
- Learn how to interpret and report your symptoms accurately
- Learn how to adjust to new social and economic circumstances
- Learn how to participate in your treatment decision and maintaining normal activities
- Participate in patient education programs which provide knowledge and skills for your self-management
- Get referrals to organizations in the community that offer exercise programs, swimming, informational meetings, social activities, self-help education and mobile services for transportation and meals.

Important points to remember:

- Parts of the knee include bones, joints, ligaments, tendons, muscles, nerves and blood vessels.
- The knee joint is made up of a thigh bone (femur), shin bone (tibia) and knee cap (patella).
- Articular cartilage covers the ends of the bones.

- OA is the most common form of arthritis.
- OA is the “wear and tear” or degenerative arthritis.
- Causes of OA are unclear but factors include: aging, joint injury or stress, heredity, muscle weakness and obesity.
- Various surgical procedures can be performed on your knee based on your condition.
- Knee replacement is done to replace an arthritic joint with an artificial joint to allow you to return to activities with less pain and greater movement.
- You will need a few weeks to prepare for knee replacement to ensure a smooth surgery and speedy recovery.
- Your active participation in your recovery is necessary to ensure a successful outcome from knee replacement surgery.
- Exercise is very important to help you strengthen your knee and other muscles after surgery.
- The best way to live with OA to keep your knees healthy and prevent further injury is to have strong flexible muscles and keep your weight down. Your doctor or physical therapist can recommend exercises that are rights for you.
- Medications can help relieve the pain of OA of your knee. Your orthopaedic surgeon will typically recommend an over-the-counter or prescription drug that is best for your condition.
- When you have arthritis it is important to understand from your doctor what it is and how it is treated.

We want to sincerely thank you for participating in our study. We hope that you found all of this information helpful as you continue your recovery from knee replacement surgery.

- The study team

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Pain Coping Skills Manuals for Physical Therapists and Patients

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Session

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Session 1

Introduction, Rationale, Training in Progressive Relaxation, and Application to Knee Arthroplasty Surgery

GOALS:

A. Introductions, develop alliance and collect patient information
B. Basic information about sessions
C. Teach Gate Control Model
D. Provide rationale for coping skills training as a treatment to be used in combination with knee replacement surgery
E. Train patient in progressive muscle relaxation

MATERIALS:

1. Packet/Binder, Pens, Pencils
2. Digital voice recorder
3. Relaxation CD (or tape) for patient

OUTLINE:

A. Introduction (time = 5 minutes) (0:00)

1. Therapist welcomes and introduces self and describes his/her position as a physical therapist with additional training in the area of pain.

2. **(Handout 1-1)**
   There will be 8 sessions lasting about one hour
   a. Come to every session on time.
   b. In case of being late, or missing the session, call the therapist as soon as possible.
   c. Here are telephone numbers (other than home) where therapist can be reached or message can be left.

3. I want to assure you that our sessions will be kept confidential. First, you will be identified only by the study number you were assigned when you agreed to participate in the study. What we discuss in our sessions will be kept in strict confidence unless you are at risk of harming yourself or others, or you tell us about a situation where children or elderly or any other dependents are being abused. For quality assurance purposes, a clinical supervisor may review the recorded sessions. The recordings will be

protected so that no one except the study investigators will have access to them.

4. **(Handout 1-2)**

Over the next 8 sessions, you will learn a number of skills that can help you to decrease and control pain and to cope with related problems during the time before and after your knee replacement surgery.

Skills you will learn will include:

a. relaxation and distraction techniques
b. how to set goals and pace your activities so that you can have a more active lifestyle
c. how thoughts can affect feelings and other responses to pain, and how to make those thoughts work for you

In today's session, we will talk about why these coping skills may be helpful for you, and you will learn a relaxation technique for pain and stress control.

5. Each session will include the learning and practicing of a new skill. We will also revisit and review the previously learned skills and recommend some homework assignments on an ongoing basis.

B. Patient Pain History and Knee Replacement Surgery

(time =15 minutes) (0:05)

1. Prior to practicing coping skills, I would like to spend a few minutes finding out some more information about you, your pain, and its impact on your life.

   i. Is your surgery date scheduled yet?
   ii. When did you first develop knee pain? (Probe the course of the pain)
   iii. Pain in other areas?
   iv. Pain rating from 0-10. Fluctuations?
   v. Assess pain levels over time and patterns
   vi. What type of treatments have you tried in the past?
   vii. What increases/decreases your pain?

2. Tell me a bit more about yourself. (Focus on the patient's lifestyle and the impact of pain.)

i. How has your pain affected your ability to do the things you want and need to do?
ii. Pain in relation to:
    - Job/work
    - Significant other relationships. How has your pain had an impact?
    - Other family relations – children, grandchildren?
    - Leisure activities
    - Physical activities
iii. What is a typical day like for you?
iv. Assess patient's overall activity levels and functioning in each area listed above
v. Assess patient's levels of support

3. What have they told you that you can expect to happen with your pain and activity after the surgery? What are your thoughts about that? What about right after surgery (recovery period)? And what about down the road (e.g., 6 months to a year later)?

   Therapist goal → Simply identify and list (for own use only) the following:

   a) Thoughts the patient has (e.g., "My pain will not get any better"; "I will disappoint my family")

   b) Feelings (e.g., excited, worried) the patient has

   c) Actions/activities the patient needs/wants to engage in after the surgery (e.g., physical therapy, walking program, getting back to bird watching)

   (Optional)
   d) Other (e.g., increased tension, feeling fatigued because not in good shape, sleep problems, etc.)

4. Summary statement: Therapist briefly provides a summary of what the patient is expecting to have to deal with.

5. Statement of rationale: In this training you will be learning skills that will help you manage some of the challenges you just mentioned. These skills can help decrease pain and help you meet your goal of becoming more active.

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C. Rationale for Pain Coping Skills Training (time = 10 minutes) (0:20)

(**Handouts 1-3 through 1-6)**
I want to give you a brief outline of what we know about pain, and why coping skills training can help to decrease pain.

1. **(Handouts 1-3)**
   For a long time, scientists believed that there was a single pathway that carried pain signals from the site of injury or the affected area to the brain. However, we now know that pain is a much more complex experience that cannot be explained using a single pathway. There are many things that can influence pain.

2. **(Handouts 1-4)**
   In the 1960s, scientists developed a new theory of pain, the "Gate Control Theory."

   - According to this theory, there is a gate located in the spinal cord right in the middle of the pain pathway. This gate can be open or closed. When the gate is closed it can stop pain messages from going up the pain pathway to the brain. When the gate is open, pain messages are allowed to go along the pain pathway right to the brain.

   - So, what are some of the things that can open or close the gate? Pain medication can close the gate. Another way your brain closes the gate in the pain pathway is by releasing natural pain killers that are called endorphins. These pain killers are just like morphine and are very powerful.

There are other ways to close the gate as well, from the brain down…

- **(Handout 1-5)**
  Scientists have discovered that there are nerves that go from areas of the brain in which thoughts and feelings occur down to the gate in the pain pathway. Research studies suggest that activity in

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these centers of the brain can cause the gate in the pain pathway to be open or closed.

- This is probably why many people notice that their thoughts and feelings can have a major effect on pain.

3. Talk about how the patient's thoughts and feelings might have impacted their pain. If the patient cannot verbalize any connections using these cues, ask: "Are there *any* thoughts or feelings you have noticed that can make your pain better or worse?"

4. The Coping Skills Training is designed to teach you coping skills for controlling thoughts, feelings and actions that affect pain. In other words you will learn techniques to close the gate.

Refer patient to **Handout 1-6,** a summary, he/she can read at a later time.

D. Progressive Relaxation Training (PMR) (time = 25 minutes) (0:30)

1. Today, you will learn about progressive relaxation. (Inquire about the patient's knowledge of or previous experience with PMR. If no experience, proceed as indicated below. If the patient has had previous experience with PMR, explore briefly and explain that this will help them build on that knowledge and/or enhance their skill level.)

2. Relaxation is one of the most important skills for controlling and decreasing pain

3. Many scientific studies support using relaxation as method for pain control

4. **(Handout-1-7)**
Relaxation can help in many ways:

R- Reduces pain. Muscle relaxation reduces pain, while muscle tension increases pain.

E- Emotional distress is reduced. (Muscle relaxation helps to feel calm.)

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L- Lets you be at ease.

A- Awareness of tense muscles increases so you can catch tension early and release it.

X- X stands for a blank; you can fill in what other benefits you discover. You may notice that you sleep better after PMR or able to concentrate more easily.

5. What is Progressive Relaxation?

(Handout 1-8)

- Progressive Relaxation is a way to learn how to relax. It involves the purposeful tensing and relaxing of specific muscle groups, which will help you to become more aware of feelings of tension and relaxation throughout your body. PMR will teach you how to release tension on command so that you will be able to keep tension at a low level and reduce your pain.
- Progressive relaxation is a skill that can be learned just as any other skill such as driving a car or typing.

Ways to use Progressive Relaxation

- Progressive relaxation can be very useful for reducing the tension and anxiety that many people feel in the days prior to receiving the knee surgery.
- Progressive relaxation can also be helpful during your stay in the hospital both before and after the surgery. It not only can help with pain, but it can help manage stress and feelings of being upset.
- Progressive relaxation can be useful during your rehabilitation period at home after the surgery. With practice you can reduce muscle tension, which can lead to less pain.

6. Relaxation preliminaries:

- Before starting, have patient **rate tension** using the tension thermometer (Tension Thermometer **Handout 1-9**).

- Encourage patient to get comfortable – e.g., remove glasses, remove watch, open collar, settle into chair (therapist should model these behaviors).
- Explain that the therapist will be going through relaxation session with the patient.
- If any exercise is difficult for you, do not produce much tension

Note: Therapist, review tense-relax cycle for each muscle. Therapist use calm, relaxing voice.

a. feet back - bend at ankles, toward knees
b. tense thighs - heavy weights on feet
c. pinch buttocks together – rise up in chair
d. pull stomach in - navel toward back
e. hands back at wrists and fingers upward
f. shoulders up - head back
g. head forward - chin toward chest
h. head to the right - ear toward right shoulder
i. head to the left - ear toward left shoulder
j. wrinkle forehead - raise eyebrows, eyes closed
k. press eyelids together (don't if wearing contact lenses)
l. tight smile
m. take a deep breath - exhale

7. Lead patient through a full progressive relaxation exercise

- Use script found at end of this session.

8. Post-relaxation review:

a. Ask for a second tension rating using the Tension Thermometer on **Handout 1-9**.
b. Ask, "Well, how was that?"
c. Ask about any problems - deal with in routine fashion
   - Problems getting various muscles relaxed? Suggest alternate tense-relax strategy
   - Reassure participant that any problems are likely to go away with practice
d. Ask, "What does relaxation feel like?" (feelings of warmth, heaviness, lightness, calmness, etc.)

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E. Home Practice and Closure (time = 5 minutes) (0:55)

1. Ask for comments, questions, or other reactions.

2. This program may be very different from other treatments:

   - Heavy emphasis on home practice **(Handout 1-10)**. This is where the real benefits of treatment will come from. This week, we encourage you to practice with the CD at least once a day. What would be a good time for you to do this?
   - Each session I will ask you about how your home practices have gone since the previous sessions.
   - This allows us to identify any problems you might be having with practicing the skills and to do some troubleshooting so that they will work better for you.

3. Progressive relaxation may be particularly helpful for you as you prepare to have your knee surgery. This can be a time of considerable tension and difficulty, and using the relaxation tape on a regular basis can help you to keep your level of stress down as well as help reduce any pain you may have as a result of the surgical procedure.

4. Confirm with patient when and where therapist can reach them, including with whom therapist can leave messages. (Refer back to **Handout 1-1**.)

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Session 2

Mini-Practices and the ABC Model

GOALS:

A. Review and troubleshoot progressive relaxation
B. Teach mini-practices
C. Introduce the ABC model and how automatic thoughts affect our responses

MATERIALS:

1. Digital recorder
2. Adhesive dots (for mini-practice reminders)

OUTLINE:

A. Overview of Session (time = 2 minutes) (0:00)

1. Preview goals for the session.

B. Review of Medical Status and Home Practice (time = 8 minutes) (0:02)

1. Any updates regarding the knee replacement procedure? (When it will occur, how patient is feeling about it?)
2. Home practice with relaxation CD?
3. Did you notice any benefits from relaxation?
   - Pain reduction?
   - Helpful in managing stress/anxiety regarding upcoming knee surgery?

C. Mini Practices for Relaxation (time = 15 minutes) (0:10)

1. Rationale:
   - For relaxation to be most beneficial, you need to learn how to relax and calm yourself quickly, upon command, whenever needed.
   - This skill can be very helpful when you are feeling increased tension or pain but can't go to a secluded area to do progressive relaxation.
   - It may be particularly helpful as you deal with increased tension and anxiety as you prepare to have the knee replacement surgery.

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2. Method for doing a mini-practice:
   Refer to **Handout 2-1**.
   - To do a mini-practice begin by stopping yourself
   - Take a long breath
   - Say the word **RELAX** to yourself while you slowly exhale
   - Allow yourself to relax, letting all the tension go, and focus on sensations of relaxation.
   - Allow your jaws to relax
   - Allow sensations of heaviness to flow downward from your shoulders throughout your body
   - After 30-60 seconds do what you were doing - regardless of how well you have succeeded in relaxing

3. Demonstrate mini-practices:
   - Take patient through a series of 4-5 mini-practices
   - Start with a longer mini-practice: 60 seconds at least
   - Do while standing, sitting, walking, driving, talking on phone, etc.
   - Review reactions: how was it?
   - What does the mini-practice feel like?
   - Any problems, questions? (troubleshoot)
   - Reassure patient that problems are likely to disappear with practice

4. Additional points about mini-practices:
   - As you practice these brief relaxation mini-practices you'll get better at producing sensations of relaxation in a short time
   - Learning to use these mini-practices quickly is similar to learning to shoot a target or hit a baseball or play a musical instrument
   - Frequency is the key
   - You will find that you will be able to feel increases in the relaxation response more reliably each time you practice.
   - Remember if after a minute of doing the mini-practice you don't feel relaxed, just go back to doing what you were doing
   - In what types of situations do you think mini-practices may be helpful for you? (Suggest use during times that anxiety regarding knee surgery comes up if patient doesn't mention.)

** Do a mini-practice **

5. Goal: Work up to 20 mini-practices a day (1-2 each hour) over the next few weeks

Refer to **Handout 2-2**.

Reminders to do mini-practices:

- Think about relaxing a lot throughout the day.
- You can remind yourself to do a mini-practice in many different ways.

Internal Cues:

- Every time you feel annoyed or tense

External Cues:

- Every time you stop at a light or pick up the phone
- One way to remind yourself to do a mini-practice is to use a signal such as an adhesive dot. (Point out the adhesive dots in the patient's binder.)
- We find that these dots make excellent reminders.
- You can put these around the house (by the door, near your mirror) or on your personal belongings (such as a watch, or pocketbook). Where will you put them? Discuss.
- Each time you see a dot, you will be reminded to do a mini-practice.
- It does not matter how you choose to remind yourself do a mini-practice and relax.
- What is important is that you practice frequently.
- Little by little you can develop a habit of keeping yourself relaxed throughout the day.
- Discuss application of mini-practices during pre-surgical period. In what situations might it be helpful? What cues can the patient use to remember to do a mini-practice at these times?

D. Communicating with Health Care Providers (time = 5 minutes) (0:25)

As you know, people who have knee replacement surgery face a number of challenges. Some of these challenges involve communicating with others.

Before moving on to the next skill of the day, I'd like to check in with you about how things are going in terms of communicating your concerns or

questions to your surgeon or to others on your health care team. We will talk about communicating with family and friends in a later session.

Have you had any challenges or difficulties communicating with members of your health care team? Note examples for future discussion or role play.

Your doctor, physical therapist and others involved in your medical care need to know about how you are progressing so that they can work with you to make the best decisions about your treatment.

Sometimes patients have difficulty with

- Knowing what kind or how much information the doctor wants them to provide.
- Understanding when the doctor uses medical language.
- Remembering everything the doctor said.
- Feeling that they are being listened to or that they are being understood.

Are any of these problems for you? (If yes, make suggestions for more effective communication or do a brief role play.)

Refer patient to **Handout 2-3** for tips on how to communication with surgeon and other health care providers.

E. Rationale: How Thoughts Affect Emotions, Behaviors and Bodily Responses (time = 5 minutes) (0:30)

1. Recall that in a previous session we had talked about how having chronic knee and/or extremity pain can affect your thoughts, feelings, and behavior, and how in turn your thoughts, feelings and behavior can have an effect on your pain.

2. During this session, we are going to focus on one part of this – Thoughts -- and spend time on the effect that thoughts have on our feelings, behavior, communication, and body responses.

3. People with chronic pain who are undergoing knee surgery have a lot to deal with, and often their thoughts change over time as they try to adjust to having the surgery. Sometimes these thoughts are helpful. On the other hand, sometimes these thoughts are not helpful and can lead to anxiety, depression, more pain, and so on.

4. We will be teaching you a way to start to identify unhelpful thoughts that can cause unnecessary anxiety, depression, and pain. What we have learned is that by identifying unhelpful thoughts, we can change how these thoughts affect us.

5. I'm going to take the next few moments to give you some more background information about thoughts and the consequences unhelpful thoughts can have.

F. Introduction to Automatic Thinking and the ABC Model

(time = 20 minutes) (0:35)

1. Refer to **(Handout 2-4)** "How Thoughts Affect Responses."

2. We all have thoughts constantly going through our minds as we take in and evaluate events around us.

3. We call these "automatic thoughts" - because we often don't even notice them - they're like *reflexes*.

4. How we think about difficult situations influences how we feel. Some thoughts help us cope effectively with difficult situations and work for us. Other thoughts make it more difficult for us to cope with troublesome situations and work against us.

5. **(Handout 2-5)** Let me give you an example of this: Suppose you are home alone at night and you hear a noise outside (A). If you think that the noise is a burglar, how would you feel? What would you do? List consequences (C). What if instead you thought that the noise was a cat knocking over the garbage can? How would you feel then, what would you do? This example demonstrates the influence that our thoughts or beliefs have on our feelings and our behavior.

6. Let's look at a more complex situation:

   Refer to **Handout 2-6a**.
   Consider an example of a man who was blinded in a welding accident. It is two years later and the man is still feeling angry, depressed, upset, and alone. He is very irritable and difficult to live with. It's no longer just about losing his sight; his thoughts or beliefs about his situation are contributing to his problem. The man's

thoughts are working against him in this situation and are contributing to his negative feelings.

7. What automatic thoughts do you think the man may be having that links the event to the consequences? (List on **Handout 2-6a**.)

8. Let's now see if we can come up with some ways of challenging these thoughts. Pretend you are an investigator and are gathering evidence about a case. What kind of evidence might you come up with that does NOT support the automatic thoughts we just came up with? (Help the patient identify some countering thoughts if necessary.)

9. It is normal for everyone to have thoughts that work against us; living with constant pain can increase these automatic thoughts. I would like you to begin monitoring your automatic thoughts by using a thought record **(Handout 2-6b)**. By monitoring your automatic thoughts, you will be better able to identify how they affect your feelings, behavior, body responses and communication with others.

    - First, if you notice that you are having strong, difficult emotions or feel overwhelmed, it is usually in response to a particular circumstance or event.
    - Use this **Handout 2-6b** to identify the event in Column A, and then list the feelings, actions and bodily responses that you are experiencing in Column C (Consequences).
    - Next, pay attention to your thoughts or self-statements, and try to identify any that could be working against you. List these unhelpful thoughts under Column B (Thoughts).
    - The first step is to become aware of these thoughts; we will talk about how to work with these thoughts in the next session.
    - Record as many events, thoughts and consequences as you can and we will review them during our next session.

** Do a mini-practice **

G. Home Practice (Handout 2-8) (time = 5 minutes) (0:55)

1. Progressive relaxation - practice with the CD daily, ideally twice a day.

2. Begin with at least 5 mini-practices per day. Put up dots to help you remember.

3. Begin daily thought monitoring using (**Handout 2-7**).

4. Use communication skills as needed with health care providers.

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Session 3

Replacing Unhelpful Thoughts with Coping Thoughts and Pleasant Imagery

GOALS:

A. Review and troubleshoot PMR and Mini-Practices
B. Review Thought Record and teach patient how to recognize and replace unhelpful automatic thoughts.
C. Teach and guide patient through Pleasant Imagery

MATERIALS:

1. Digital recorder

OUTLINE:

A. Overview of Session (time = 2 minutes) (0:00)

1. Preview goals for the session

B. Review of Medical Status and Home Practice (time = 13 minutes) (0:02)

1. Ask about the patient's progression with the knee surgery process. If they have received the surgery, ask how the procedure went and how they are doing now being back home (or at rehab center). If they are still waiting to receive the surgery, inquire about their level of difficulty as they wait.

2. Ask patient to report on use of progressive relaxation and relaxation mini-practices (ask about application of skills to pain and thoughts associated with pre-surgical or post-surgical period; positively reinforce practice).

** Do a mini-practice **

C. Review Cognitive (ABC) Model and Patient's Thought Record (time = 10 minutes) (0:15)

1. Ask about the patient's use of the thought record (**Handout 2-7**). Discuss any issues or problems associated with the thought record and how daily monitoring has progressed.

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D. Recognizing Unhelpful Pain-Related Thoughts (time = 5 minutes) (0:20)

1. Like the man who has lost his sight, having chronic pain often leads to thoughts that are not helpful.

2. Begin reviewing the content of the patient's "Thought Record" **(Handout 2-7)**, discussing specific negative events that have occurred since the previous session.

3. Discuss some thoughts and consequences related to these events that have occurred. Explore each thought individually and ask the patient to talk about what they feel when they repeat these thoughts.

4. If patient has <u>not</u> filled out the "Thought Record Form" continue to guide patient to identify unhelpful thoughts in the situations they have encountered. If the patient has filled out the "Though Record Form," go to **Section E**.

    a. "I would like you to recall a time when you had a challenging situation such as a bad pain flare-up. Let's look at some of the consequences that you experienced when this happened. What were some of your feelings that you had in response? What were some of your actions in response? Your bodily responses?"

    b. Using the "Thought Record" to reinforce the explanations of the ABC model: Pain and other symptoms lead to Thoughts and Beliefs that lead to Consequences: feelings, actions, bodily responses. Fill in the consequences that the patient reports.

5. Now let's see if you can identify some of your thoughts that might have led to those consequences. Good examples of unhelpful thoughts are those related to the knee surgery. The upcoming surgery can lead to high amounts of stress and anxiety which is often related to our thinking. Let's discuss some thoughts you have been having and then we can work on challenging them. List patient's own thoughts; draw connecting lines to consequences.

    - Probe patient's catastrophizing thoughts
    - Assess concerns about risks for surgery, references Gate Control Theory

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E. Replacing Unhelpful Thoughts with Coping Thoughts (time = 10 minutes) (0:25)

Use **Handout 3-1**: "Identifying Unhelpful Automatic Thoughts." Share this with patient to help them identify the types of unhelpful automatic thoughts that some people with chronic pain have.

Now let's focus on how to change these unhelpful thoughts. Refer to **Handout 3-2** and continue to review patient's "Thought Record" (**Handout 2-7**).

Review events in Column A and consequences in Column C. Now discuss related thoughts listed in Column B (**Handout 2-7**).

- Let's challenge these thoughts to determine if they are completely true, just as we did in the example of the young man who was blinded in an accident. You can list your alternative thoughts using **Handout 3-2**. These thoughts should be realistic and work for you. We refer to these as "coping thoughts". Some examples of replacing unhelpful thoughts with more realistic, helpful thoughts are in **Handout 3-2**.

Instruct patient to continue to do Thought Records, but this time to replace an unhelpful thought with a coping thought. Refer to **Handout 3-3.**

- As an alternative, suggest that patient make "coping cards" (i.e., index cards) and discuss ways to use them.
- Some people carry them in their wallet or somewhere, where they can easily get to them and read them when they have a difficult time.
- Or some people read their coping thoughts regularly to remind them how to cope in difficult situations.

Ask the patient if they have any questions, reactions, etc. to the cognitive model and troubleshoot as needed.

F. Introduction to Pleasant Imagery (Handout 3-4) (time = 5 minutes) (0:35)

1. Pleasant imagery is a distraction method that involves imagining something enjoyable in order to divert attention from pain, stress, and other unpleasant experiences.

2. Thinking about pleasant events can help you control pain and manage stress in several ways:
   - When you are concentrating on something pleasant, you are not able to attend as much to pain, or to thoughts or experiences that are causing stress/anxiety.
   - Pleasant imagery can help relax you as much or even more than relaxation alone; this helps reduce pain caused by tense muscles.
   - Focusing on something positive can also help reduce anxiety and other negative emotions that you may be experiencing before, during, and after the knee replacement surgery.
   - Finally, like relaxation, it can help you rest and sleep better.

3. Ask patients whether they listened through the relaxation tape to the imagery section (reclining under a shady tree on a warm, sunny day). If so, ask about their reactions to pleasant imagery segment of the relaxation tape. (If they have not listened to it, ask them to do so soon at home.)

4. Tell patient that although they are welcome to continue to use the image from the tape, often times people can get more out of pleasant imagery if they control the imagery themselves (i.e., what image to use, when to change the image, etc.)

5. Encourage the patient to utilize images he or she has actually experienced.

6. Ask patient to brainstorm about images that are calming and pleasant to them and list responses on board/pad.

7. Have patient discuss the image(s) in detail and prompt for what they see in all directions and what they might hear, smell, taste, and touch in that scene.

G. Pleasant Imagery Application (time = 15 minutes) (0:40)
(Handout 3-5)

1. Guidelines for practice with imagery
   - Precede imagery with relaxation.
   - Try to involve all of your senses in imagery.
   - Practice for a specific time period (minimum of 5 minutes).
   - To end imagery practice, slowly count backwards from 10 to 1.

2. Ask the patient to select a pleasant scene and guide them through the imagery exercise using the following script verbatim or as a guideline:

Imagery Script

Get as comfortable as you can. Settle into the chair and relax. If you feel comfortable let your eyes close…. (*pause for 20 seconds*). Take a long slow breath…(*pause*)…Say the word RELAX to yourself…Slowly exhale and, while you do, allow yourself to relax and focus on the sensations of relaxation… Allow your forehead to relax, your jaws, your neck and shoulders, your hands and arms, your back, your legs, your feet… allow the sensations of heaviness to flow downward from your head and shoulders throughout your body…

Now, I would like you to imagine that you are in a pleasant and peaceful place. This might be a place that you have been before or would like to visit…(*pause 20 seconds*) Just imagine what it might be like to be in this place…(*pause for 30 seconds*).

Now, imagine what you see in this situation…what does it look like….look in all directions…imagine what the quality of the light is like, what might be around you….spend a minute simply focusing on what you might see…….(*pause for 60 seconds*).

Now imagine what you might hear while you are in this situation…focus on all the different sounds you might hear…..(*pause for 60 seconds*).

Now, I would like you to focus on what you might feel in this situation….is it warm, mild, or cool…can you feel the wind blowing…or the sun shining on your body…..simply focus on the feelings that you might have while you are in this pleasant and peaceful place……(*pause for 60 seconds*).

Now focus on what you might smell in this situation…imagine any pleasant smells that might be present such as the smell of the grass or flowers if you are outside…(*pause for 60 seconds*).

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(*Possibly omit the next sense if taste is not involved*)

Now, focus on what you might taste in this situation….imagine savoring any pleasant tastes that might occur…
Now spend a few moments just enjoying being in this pleasant and relaxed scene.
(*Wait a few minutes and then stop session by counting backward from 10 to 1*).

3. Have patient describe reaction to the pleasant imagery and the scenes they used. Have them go through their senses. What did they see? Hear? Smell? Feel?

4. Discuss application of pleasant imagery to pre-surgical or post-surgical period. In what other situations might it be useful?

** Do a mini-practice **

H. Home Practice (time = 5 minutes) (0:55)
(Handout 3-6)

1. Progressive relaxation - listen to CD daily, preferably twice a day.

2. Increase mini-practices to 10-15 times daily.

3. Practice pleasant imagery alone or in combination with the relaxation CD.

4. Continue to use the "Thought Record." Identify unhelpful thoughts and begin to replace them with coping thoughts. Record this on **Handout 3-3**.

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Session 4

Activity Rest Cycling, Imagery, and Recognizing and Changing Unhelpful Thoughts (Continued)

GOALS:

A. Practice guided imagery
B. Teach the activity-rest cycle as a coping skill for controlling pain while maintaining/increasing activities.
C. Continue cognitive restructuring related to physical reactivation

MATERIALS:

i. Digital recorder
ii. Index cards (used as coping cards)

OUTLINE:

A. Overview of Session (time = 2 minutes) (0:00)

1. Preview goals for the session

** Do a mini-practice ** (time = 1 minute) (0:02)

B. Review of Medical Status and Home Practice (time = 13 minutes) (0:03)

1. Ask about the patient's progression with the knee surgery process. If they have received the surgery, ask how the procedure went and how they are doing. If they are still waiting to receive the surgery, inquire about their level of difficulty and how they are coping with the wait.

2. Review home practice from past week, asking about application of skills to pain and stress associated with pre-surgical or post-surgical period -troubleshoot as needed:

   (a) Relaxation (PMR, mini-practices, imagery): Review patient's use of these skills and the outcomes, and troubleshoot as needed.

   (b) Cognitive monitoring (thought record, unhelpful pain related thoughts): Review patient's use of the record and troubleshoot issues.

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C. Coping Thoughts – Physical Reactivation (time = 10 minutes) (0:16)

1. You previously have been using a thought record to monitor your automatic thinking and using this tool to help replace unhelpful thoughts with coping thoughts. Provide additional troubleshooting if needed.

2. Let's take a look at your Thought Record and specific thoughts you have been experiencing since the last session. Review thought record and the patient's use of unhelpful thoughts and change to more positive coping thoughts.

3. Troubleshoot use of cognitive coping strategies with patient and discuss specific scenarios.

4. Now let's focus in particular on ways of coping in the weeks after the surgery. (If the patient is already post-op, adapt the following discussion to patient's present situation.) Many patients report that after knee replacement surgery they feel overwhelmed, have more pain, can do very little and need assistance with many activities. At the same time, it is important to become more active doing physical therapy, but also to participate in social activities. Often, unhelpful thoughts play a role here and can influence feelings and actions. (Use **Handout 4-1**.)

    - Let's discuss some specific situations from the past where you have had considerable pain and how unhelpful thoughts have interfered in being more active.
    - Let's imagine that you already have had the surgery and you want to be active, but get frustrated or depressed because the pain prevents you from being able to move around the way you want.
    - What are some thoughts that might be working against you?
    - What would be some coping thoughts that could work for you in this situation?

    Help patient to find strong coping thoughts (specific to their situation) and encourage them to write these thoughts on index cards (coping cards) to be used later.

    - It can be helpful to rehearse a strategy when one is anticipating a challenge. You may want to read your coping

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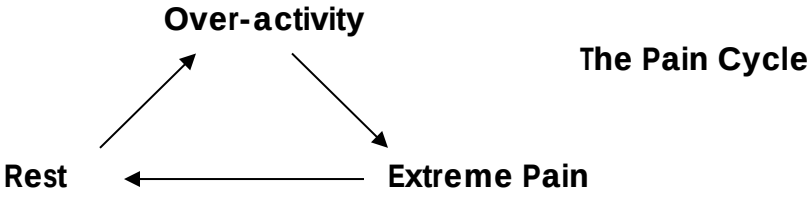
cards frequently in preparation for the time after the surgery so that when you are faced with pain and difficulties these coping thoughts will already feel natural to you.

D. Rationale for Activity: Rest Cycle (time = 10 minutes) (0:26)

1. Let's look at another way of helping you to increase your level of activity. This technique is called activity/rest cycling.

2. One of the benefits of the surgery is that it will enable you to become more active. However, as you heal and start to do some of your activities you want to learn to self-monitor so that you do not overdo. When they start feeling better some people tend to overdo or push themselves so much that they later find their pain is so severe that they are forced to rest for long periods. This is not very helpful for a variety of reasons.

3. Let's look at how this pain cycle (overdoing activities - severe pain - rest) usually repeats itself many times (use **Handout 4-2**).



4. It is particularly easy to get caught in this pain cycle after you have had new treatments like knee replacement surgery. Because your pain level may be different from before you may not know how your body will react to increased activity.

5. There are some downsides to repeating this cycle. What might be some of these downsides? (Elicit responses from patient – e.g., anticipation of pain, increased pain and fatigue, increased tension, worry, and anxiety, learn to avoid certain activities.)

6. Can you think of any ways to break out of this cycle? If patient cannot come up with ideas suggest the following: "One way is to try to get the severe pain out of the cycle. You can do this by replacing over-activity with moderate activity (give example) then take a limited rest break rather than a prolonged break."

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7. We call this the **Activity – Rest Cycle** (Refer to **Handout 4-3**).

8. The Activity-Rest Cycle is a way to better pace your activities so that you can continue or resume activities that you enjoy, want to or need to do, without having an unnecessary increase in pain.

9. By using the Activity-Rest Cycle, you can still engage in the desired activity, but you do a moderate amount and stop before your body makes you stop. You take a short rest and then can continue the activity (**Handout 4-4**). It involves 3 steps:

   Step 1 - Identify activities that you tend to overdo (e.g., working, shopping, cleaning, exercising).

   Step 2 - Set a time limit for one activity and when you reach the time limit stop and rest or relax for a reasonable length of time (10 to 20 minutes).

   Step 3 - Keep a count this week of how many times you stop yourself from overdoing and use rest and relaxation.

10. Let's do a thought experiment. What if you could magically do this – the Activity-Rest cycle)? What would happen? (List patient responses on **Handout 4-3**.)

11. We have seen that when people do this and get good at it they can build up their ability to do more of the things they want to do.

12. Other benefits of the Activity-Rest Cycle (if not listed above)
    - Avoid extreme pain
    - Fewer and shorter pain flare-ups
    - More productive
    - More stable level of activity
    - Less tension and fatigue

13. Today we will set up a cycle we think will work for you and then modify it as needed.

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E. Establishing Patient's Activity/Rest Cycle (time = 10 minutes) (0:36)

1. When was the last time you got caught in the pain cycle? Please describe one of your pain cycles.

2. Talk patient through filling in each of the three steps on **Handout 4-3**.

STEP 1:
What is one activity you tend to overdo?
- Patient should identify one activity they overdo frequently (e.g., daily, several times a week).

STEP 2:
Set a time limit. When you reach it, stop and rest or relax.
- The time limit for any given activity can range from as little as 5 minutes to as much as an hour. (List a number of possible time limits.)
- 5, 10, 15, 20, 30, 60 minutes.
- What's a reasonable time limit?
- How long do you go before you feel pain?
- How did you feel the next day?
- Help patient set reasonable time limits. If they have trouble identifying limits for different activities have them select the one activity that they tend to overdo most often.
- My time limit is: _____
- When I reach my time limit, I'll stop, rest and relax for the following length of time: _____

STEP 3:
Keep a count this week of how many times you are using the activity rest cycle.

- If patient has the tendency to overdo, reinforce the need to stop and rest or relax in between; if patient has acquired a more sedentary life-style reinforce the activity-rest cycle as a strategy to become more active.

- Discuss why keeping a count is important: increased awareness, keep track of progress, serves as a reminder, etc.

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F. Practice of Guided Imagery (time = 10 minutes) (0:46)

1. Review previous use of imagery and troubleshoot practices.

2. Ask patient to review previous images or brainstorm about new images that are calming and pleasant to them and review/list responses on board/pad.

   Have patient discuss the image(s) in detail and prompt for what they see in all directions and what they might hear, smell, taste, and touch in that scene

3. Have patient engage in an abbreviated form of relaxation, using mini-practices and any tension-release progressions as needed.

4. At the end of relaxation, read the following:

   "I'd like you to imagine yourself in a very pleasant scene **(use patient's scene of choice)**. (pause) See things in as much detail as possible. Try to be in your imaginary scene as much as possible. I want you to involve all of your senses. (pause) Imagine what you are doing? Imagine what you are seeing….hearing…..feeling…..smelling. (pause) This will become easier with practice, and it is important not only that you relax, but that your goal is to, as vividly as possible, experience a scene that you find pleasant."

   End the exercise after **5** minutes by counting backwards from 10 to 1. Patient is instructed to open his/her eyes on the count of one.

5. Have patient describe reaction to the pleasant imagery and the scenes they used. Have them go through their senses. What did they see? Hear? Smell? Feel?

6. Discuss application of pleasant imagery to pre-surgical or post-surgical period. Discuss their success in previous practices. In what other situations might it be useful?

G. Home Practice (time = 4 minutes) (0:56)

(Handout 4-5)

1. Relaxation strategies:

Progressive relaxation - listen to CD daily, preferably twice a day.
Mini-practices - 15 times a day, at least one with imagery.

2. Activity-rest cycling: Begin planning activity-rest cycles for situations in which you tend to overdo.

   Keep track of how many times you stop yourself from overdoing by using the "Activity-Rest Cycle" form (**Handout 4-7**).

3. Continue to use the "Thought Record" (**Handout 4-6**) and replace unhelpful thoughts with coping thoughts

4. Make coping cards, recording thoughts about becoming physically active again, post-surgery.

** Do a mini-practice **

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Session 5

Cognitive Coping Skills, Goal Setting, and Pleasant Activity Scheduling

GOALS:

A. Review thought record and patient's ability to recognize and replace unhelpful automatic thinking
B. Discuss goal setting to identify patient's valued activities

OUTLINE:

A. Overview of Session (time = 2 minutes) (0:00)

1. Preview goals for the session

B. Review of Home Practice/Extensions (time = 18 minutes) (0:02)

1. Ask about the patient's progression with the knee surgery process. If they have received the surgery, ask how they are doing and about their thoughts and reactions. If they are still waiting to receive the surgery, ask about how they are feeling leading up the procedure.

2. Discuss reaction from previous session. Review progress with Activity-Rest Cycling. Do problem solving around issues that come up.

3. Home practice with relaxation CD (reinforce efforts) and Imagery

4a. Review mini-practices;
- How did they use mini-practices this week?
- Were there opportunities to combine mini-practices with other skills, like communication?

4b. "As a reminder of how 'portable' mini-practices can be and of the value of weaving mini-practices into our day, we are going to do some mini-practices during today's session and during subsequent sessions."

** Guide patient through a mini-practice **

C. Review Use of Cognitive Skills, Patient's Thought Record, and Physical Reactivation (time = 10 minutes) (0:20)

1. Review patient's practice with cognitive strategies with emphasis on specific situations.

2. Review patient's Thought Record **(Handout 4-6),** coping cards and their ability to replace unhelpful automatic thinking with positive coping thoughts.

3. Discuss thoughts regarding reactivation post-surgery and specific unhelpful thoughts that have occurred.

4. Now probe some more catastrophic thinking/thoughts and help patient identify additional positive/helpful thoughts. Use **Handout 5-1**.

5. Discuss how their thoughts have affected their feelings, emotions, and how their body has responded.

D. Identifying Pleasant/Valued Activities (time = 15 minutes) (0:30)

1. Rationale
   a. As we discussed in our first session, the goals of the knee replacement are both to decrease the amount of pain you are having and to restore function to allow you to resume a more active lifestyle. In this session we will be learning ways of increasing your involvement in pleasurable and meaningful activities in a manner designed to maximize your level of functioning without increasing your pain.

   b. It is really important to find ways to engage in activities that bring you a sense of accomplishment, joy, and pleasure. This is true especially also during your time while you are waiting for the surgery and during the rehab phase.

   c. We all need to have fun and also feel like we are doing something meaningful.

   d. Engage patient in further discussion of how increasing pleasant/valued activities could be of personal benefit:
      - It is important that you set daily goals for yourself to engage in activities that bring you a sense of accomplishment, joy, and

pleasure. We all need to have fun and also feel like we are doing something worthwhile with our lives.
- Individuals who are involved in a variety of pleasant/valued activities tend to feel better and cope with pain and other stressors more effectively.
- When you are distracted you are less able to focus on your symptoms or on worrisome thoughts and as a result you experience a decrease in anxiety, depression, and frustration.
- (Refer back to Gate Control Model.) As we discussed previously, distraction from pain and reductions in negative feelings will help you close the gate and decrease pain.

e. In today's session, let's make a list of a variety of activities that you might enjoy doing or find meaningful Let's look both at activities you might enjoy during your recovery and also make some plans for bigger activities you will do when your new knee is healed and functional.

2. Identifying Pleasant/Meaningful Activities **(Handout 5-2)**
   a. Anything that comes to mind that might be enjoyable.

      Emphasize that there are 3 rules:
      "ANYTHING GOES"
      "THE MORE THE MERRIER"
      "MIX AND MATCH"

   b. The key is to engage in a variety of activities that you find really distract you and bring you a sense of pleasure or mastery.

   c. List can include things the patient is currently able to do or things patient cannot do at the moment, but is likely to do again once recovered from surgery. (Keep in mind that it easily takes 6 months to be fully recovered from TKR.)

   d. Encourage patient to list activities that may require only minutes and can fit into a busy schedule as well as plans for big projects (i.e., traveling) and everything in between.

   e. Consider options that you haven't done in the past… open your mind to new ideas/experiences.

f. Generate a list (**Handout 5-3**). The list should include both realistic and potentially "unrealistic" activities ("NO CRITICISM"); If not realistic we can cross it off later.

g. If patient has difficulty identifying pleasant/valued activities, ask how they spend their time to start discussion and refer to "Menu of Pleasant Activities" (**Handout 5-4**).

h. Be sure to include a wide range of activities (e.g., household, leisure, work, etc.). List on **Handout 5-3.** Keep **Handout 5-3** for use in future sessions.

E. Goal Setting and the Pleasant/Valued Activity Schedule

(time = 10 minutes) (0:45)

1. We recognize that patients who are candidates for knee replacement often have had to reduce or entirely eliminate many activities because of their persistent pain and reduced level of functioning. Setting and attaining goals is one of the most effective ways of resuming your involvement in pleasant/valued and valued activities.

2. Basic guidelines in setting goals: Be realistic and explicit.

3. It is helpful to think of short-term and long-term goals.

4. Have patient generate realistic and explicit pleasant/valued activities.

5. Have patient identify the five activities listed they would most like to add or increase.

   Have the patient rate each activity on a 1 (least important) to 5 (most important) scale.

6. Ask patient to set a goal of three activities they would like to do in coming week; three activities they would like to do within the next three months and one or two activities they want to plan for the time that their knee is fully functional again.

7. Make sure that activities are written down on patient handout (**Handout 5-5**).

8. We will start the session next week by reviewing what activities you did and how enjoyable they were. Additionally, we will continue to monitor your progress in achieving these goals throughout the study.

** Do a mini-practice **

F. Home Practice (Handout 5-6) (time = 5 minutes) (0:55)

1. Progressive relaxation - listen to CD (tape) daily, ideally twice a day.

2. Use Imagery alone or in combination with PMR.

3. Mini-practices - 20 times a day.

4. Activity/Rest Cycling - pay attention to your level of activity and use the A/R cycle to keep from overdoing

5. Pleasant Activity Scheduling - Do the 3 pleasant activities you listed on your schedule (**Handout 5-5**).

6. Thoughts - Continue using **Handout 5-7** to identify strong negative or positive emotions as a cue to tune into your thoughts. If any of these thoughts appear to be working against you, try to replace them with coping thoughts. If this task is difficult for you, refer to **Handout 3-2** for examples of how to replace unhelpful thoughts with coping thoughts. (Instructions can be modified according to patient's readiness and needs.)

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Session 6

Using Communication Skills to Cope with Knee Replacement Surgery Related Challenges and Cognitive Coping Techniques

GOALS:

A. Review home practice
B. Identify knee surgery related challenges and teach use of communication skills to address these
C. Teach focal point and auditory stimuli as distraction techniques

MATERIALS:

1. Digital recorder

OUTLINE:

A. Overview of Session (time = 1 minute) (0:00)

1. Preview goals for the session

B. Review of Medical Status and Home Practice (time = 14 minutes) (0:01)

1. Ask about the patient's progression with the knee surgery process. If they have received the surgery, ask how the procedure went and their thoughts and reactions to the procedure thus far.

2. Review home practice from past week, asking about application of skills to pain and stress associated with pre-surgical or post-surgical period. Troubleshoot as needed:

   (a) Relaxation (PMR, mini-practices, imagery): Review patient's use of these skills and the outcomes, and troubleshoot as needed.

   (b) Pleasant activity goals and Activity-Rest Cycle
   - Ask if patient was able to complete 3 activity goals (troubleshoot as needed).
   - Ask Patient to write 3 more pleasant activities for the coming week on **(Handout 6-1)**.
   - Discuss with patient what worked or did not work about their activity-rest cycles from the past week. If indicated, consider altering the amount of activity time or rest time as a result of observations from last week.

(c) Cognitive restructuring and thought monitoring
- Troubleshoot patient's use of thought record and substituting coping thoughts

** Do a mini-practice **

C. Communicating with Others (time = 15 minutes) (0:15)

Rationale:

Today we will spend some time addressing the challenges of communicating with family and friends.

Communicating effectively with others can be particularly difficult when you are undergoing knee replacement surgery and rehabilitation. There may be a lot of stress and uncertainty – both for you and for your friends/family – about decisions regarding treatment, what you can expect from the treatment, and about how you might feel and what activities you will able to perform as you go through the knee replacement process.

Have you had any challenges or difficulties communicating with family and/or friends about things related to your knee replacement? (Note any difficulties.)

Although it can be challenging, there are many potential benefits of communicating with your spouse or other family members and friends about your situation, and also listening to what they have to say.

Let me describe two different types of conversations (**Handout 6-2**).

Now let me give you an example of a common situation in which a husband and wife have difficulty communicating.

Example:
Jane is 8 weeks out from knee replacement surgery and during her first day back at work, she has had an upsetting interaction with her supervisor. When she gets home she wants to share her frustration and hurt feelings with her husband, John. As she begins to tell him about the situation in some detail, John is obviously affected by what she is telling him and jumps in with his thoughts about how she should have reacted in the situation and what she should do

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next. When Jane doesn't seem interested in taking his advice but tries to continue sharing her thoughts and feelings, John becomes frustrated and Jane feels that her husband is more interested in telling her what to do than in how she feels. The conversation does not work well for either of them.

The difficulty here is that Jane wants to share her experiences with John and John is trying to be helpful by suggesting ways of handling the problem. In other words, Jane is trying to have one kind of conversation (a sharing conversation) while John is trying to have another kind of conversation (a problem solving or decision-making conversation).

Have you ever experienced similar difficulties in communicating with family or friends about experiences related to your knee replacement?

Let me give you some helpful guidelines that might help (**Handout 6-3a** and **6-3b**).

D. **Role Play:** (time = 5 minutes) (0:30)

OK. Let's role play the situation you mentioned previously (select an example).

You play yourself and I will play the part of your significant other (depending on the chosen scenario).

Set the stage for the role play:

- Ask patient to describe the situation
- Have the patient be clear about the goal or type of conversation this will be
- Ask about what the patient will likely do
- Ask about what the other person will likely do

Act out the scene

E. Process and Redo Role Play (time = 5 minutes) (0:35)

Give patient feedback. Reinforce appropriate verbal and non-verbal communication skills and suggest changes as indicated. Refer to handouts when indicated.

- *Nonverbal*: appropriate voice tone, loudness, latency, eye contact, facial expression, body posture

- *Verbal*: use "I" statements (avoid "you" statements), speak in paragraphs, share positives as well as negatives, avoid "should, ought, must" or "always/never" language, avoid an excessive focus on pain or physical limitations, consider appropriate vs. inappropriate things to say in this situation.

Redo role play. If helpful, switch roles and do the role play a third time.

F. If time permits, select a second scenario to role play and follow the procedures above (time = 5 minutes) (0:40)

Note to therapist: The main thing to accomplish with this section is to assist the patient in identifying potential problem areas and then use the information in the handouts to guide the role plays and skills training in effective communication.

G. Introduction to Distraction Techniques (time = 1 minute) (0:45)

1. As we have discussed in our sessions, pain is a complex experience. Many things can affect how we experience pain including how we think and feel.

2. Remind the patient of the Gate Control Theory: Centers in your brain that process thoughts and feelings are directly linked to a gate in your spine. This gate can be opened or closed, which in turn affects the amount of pain you experience.

3. Using distraction techniques to change your thoughts and feelings can reduce pain by helping to close the gate to the pain pathway.

4. The distraction techniques we are going to review today are known as focal point, and focusing on auditory stimuli.

H. Additional Distraction Techniques (time = 10 minutes) (0:46)

You have learned that when you are experiencing a pain flare or unhelpful thoughts and feelings it can help to refocus your attention onto pleasant scenes as you did in our imagery exercise earlier.

1. Other methods of distraction involve deliberately focusing on pleasant or neutral events/objects (focal point) or on sounds in the environment (sound of a waterfall, classical music, etc.).

   Ask patient: "Have you ever become so focused on something that you almost forgot your pain or some other unpleasant experience?"

2. Ask patient for examples in which they have used an attention diversion strategy to control pain. If patient cannot come up with examples, provide some additional examples of focal point distractions (e.g., counting ceiling or floor tiles, looking at a lava lamp, examining construction of a piece of furniture, concentrating on a difficult piece of needlework, or a challenging card game) and auditory distractions (music, fan of the AC/Heating system, voices, traffic going by, etc.

3. **(Handout 6-4)** Focal point and auditory distraction involves:

   a. First completing a mini-practice to relax.
   b. Enhancing the relaxation from the mini-practice by concentrating your attention on something you can see or hear in your immediate environment.

4. Demonstration: ask patient to do a mini-practice and then select some visual or auditory aspect of physical surroundings and focus on it for two minutes.

   a. Rate ability to concentrate on 0-100 scale (0 = can't concentrate at all, 100 = perfect concentration).
   b. Probe for effects of the distraction: "What was that like for you?" Troubleshoot as needed and encourage practice to identify those distractions that work best for them.

I. Home Practice (time = 4 minutes) (0:56)
(Handout 6-5)

Menu of Coping Skills

1. Progressive relaxation - listen to CD daily, ideally twice a day.

2. Practice with Imagery

3. Mini-practices - 20 times a day, at least one with imagery.

4. Activity-rest cycling: Continue planning activity-rest cycles for situations in which you tend to overdo things.

5. Continue to monitor unhelpful thoughts and replace with thoughts that work for you. Use **Handout 6-6**, "Thought Record."

6. Pleasant-Activity Scheduling – continue to identify and schedule pleasant/valued activities.

7. Communication – practice communication techniques with a friend or family member and note any issues or problems to discuss next session.

8. Distraction (Focal Point and Auditory Stimuli) - use these strategies as additional methods of coping with pain.

** Do a mini-practice **

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Session 7

Integration of Communication, Cognitive Skills and Problem Solving

GOALS:

A. Discuss specific examples of communication that have occurred, examine thoughts and feelings related to each, and problem solve these situations
B. Review menu of coping skills and discuss combining and mixing and matching

MATERIALS:

1. Digital recorder

OUTLINE:

A. Overview of Session (time = 1 minute) (0:00)

1. Preview goals for the session

** Do a mini-practice **

B. Review of Home Practice (time = 19 minutes) (0:01)

Review home practice and have patient chose 3 Pleasant Activities for the upcoming week. Refer to **Handout 7-1**.

C. Review of Communication Home Practice

Discuss specific issues that came up, process and reinforce. Make notes for possible later use in Problem Solving portion of session.

** Do a Mini-Practice **

D. Review of Pain Coping Skills Menu (Handout 7-2) (time = 10 minutes) (0:20)

You have developed a number of skills to reduce pain. It can be helpful to review these skills and discuss how you have been trying to apply them in a way that works for you. We're going to spend the next several minutes going through each of the skills we have discussed in here so far

(Review each skill and its rationale with the patient and discuss how he/she has applied the skill to try to reduce pain and tension. Use the following prompts as needed.)

1. Progressive Muscle Relaxation
    a. What is it?
    b. How are you using it?
    c. Therapist reinforces patient, provides educational information to fill in above.

2. Mini-practices
    a. What is it?
    b. How are you using it?
    c. Therapist provides educational information to fill in above

3. Pleasant Activity Scheduling
    a. What is it?
    b. How are you using it?
    c. Therapist provides educational information to fill in above

4. Coping Thoughts/Calming self-statements:
    a. What is it?
    b. How are you using it?
    c. Therapist provides educational information to fill in above

5. The Activity-Rest Cycle
    a. What is it?
    b. How are you using it?
    c. Therapist provides educational information to fill in above

6. Pleasant Imagery
    a. What is it?
    b. How are you using it?
    c. Therapist provides educational information to fill in above

7. Distraction Techniques
    a. What are these?
    b. How are you using them?
    c. Therapist provides educational information to fill in above

8. Communication
    a. What is it?

b. How are you using it?
c. Therapist provides educational information to fill in above

E. Applying Your Pain Coping Skills to Problem Situations: Problem Solving
(time = 25 minutes) (0:30)

1. Rationale for problem solving

a. You have experienced positive benefits of applying your pain coping skills.
b. There may be some problematic or challenging situations however, where you find it difficult to cope with pain using only one of your coping skills (e.g., relaxation).
c. These situations can often be managed successfully by combining different pain coping skills.
d. To help you determine which techniques might work best in any given situation we can use a problem solving model that involves three steps.

2. Problem Solving Exercise (refer to **Handout 7-3**).

STEP 1: Describe the situation
- What is the problem?
- Describe the problem (challenge) as precisely as you can
- Break down large, complex problems into several smaller problems and deal with them one at a time

STEP 2: Why is it a problem?
- Specify how the situation affects pain, body responses, thoughts/feelings, and behavior.
- Difficulties you are likely to have in the situation (e.g., tension, worry, have to cancel activity, increased pain)

STEP 3: Brainstorm for solutions.
- List possible solutions including coping skills you can apply (e.g., relaxation, activity-rest cycle)

Brainstorming guidelines:
- ANYTHING GOES: Be open to all possibilities and consider all options.
- NO CRITICISM: Do not criticize or reject any ideas initially.
- MIX AND MATCH: Think about combining different strategies

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3. Ask patient to identify a problem situation and work through each of the three steps using **Handout 7-4**, **"**Problem-Solving Worksheet."

    - Make a plan of action: be specific - when, how, etc.
    - Repeat for a second challenging situation if there is time.

E. Home Practice (time = 5 minutes) (0:55)
(Handout 7-5)

1. Progressive relaxation - listen to CD daily, ideally twice a day.

2. Practice with Imagery

3. Mini-practices - 20 times a day, at least one with imagery

4. Activity-rest cycling: Continue planning activity-rest cycles for situations in which you tend to overdo things.

5. Practice Coping Thoughts with "Though Record" **(Handout 7-6)**.

6. Pleasant-Activity Scheduling – continue to identify and schedule pleasant/valued activities.

7. Communication – practice communication with a friend or family member and consider issues or problems.

8. Distraction (Focal Point and Auditory Stimuli) - use these strategies as additional methods of coping with pain.

** Do a mini-practice **

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Session 8

Maintenance, Setbacks, and Termination

GOALS:

A. Teach how to recognize and deal with setbacks.
B. Develop a maintenance plan, tailoring it to the individual patient's needs.
C. Wrap things up with termination.

OUTLINE:

A. Overview of Session (time = 5 minutes) (0:00)

1. Preview goals: review home practice, discuss coping with setbacks, discuss a plan for maintenance of skills, and discuss termination.

** Do a Mini-Practice **

B. Review of Home Practice of New Skills (time = 5 minutes) (0:05)

1. Reactions to last session?

2. Review cognitive skills (identifying and challenging unhelpful thoughts and replacing them with coping thoughts)and determine when this skill was used this week. Obtain details, reinforce patient, and discuss further ways of changing unhelpful thoughts. Troubleshoot difficulties.

C. Review Progress in Study

1. What I would like to do now is to review hose coping skills you have found most helpful and discuss how you think they might be helpful to you in the future. (Refer back to **Handout 7-2**.)

2. Identify the coping skills from last session that the patient said had benefitted them most.

- What makes these particular skills be more beneficial than some of the others?

- Address skills that the patient has not used consistently: e.g., "You have learned how to use this/these skills and have them in your Coping Skills toolbox. You can always go back and use them when needed."

D. Rationale for Relapse Prevention (time = 10 minutes) (0:10)

Now that we have come to the end of our coping skills training sessions, we want to look ahead and identify possible challenges that you might have to deal with that could lead to setbacks in coping and how to prevent or manage these setbacks when they do occur.....

a. Setbacks happen to everyone. It is common to have flares in pain, or increases in negative emotion (e.g., sadness, depression).

b. You might experience a setback in your emotional health or coping abilities for any number of other reasons. For example, having a flare in your pain might trigger a setback in emotional health. Or you may experience a loss, or something may go wrong in your family or with your financial situation. Or maybe you will just start feeling blue or worried, or have a flare-up of pain, for no identifiable reason at all.

c. There are some things that you can do to help reduce the chances of a setback:
   - Continue to follow-up with your medical team per their recommendations and keep them fully informed.
   - Regular practice of coping strategies (if you don't use it, you can lose it!)

d. However, in some cases setbacks cannot be avoided. In these instances, it is helpful to have a personal plan for coping with a setback that you can put into place early on during the course of the setback.

e. The more prepared you are for a problem, the better you will be able to handle it.

f. We will spend the next part of today's session coming up with a plan for coping with setbacks.

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E. Coping Plan for Setbacks (time = 20 minutes) (0:20)

1. Let's think of any challenges you might come up in the future. If the patient cannot identify anything, use the following common scenario or one that is relevant for the patient:

   "Let's say that things are going really well for you and that your pain has been well controlled for some time. However, all of a sudden your symptoms start to flare and you find that you are having difficulty coping. How would this affect you? (i.e., what would you be thinking or feeling? What other physical symptoms might you be having? How would this affect your behavior?)"

2. Other setbacks:

   Have you had any different setbacks that we haven't talked about, or are there any other potential setbacks you anticipate occurring in the future? (Refer to **Handout 8-2**.)

   If yes, discuss a coping plan together with the patient.

F. Plan for Maintaining Progress (time = 10 minutes) (0:40)

1. As we discussed, regular practice of the coping skills is the best way to prevent and minimize the occurrence of setbacks. Now that you have learned the basic set of skills, it's important to develop a plan for maintaining practice over the long run.

2. As we go along, we can fill out this Plan for Maintaining Progress (**Handout 8-3**). (With each skill, discuss with patient how he/she has used method to date and how he/she would like to continue to use in future. Discuss any potential barriers to continued use of this skill, and problem-solve as needed.)

3. Have patient complete the Daily Practice Plan part of **Handout 8-3**.

4. Discuss short-term goals with the patient. What would he/she like to accomplish in the next month or so? Discuss with patient what is reasonable. Have patient list these on **Handout 8-3**.

5. Discuss long-term goals with the patient—those goals over future months/years. Help patient to identify several goals and complete **Handout 8-3**.

** Do a mini-practice **

G. Termination (time = 10 minutes) (0:50)

1. As you know, this is our last session. What thoughts have you had about that? Explore patient's thoughts and feelings about the sessions. Validate their feelings, acknowledge your own feelings if appropriate.

2. Thank patient for their participation and their work.

3. Empower patient: give patient credit for success in program, and if appropriate, express confidence in his/her ability to continue to handle problems effectively.

4. Discuss resources or contingency plan if patient has trouble coping with problems on his or her own.

5. Recommend that patient have a "self-therapy" meeting once a week to review progress, problems and use of coping skills. Help patient select a time for meeting.

6. Set goals with patient for further progress.

7. If patient wants feedback regarding the results of the study, provide information about how and when this might happen.

8. If patient requests further contact, explain again about the need for consistency in number and type of sessions. Direct the patient to resources that are typically available in the community or, if necessary, assist by making a referral.

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Pain Coping Skills Manual for Patients

Session Overview

Session 1:
Introduction, Overview of Theory and Skills, and Progressive Relaxation Training

Session 2:
Mini-Practices and Coping Thoughts Part 1

Session 3:
Coping Thoughts Part 2 and Pleasant Imagery

Session 4:
Using Coping Thoughts after Surgery and Activity Rest Cycle

Session 5:
Pleasant/Valued Activities and Goal Setting

Session 6:
Communication and Distraction/Refocusing Techniques

Session 7:
Communication Follow-Up and Problem Solving

Session 8:
Coping with Setbacks and Maintenance Plan

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Handout 1-1

BASIC INFORMATION

There are 8 Coping Skills Training Sessions, each of which will last for 1 hour. Every session is different so it is important that you participate each week. In the course of our sessions, we invite you to share and discuss some personal matters. We assure you that our sessions will be confidential.

We would like to encourage you to ask questions during your sessions. If we don't have the answers to all of your questions, we will try to get an answer and discuss it in a later session.

If you will be late or miss a session, call the therapist. Your therapist is _____ and you can call him/her at:_____.

DATE	TIME	SESSION
_____	_____	Session 1
_____	_____	Session 2
_____	_____	Session 3
_____	_____	Session 4
_____	_____	Session 5
_____	_____	Session 6
_____	_____	Session 7
_____	_____	Session 8

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Handout 1-2

OVERVIEW

In these sessions, you will be learning skills that will help you manage stress and meet your goals for increasing activities after knee replacement surgery. Many of these skills are also quite helpful in decreasing and controlling pain.

Session	Topic
1	Introduction, Overview of Theory and Skills, and Progressive Relaxation Training
2	Mini-Practices and Coping Thoughts-Part 1
3	Coping Thoughts-Part 2 and Pleasant Imagery
4	Using Coping Thoughts after Surgery and Activity Rest-Cycle
5	Pleasant/Valued Activities and Goal Setting
6	Communication and Distraction/Refocusing Techniques
7	Communication Follow-up - and Problem Solving
8	Coping with Setbacks and Maintenance Plan

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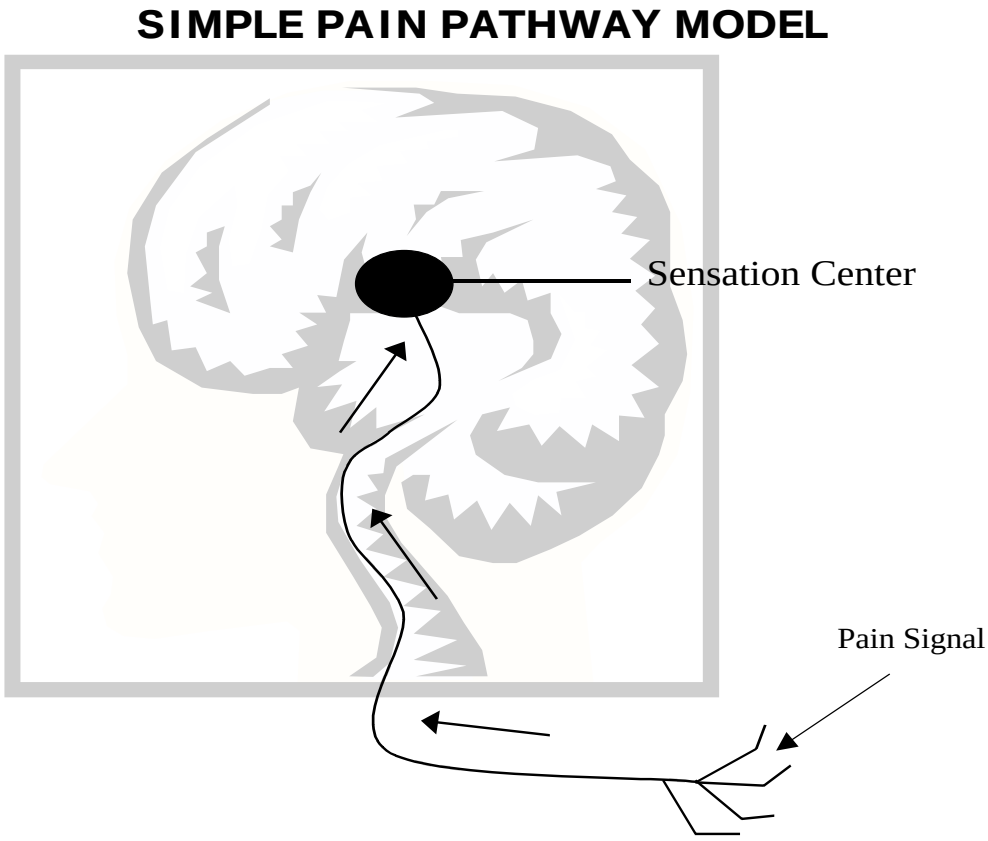
Handout 1-3



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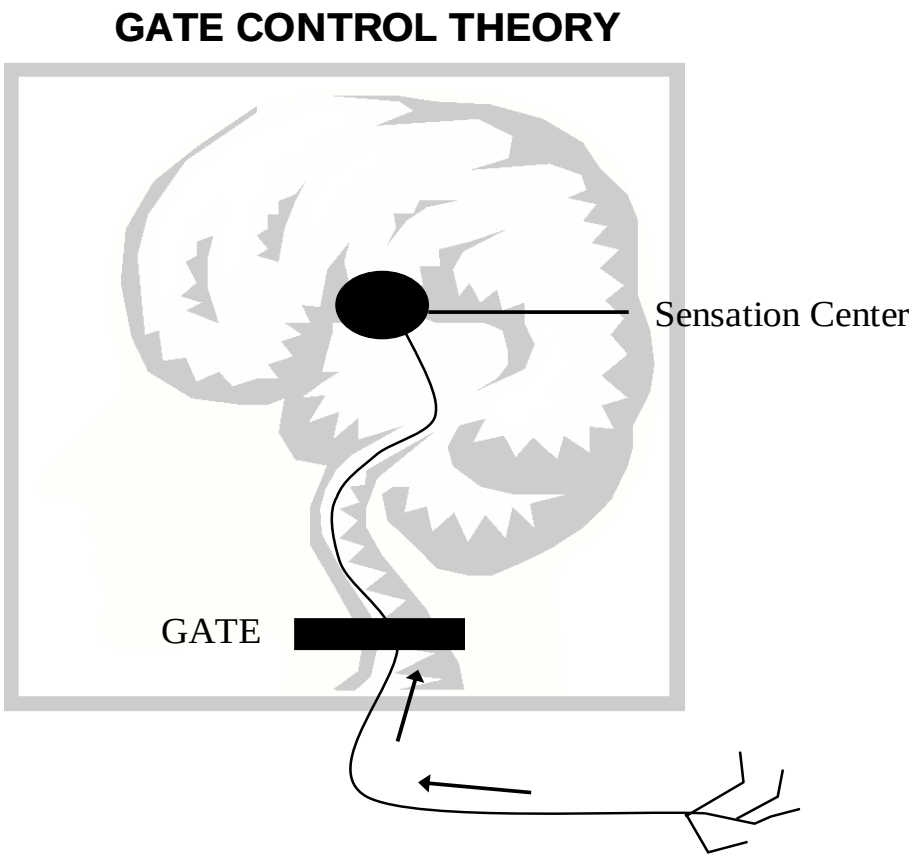
Handout 1-4



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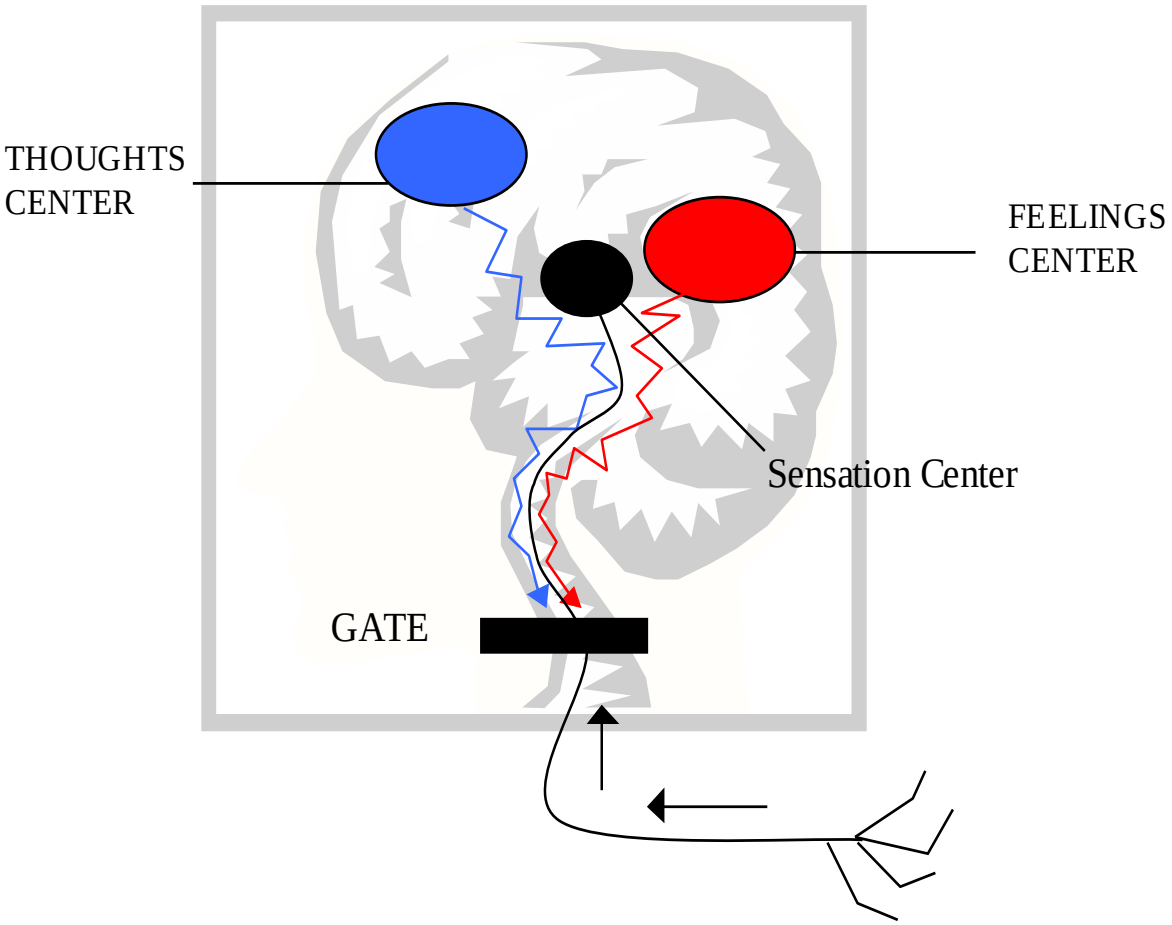
Handout 1-5



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Handout 1-6

THE PAIN COPING SKILLS TRAINING SESSIONS: WHY AND HOW THEY CAN WORK

The purpose of these sessions is to teach you skills that you can use to control and decrease pain in addition to other medical interventions. The skills we will teach you are based on the latest findings from our own research and research carried out at other university medical centers. Some of the skills will be for controlling pain while other skills will help you to better manage additional problems caused by pain.

The pain control skills you will learn are based on recent scientific discoveries about pain. Scientists have long believed that there was one pain pathway that carried pain signals from the site of injury along nerves in the spine to the brain. When the pain signals reach the brain, the individual feels pain. In the 1960s scientists began to raise questions about the idea of a single pain pathway. They were puzzled by the fact that some individuals having major wartime injuries reported having little or no pain. They were also puzzled by patients who had amputations of a leg or arm and reported having severe pain in the missing limb. The idea of a single pain pathway could not explain these observations.

In the late 1960s scientists developed a new theory of pain called the "Gate Control Theory." According to this theory, there is a gate in the spinal cord that can be opened or closed. When the gate is closed it can stop pain messages from going up the pain pathway to the brain. When the gate is open, pain signals go right to the brain. Scientists also found that there are nerves that go from the emotional, thought, and activity centers of your brain to the gate in the pain pathway. Research studies suggest that activation in the emotion, thought, and activity centers of the brain can cause the gate to be open or closed. This is probably why many people notice that their thoughts, feelings, and activities have a big effect on pain.

To summarize, new research findings indicate that thoughts, feelings, and activities can have a big effect on how much pain we feel by causing the gate in the pain pathway to open or close. The pain coping skills that you will learn will teach you to control thoughts, feelings, and actions that affect pain. These skills will help you control or decrease pain. You will also learn to maintain frequent practice of pain coping skills and to better manage problems caused by pain.

http://dx.doi.org/10.2106/JBJS.18.00621

Handout 1-6

In each session, you will learn new coping skills. You will have a chance to practice the coping skills and your therapist will give you feedback and suggestions on how to make these coping skills work best for you. In between sessions, you will be asked to practice on your own in order to master the coping skills you learn. You will need to practice the skills throughout the time you are attending the sessions because that is how long it takes to learn the skills well enough to get their full benefits.

By the completion of the sessions you will have a "menu" of pain coping skills that you can choose from. The following menu lists the pain coping skills we will focus on.

Menu of Pain Coping Skills

- Progressive relaxation
- Mini relaxation practices
- Pleasant imagery
- Distraction techniques
- Pleasant activity scheduling
- Activity/rest cycling
- Coping Thoughts
- Communication skills
- Problem Solving

http://dx.doi.org/10.2106/JBJS.18.00621

Handout 1-7

PROGRESSIVE MUSCLE RELAXATION

Progressive Muscle Relaxation (PMR) is a technique that induces a state of deep relaxation in your body. It is a very helpful skill when coping with pain.

Here are some benefits you will get from practicing PMR regularly:

Reduces pain.

Muscle relaxation reduces pain, while muscle tension increases pain.

Emotional distress is reduced.

Muscle relaxation helps to feel calm.

Lets you be at ease.

Awareness of tense muscles.

Increases awareness so you can catch tension early and release it.

X discover for yourself more benefits.

You may notice that you sleep better after PMR or are able to concentrate more easily after doing PMR.

http://dx.doi.org/10.2106/JBJS.18.00621

Handout 1-8

PROGRESSIVE MUSCLE RELAXATION TRAINING

What is Progressive Muscle Relaxation Training?

- PMR training is a way to learn how to relax.
- In order to learn how to relax, you need to pay attention to the feelings of tension and relaxation in your body.
- PMR involves tensing and relaxing various muscle groups throughout the body.
- With practice, this technique will help you increase your awareness of tension in your body and keep your tension levels low.
- Relaxation is a skill that can be learned just as any other skill such as driving a car, playing a musical instrument, or typing. It just takes practice!

When and how to practice?

- It takes a few weeks of daily practice with the relaxation CD to get a strong relaxation response. Practice at least once a day (twice a day is even better).
- It is important to have a quiet, comfortable place to practice. There should be no interruptions, phone calls, no worries about doing chores, etc.
- During the learning phase, practice at a time when you are most relaxed, usually early in the day.
- Don't be discouraged if at first it is difficult for you to relax completely. If you try too hard, you will interfere with the relaxation response. It will come naturally with practice.

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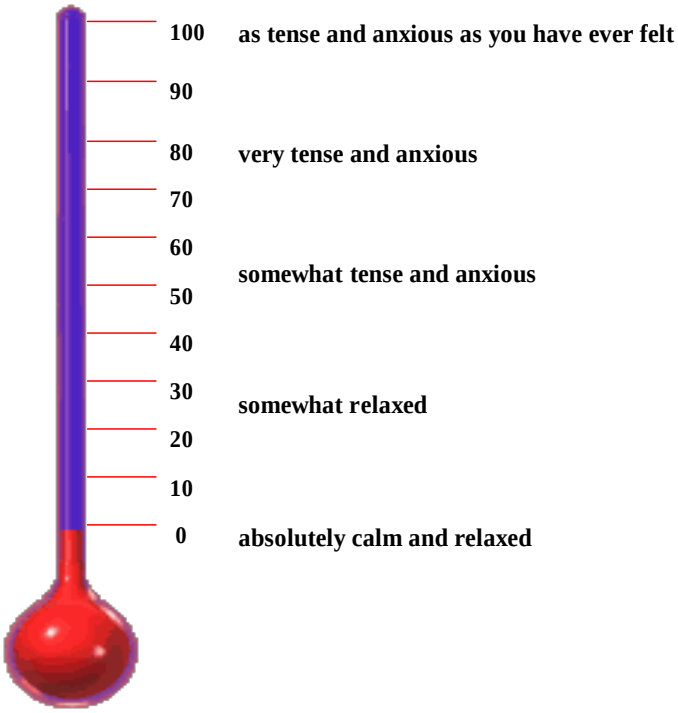
Handout 1-9

TENSION THERMOMETER

Pay attention to your body and how tense or relaxed it might be.
Decide how tense you feel at this moment and circle the number that best describes your tension.



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Handout 1-10

Home Practice

The different techniques you are learning in this program are really skills that require regular practice. We strongly recommend that you practice between sessions in order for you to get the benefits from the Coping Skills Training.

- We suggest that you practice Progressive Muscle Relaxation using the CD at least once a day, ideally twice a day.
- Write down any questions you may have.

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Handout 2-1

MINI-PRACTICES

For relaxation to benefit you the most, you need to learn how to relax and calm yourself upon your command. This skill can be very helpful when you are feeling increased tension, pain, or other symptoms but you are unable to go to a secluded area to do progressive relaxation.

To Do a Mini-Practice:

- Stop yourself.
- Take a long smooth breath.
- Say the word “relax” to yourself.
- Allow yourself to relax and focus on sensations of relaxation flowing through your body.
- Feel the relaxation spreading down through your jaw. Allow sensations of heaviness and relaxation to flow downward through your shoulders, through your arms and hands, down into your stomach, and into your legs and feet.
- After 30 seconds go back to what you were doing, regardless of how well you have succeeded in relaxing.

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Handout 2-2

REMINDERS TO DO MINI-PRACTICES

Your goal is to do about 5 mini-practices the first day and then gradually build up to about 20 mini-practices a day over the next few weeks.

You can remind yourself to do a mini-practice in many different ways:

- Some people do a mini-practice every time they feel annoyed or tense.
- Other people do one every time they stop at a traffic light or pick up the telephone.
- You can remind yourself to do a mini-practice by placing adhesive "dots" around the house (by the door, near your mirror) or on personal belongings (such as a watch, or pocketbook). Every time you see a "dot," you will be reminded to do a mini-practice.

It doesn't matter how you choose to remind yourself to relax; what is important is that you practice frequently. Little by little you can develop a habit of keeping yourself relaxed throughout the day.

http://dx.doi.org/10.2106/JBJS.18.00621

Handout 2-3

TIPS FOR COMMUNICATING WITH YOUR HEALTH CARE PROFESSIONAL

- Bring a written list of question and concerns
- Ask a family member or a friend to accompany you to the doctor's appointment. Choose someone who can give you emotional support, who listens and remembers well, and who can think objectively. Ideally the same person will be with you every time.
- Take notes or have someone else take notes
- Make sure you understand the words. Ask to hear explanations in familiar terms.

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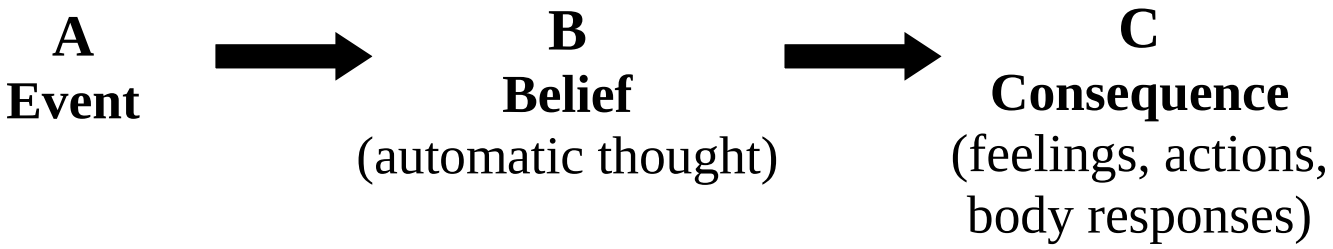
Handout 2-4

HOW THOUGHTS AFFECT RESPONSES

We often observe events as they occur (A) and then the consequences of those events (C).

What we don't observe is the step in between, our thoughts or beliefs about the event (B).



We all have thoughts constantly going through our heads as we take in and evaluate the world around us. We call these automatic thoughts. Often, we don't even notice them; they're like reflexes. However they can have a significant effect on how we feel and act, and on how our body responds.

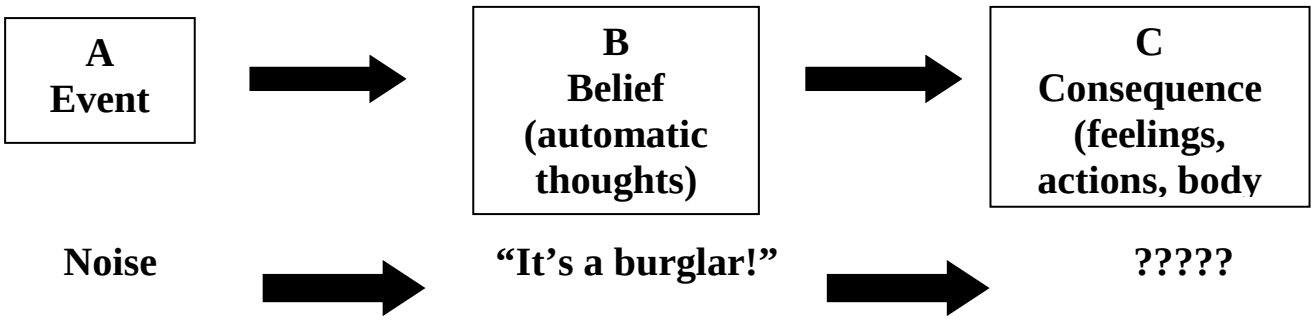
http://dx.doi.org/10.2106/JBJS.18.00621

Handout 2-5

HOW THOUGHTS AFFECT RESPONSES

"Noise in the Night" Example:

Suppose you are downstairs late at night and you hear a noise outside (A). If you think that the noise is a burglar, how would you feel? What would you do?



What if instead you thought that the noise was your cat knocking over the garbage can? How would you feel then, what would you do?

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Handout 2-6a

HOW THOUGHTS AFFECT RESPONSES

Blind Man Example:

How we think about difficult situations influences how we feel. Some thoughts help us cope effectively with difficult situations and work for us. Other thoughts make it more difficult for us to cope with troublesome situations and work against us.

Consider an example of a man who was blinded in a welding accident. It is two years later and the man is still feeling angry, depressed, upset, and alone. He is very irritable and difficult to live with. However, his thoughts or beliefs about his situation may be contributing to his problem. The man's thoughts are working against him in this situation and are contributing to his negative feelings. You can record his problem using the following illustration.

What are the thoughts that may contribute to the way he feels and how he is doing?

_____
_____
_____
_____
_____

What would be more helpful thoughts in this situation?

_____
_____
_____
_____
_____

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Handout 2-6b

RECOGNIZING THOUGHTS THAT ARE WORKING AGAINST YOU: USING A THOUGHT RECORD

This form is called a thought record and can help you think about and analyze situations in which your thoughts may be working against you. Try to identify any thoughts you are having that may be working against you.

A **Event**	**B** **Thoughts**	**C** **Consequences** (feelings, actions, body responses)

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Handout 2-7

THOUGHT RECORD FORM

A **Event**	**B** **Thoughts**	**C** **Consequences** (feelings, actions, body responses)

http://dx.doi.org/10.2106/JBJS.18.00621

Handout 2-8

Home Practice

- Continue to practice the Progressive Relaxation (PMR) twice daily.

- Do frequent mini-practices; start with five per day and build up to about 20 throughout the day (one or two every hour).

- Monitor your thoughts. Take a moment every day, think about and analyze situations in which your thoughts may be working against you. Record this in your *Thought Record Form* (Handout 2-7).

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Handout 3-1

IDENTIFYING UNHELPFUL AUTOMATIC THOUGHTS

These are some thoughts that people with pain sometimes report having.

Check the ones that apply to you or write in some.

Self-defeating thoughts:

- ❑ I cannot go on like this.
- ❑ I am a weak person.
- ❑ I can't do anything I used to do; I am useless.
- ❑ There is no way that I can deal with this pain.
- ❑ I can't do anything or go anywhere anymore.
- ❑ No one really understands my problem.
- ❑ I am a burden on my friends and family.
- ❑ Why me? I didn't do anything to deserve this.
- ❑ I need help with everything these days.
- ❑ I can't take anymore.
- ❑ I can't stand this pain any longer.
- ❑ I am definitely going to get hurt if I try to do something for myself.
- ❑ If things go on like this, I won't be able to cope.
- ❑ I am worthless when I am like this.
- ❑
- ❑

These thoughts can lead to emotions and feeling such as:

Depression	Guilty feelings	Alienation
Anger	Resentment	Isolation
Frustration	Jealousy	Fear

Others: _____

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Handout 3-2

USING COPING THOUGHTS

One way to deal with these automatic unhelpful thoughts is to try to replace them with coping thoughts. For example:

Unhelpful Thought	*Coping Thoughts*
1. I cannot do anything.	I may not be able to do everything I used to but there are things I can do.
2. I can't deal with this pain.	There are things that I can do to control and decrease the pain.
3. There is no hope.	Change is possible; there is always hope.
4. I'm a burden on my family/friends.	My family cares about me. There are things I can do for my family.
5. _____	_____
6. _____	_____
7. _____	_____

Your thoughts influence:

- how you feel
- how you act
- how your body responds

Some thoughts work for you – some work against you

Goal: To focus on thoughts that help you cope with pain and other difficult situations.

http://dx.doi.org/10.2106/JBJS.18.00621

Handout 3-3

THOUGHT RECORD

First identify thoughts you are having that are not helpful, that are working against you. Then replace these thoughts with thoughts that work for you. Reread these coping thoughts frequently until they feel more natural to you.

Unhelpful Thoughts	Coping Thoughts

http://dx.doi.org/10.2106/JBJS.18.00621

Handout 3-4

PLEASANT IMAGERY

What is pleasant imagery?

- Imagery is using your imagination to create a pleasant scene, much like what you do when you daydream.

- Studies have shown that imagery is a very effective technique for reducing stress and pain.

It can help by:

- Distracting you from unpleasant thoughts or experiences. When you are concentrating on something pleasant, you are not able to pay as much attention to your discomfort.

- Helping you relax. You can use imagery along with the muscle relaxation exercise to enhance the benefits of relaxation, or you can use it alone.

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Handout 3-5

HOW DO YOU USE PLEASANT IMAGERY?

- You are in control of imagery: you control whether or not to use imagery, what kind of imagery to use, and when to change imagery.

- You can use any images that are pleasant for you. When you want to use imagery to help you relax it is best to choose an image that is calming and peaceful.

- You may revisit a place you have been before or a place you always wanted to go to.

Guidelines for practicing with imagery:

- Start by taking a deep breath and allowing yourself to relax.
- Try to involve all your senses (what you see, hear, feel, taste, smell).
- Try to imagine that you are actually there in the scene, not just looking at yourself in it.
- Practice for a specific period of time (at least 5 minutes).
- To end imagery, you may slowly count backwards from 10 to 1.

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Handout 3-6

Home Practice

- Continue to practice the Progressive Relaxation (PMR) daily, ideally twice daily.
- Use Imagery either alone or in combination with PMR.
- Do frequent mini-practices; start with five per day and build up to about 20 throughout the day (one or two every hour).
- Monitor your thoughts. Take a moment every day, think about and analyze situations in which your thoughts may be working against you then replace these thoughts with Coping Thoughts. Record these in your Thought Record Form (Handout 3-7).

http://dx.doi.org/10.2106/JBJS.18.00621

Handout 3-7

THOUGHT RECORD

First identify thoughts you are having that are not helpful, that are working against you. Then replace these thoughts with thoughts that work for you. Reread these coping thoughts frequently until they feel more natural to you.

Unhelpful Thoughts	Coping Thoughts

http://dx.doi.org/10.2106/JBJS.18.00621

Handout 4-1

THOUGHT RECORD

First identify thoughts you are having that are not helpful, that are working against you. Then replace these thoughts with thoughts that work for you. Reread these coping thoughts frequently until they feel more natural to you.

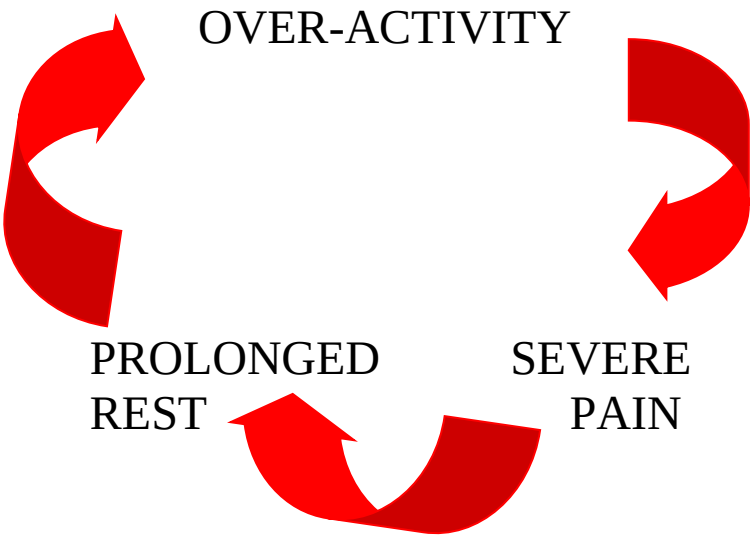
Unhelpful Thoughts	Coping Thoughts

http://dx.doi.org/10.2106/JBJS.18.00621

Handout 4-2

THE PAIN CYCLE

It is important to push yourself to do your physical therapy exercises after the surgery even though you are hurting. However, you do not want to overdo activities. Some people tend to overdo or push themselves so much that they later find their pain is so severe that they are forced to rest for long periods. This is not very helpful.



There are many negative consequences of this cycle including:

- anticipating symptoms
- increased severity of symptoms
- increased tension, worry and anxiety
- avoidance of activity
- deconditioning

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Handout 4-3

THE ACTIVITY-REST CYCLE

The activity-rest cycle is a better way to pace your activities.

What are some benefits that might come from using the activity rest cycle?

_____
_____
_____
_____
_____
_____
_____
_____
_____

http://dx.doi.org/10.2106/JBJS.18.00621

Handout 4-4

COMBATING THE TENDENCY TO OVERDO: THE ACTIVITY-REST CYCLE

The Activity-Rest Cycle is a better way to pace your activities. To use this cycle you need to:

1) Identify activities you tend to overdo

2) Set a realistic time limit for these activities and when you reach the time limit stop, rest and relax

3) Keep a count of how many times you stop yourself from overdoing and use rest and relaxation.

To set up an Activity-Rest Cycle that will work for you, fill in the following:

STEP 1: What is one activity you tend to overdo frequently?

_____

STEP 2: Set a time limit; when you reach it STOP and REST or RELAX

My time limit is: _____

When I reach my time limit, I will stop, rest and relax for the following length of time: _____

STEP 3: Keep a count this week of how many times you stop yourself from overdoing and rest or relax.

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Handout 4-5

Home Practice

- Continue to practice the Progressive Relaxation (PMR) daily, ideally twice daily.
- Use Imagery either alone or in combination with PMR.
- Do frequent mini-practices; build up to about 20 throughout the day (one or two every hour).
- Use the Activity-Rest-Cycle with different activities you are doing. Pay attention to how you feel afterwards, and keep a count of how many times you do this
- Monitor your thoughts. Notice thoughts may be working against you and replace them with Coping Thoughts. Record these in your Thought Record Form (Handout 4-6) or on Coping Cards.

http://dx.doi.org/10.2106/JBJS.18.00621

Handout 4-6

THOUGHT RECORD

First identify thoughts you are having that are not helpful, that are working against you. Then replace these thoughts with thoughts that work for you. Reread these coping thoughts frequently until they feel more natural to you.

Unhelpful Thoughts	Coping Thoughts

http://dx.doi.org/10.2106/JBJS.18.00621

Handout 4-7

Activity-Rest Cycle Record

Here is an easy way to keep track of your Activity-Rest Cycling. Simply record the date, the type of activity and how many "activity-rest cycles" you completed while doing that particular activity.

An "activity-rest cycle" describes a certain amount of time doing an activity as well as the following rest period.

If your goal is to work in the garden for 20 minutes and then rest for 20 minutes, you have completed **ONE** "activity-rest cycle." If you were to work in the garden for another 20 minutes, followed by another 20-minute rest period, you have then completed **TWO** "activity-rest cycles."

Date	Activity	Number of Cycles

http://dx.doi.org/10.2106/JBJS.18.00621

Handout 5-1

THOUGHT RECORD

First identify thoughts you are having that are not helpful, that are working against you. Then replace these thoughts with thoughts that work for you. Reread these coping thoughts frequently until they feel more natural to you.

Unhelpful Thoughts	Coping Thoughts

http://dx.doi.org/10.2106/JBJS.18.00621

Handout 5-2

BRAINSTORMING GUIDELINES

When trying to come up with new ideas for pleasant activities, remember the following guidelines:

ANYTHING GOES – Open your mind to all possibilities and consider all options.

THE MORE THE MERRIER – The more ideas you put on your initial list, the better. You can always cut things out later. There may be ways to modify activities you don't think you can do.

MIX AND MATCH – Think about combining different activities (e.g., perhaps read while enjoying fresh air or talk to a friend while going for a drive).

NO CRITICISM – Do not criticize or reject any ideas initially.

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Handout 5-3

Pleasant Activities I Want to Do:

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Handout 5-4

MENU OF PLEASANT ACTIVITIES

Play a musical instrument
Listen to music
Dance
Watch a sunset/sunrise
Laugh at yourself
Play with a child
Take a walk
Take a class
Clean out a closet
Look at the clouds
Go fishing
Enjoy a cup of hot tea
Get up early and enjoy the quiet
Take in a funny movie
Read a good book
Buy some new clothes
Eat by candlelight
Sit by a fire
Take a long bath
Fly a kite
Talk on the phone with a friend
Visit a friend
Go to a concert
Go to a ballgame
Buy a present for someone
Take a walk in the grass with your shoes off
Look out a window
Have a water fight
Go sailing
Drink a cup of cocoa
Watch the rain
Listen to a story

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Handout 5-5

MY PLEASANT ACTIVITY GOALS

Pleasant Activities I Want To Do In the Next Week

1.

2.

3.

http://dx.doi.org/10.2106/JBJS.18.00621

Handout 5-6

Home Practice

- Continue to practice the Progressive Relaxation (PMR) daily, ideally twice daily.
- Use Imagery either alone or in combination with PMR.
- Do frequent mini-practices; build up to about 20 throughout the day (one or two every hour).
- Continue to use the Activity-Rest-Cycle with different activities you are doing.
- Monitor your thoughts. Notice thoughts may be working against you and replace them with Coping Thoughts. Record these in your Thought Record Form (Handout 5-7) or on Coping Cards.
- Enjoy your pleasant activities!

http://dx.doi.org/10.2106/JBJS.18.00621

Handout 5-7

THOUGHT RECORD

First identify thoughts you are having that are not helpful, that are working against you. Then replace these thoughts with thoughts that work for you. Reread these coping thoughts frequently until they feel more natural to you.

Unhelpful Thoughts	Coping Thoughts

http://dx.doi.org/10.2106/JBJS.18.00621

Handout 6-1

WEEKLY PLEASANT ACTIVITY GOALS

Pleasant Activities I Want To Do In the Next Week

1.

2.

3.

http://dx.doi.org/10.2106/JBJS.18.00621

Handout 6-2

COMMUNICATION: TYPES OF CONVERSATION

1. Sharing thoughts and feelings

The purpose of this type of conversation is <u>not</u> to make a decision or to solve a problem, but to let each other know what you are thinking or feeling.

2. Decision-making

One reason people talk with each other is so that they can think things though and make good decisions.

People can get frustrated with each other if they are trying to have two different kinds of communication at the same time!

http://dx.doi.org/10.2106/JBJS.18.00621

Handout 6-3a

Sharing Thoughts and Feelings

When you are sharing your thoughts and feelings:

1. ***Talk from your own point of view.***

   - Use I statements: "This is what I think. This is what I feel. This is what it is like for me."

2. ***Be honest about your thoughts and feelings.***

   - You can make decisions about what you want to share and what you do not want to share, but don't give each other misinformation (such as saying that everything is fine when it is not).

3. ***Speak in "paragraphs."***

   - Express one main idea with some elaboration and then allow your partner to respond. Speaking for a long time period without a break makes it hard for your partner to listen.

4. ***Make sure that you are understood.***

   - **If there are questions about whether the listener has understood something important you can ask for him/her to tell you what s/he heard. You can then let him or her know if that is correct, or if not, you can clarify.**

5. ***Express appreciation.***

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Handout 6-3b

Sharing Thoughts and Feelings

When you are listening:

1. ***Pay close attention to really understand your partner's opinions, feelings, and needs.***

    - Try to put yourself in your partner's place and look at the situation from his or her perspective in order to determine how he/she feels and thinks about the issue.

2. ***Be careful not to interrupt - except if you don't understand what was said and need clarification.***

    - Do not express your own views or offer solutions.

3. ***After your partner speaks, you may summarize or say back what you understood your partner to have said.***

    - Your partner may add anything you left out or clarify anything you misunderstood.

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Handout 6-4

USING A FOCAL POINT

1. Possibly begin with a mini-practice.

2. Turn your attention to an object that you can see in your immediate environment.

3. Focus on the object for 1-5 minutes.

USING AUDITORY STIMULI

1. Begin with a mini-practice.

2. Close your eyes and listen to any type of music that you find stimulating, enjoyable, or relaxing. Or listen to any sound that you can hear in your environment (traffic, heating/air conditioning).

3. Listen for as long as you like.

http://dx.doi.org/10.2106/JBJS.18.00621

Handout 6-5

Home Practice

- Continue to practice the Progressive Relaxation (PMR) daily, ideally twice daily.
- Use Imagery either alone or in combination with PMR.
- Do frequent mini-practices; build up to about 20 throughout the day (one or two every hour).
- Continue to use the Activity-Rest Cycle with different activities you are doing.
- Monitor your thoughts. Notice thoughts may be working against you and replace them with Coping Thoughts. Record these in your Thought Record Form (Handout 6-6) or on Coping Cards.
- Use distraction techniques as additional methods in coping with your pain.
- Pay attention how you communicate with others. Practice assertive communication.
- Enjoy your pleasant activities!

http://dx.doi.org/10.2106/JBJS.18.00621

Handout 6-6

THOUGHT RECORD

First identify thoughts you are having that are not helpful, that are working against you. Then replace these thoughts with thoughts that work for you. Reread these coping thoughts frequently until they feel more natural to you.

Unhelpful Thoughts	Coping Thoughts

Handout 7-1

WEEKLY PLEASANT ACTIVITY GOALS

http://dx.doi.org/10.2106/JBJS.18.00621

Pleasant Activities I Want To Do In the Next Week:

1.

2.

3.

http://dx.doi.org/10.2106/JBJS.18.00621

Handout 7-2

Review of the Coping Skills

Progressive Relaxation *(session 1)* – This is useful to keep your overall stress level low. When you feel generally relaxed you cope with pain and other stressors more effectively. If you are generally relaxed you will feel better emotionally, which will also help you cope. Also, feeling relaxed helps you sleep better and you feel more rested and less fatigued, which gives you more energy and helps you feel better overall. *(Recommended practice: daily)*

Mini-Practices *(session 2)* – These are useful to use on a regular basis throughout the day to remind yourself quickly to stay calm and relaxed. When you encounter a stressful experience, you can use a mini-practice "in the moment" to help you gain control over your anxiety. (*Recommended practice: 20 per day, or 1-2 per hour)*

Imagery *(session3)* – This is another stress reduction technique that helps you divert attention away from pain or other problems and that can help you relax. *(Recommended practice: daily, after relaxation or mini-practice)*

Distraction Techniques *(session 6)* – Focusing on a focal point or listening to music (or other sounds) are simple techniques that can reduce pain. (*Recommended practice: Use as needed for coping with pain.)*

Pleasant/Valued Activities *(session 5)* – Pain causes many people to give up on regular activities that once brought joy, pleasure, or a sense of accomplishment. In order to feel good about yourself and to enjoy life, it is important to do as much as you can, using the activity-rest cycle to pace yourself. *(Recommended practice: schedule at least one simple pleasant activity per day)*

http://dx.doi.org/10.2106/JBJS.18.00621

Handout 7-2

Activity-Rest Cycle *(session 4)* – Overdoing activities can lead to severe pain and exhaustion. When doing an activity, pace yourself, take frequent breaks and resume activity after a short rest. *(Recommended practice: use in particular with activities you tend to overdo and adjust to your tolerance level.)*

Coping Thoughts *(session 2 and 3)* – We talked about how some thoughts can work for you and some thoughts can work against you. Use the coping thoughts that have helped you in the past or create new ones. *(Recommended practice: use whenever you are tense, upset, or have increased pain)*

Communication *(session 6*) - In many situations there are two types of conversations we want to have: 1) sharing thoughts and feelings, and 2) making a decision/solving a problem. It is important to be clear what kind of conversation you want to have.

http://dx.doi.org/10.2106/JBJS.18.00621

Handout 7-3

PROBLEM-SOLVING GUIDELINES

1) *What is the problem?*

Describe the problem as precisely as you can.

2) *Why is it a problem?*

How does the situation affect your:

a. Body Reponses?

b. Thoughts/Feelings?

c. Behavior?

3) *Brainstorm and list possible solutions*

Include coping skills you can apply.

Brainstorming guidelines:

- **ANYTHING GOES** – Open your mind to all possibilities and consider all options.
- **THE MORE THE MERRIER** – The more ideas you put on your initial list, the better. You can always cut things out later.
- **MIX AND MATCH** – Think about combining different activities.
- **NO CRITICISM** – Do not criticize or reject any ideas initially.

4) *Select solution(s) to try out.*

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Handout 7-4

PROBLEM-SOLVING WORKSHEET

Select a problem that you are currently experiencing or that you expect to have difficulty with in the future. Complete the following worksheet for that problem.

Identify the problem:

_____
_____
_____

How does it affect your body responses?

_____
_____
_____

How does it affect your thoughts and feelings?

_____
_____
_____

How does it affect your behavior?

_____
_____
_____

List all possible solutions*:

_____
_____
_____
_____
_____
_____

***Consider coping skills**
Select solution(s) to try out:

_____
_____

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Handout 7-5

Home Practice

- Continue to practice the Progressive Relaxation (PMR) daily, ideally twice daily.
- Use Imagery either alone or in combination with PMR.
- Do frequent mini-practices; build up to about 20 throughout the day (one or two every hour).
- Continue to use the Activity-Rest Cycle with different activities you are doing.
- Monitor your thoughts. Notice thoughts may be working against you and replace them with Coping Thoughts. Record these in your Thought Record Form (Handout 7-6) or on Coping Cards.
- Use distraction techniques as additional methods in coping with your pain.
- Pay attention how you communicate with others.
- Enjoy your pleasant activities!

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Handout 7-6

THOUGHT RECORD

First identify thoughts you are having that are not helpful, that are working against you. Then replace these thoughts with thoughts that work for you. Reread these coping thoughts frequently until they feel more natural to you.

Unhelpful Thoughts	Coping Thoughts

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Handout 8-1

COPING WITH SETBACKS

Stop, look, and listen

Your reaction at this time can be viewed as a warning sign that you are in emotional danger. You need to identify what is going on for you at this point. What can you do to help yourself stop, look, and listen?

Keep calm by using calming self-talk

You have learned how to monitor your thoughts and reactions to situations and have realized that some thoughts work for you and some work against you. How can you apply this to dealing with a setback?

Review the situation leading up to the setback

Were there any warning signs or other factors that might have been important? Were you letting negative emotions build up? Were you slowing down on activities, relaxation exercises, etc.? Are there different ways that you might have coped with events that led up to the setback?

Make an immediate plan for coping

What are some of the methods that can help you at difficult times? Review the menu of coping skills and make a plan to implement an appropriate skill.

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Handout 8-2

Challenges to Coping Efforts

Doctors/Health Care Professionals	**Family Members**	**Friends, Acquaintances, or Coworkers**
Getting questions asked and answered	Dealing with people not letting you do things	Sharing vs not sharing about how you are doing with friends
Clarifying expectations for the future	Dealing with people who ask you to take on tasks you are not ready to do	Saying no to unreasonable requests
Understanding what I can do and can't do	Negotiating with family about leisure time activities/plans	Reconnecting with friends you have not seen in a while
Clarifying what I can do to help myself	Negotiating with family about dividing up responsibilities for household chores	Negotiating reasonable social plans with others
Clarifying the role of my surgeon vs. family doctor in my recovery		

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Handout 8-3

Maintaining Progress

My Plan for Coping Skills Practice:

1.

2.

3.

Short-Term Goals (next month or so):

1.

2.

3.

Long-Term Goals (over many months):

1.

2.

3.