KAISER PERMANENTE®

Caring for Patients with Hip and Knee Osteoarthritis

- **Department of Orthopedic Surgery**
- **Kaiser Permanente Vacaville/Vallejo**

Goals

We Are Here to Help!

1. **Provide Education on Hip and Knee Arthritis**

2. **Guide Your Treatment**

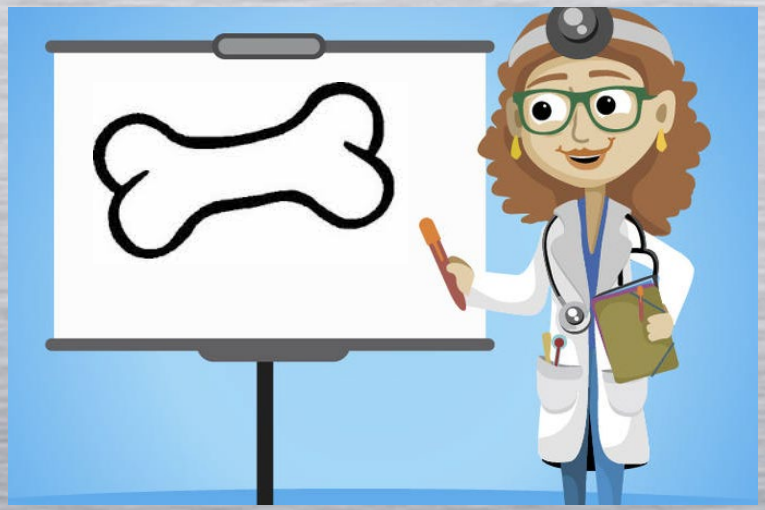
3. **Answer Your Questions**

Overview

Today's class will be divided into two 25 minute sessions

1. **Disease Process and Treatment Options**

2. **Surgical Presentation**
   - In-depth discussion about Total Hip and Knee Replacement
   - Will help you decide if a Total Joint Replacement may be right for you



Overview

After The Two Sessions

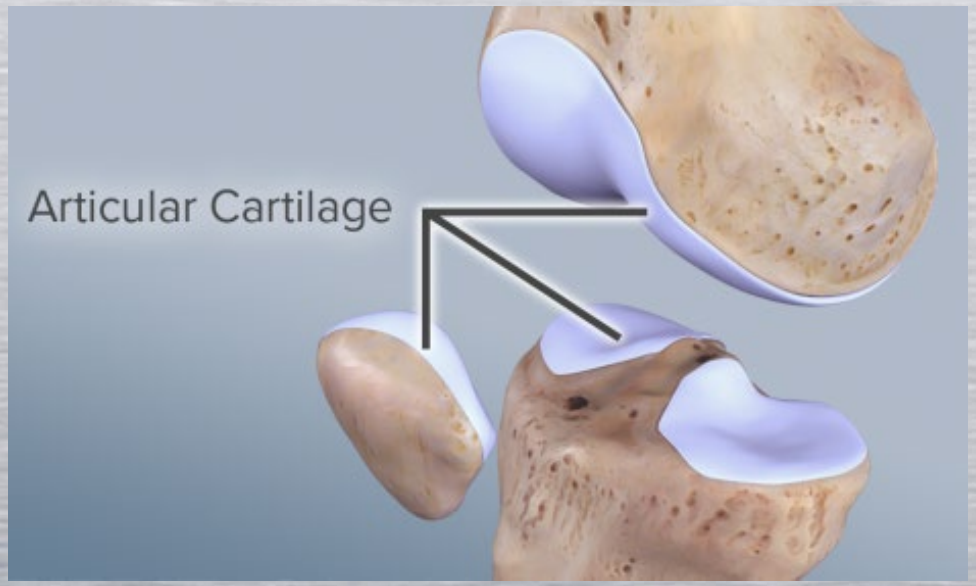
1. **Direct next steps in your care**

2. **Optional Question and Answer Session**

What is Osteoarthritis?

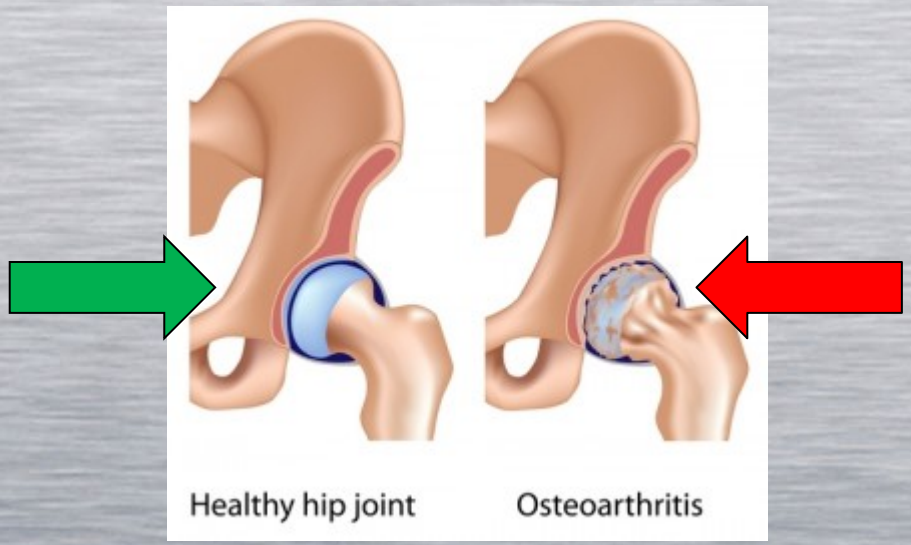
- **Cartilage is the soft lining at the ends of the bones that allows for gliding motion**

- **Osteoarthritis is when the cartilage lining wears away and becomes roughened**



What is Osteoarthritis?

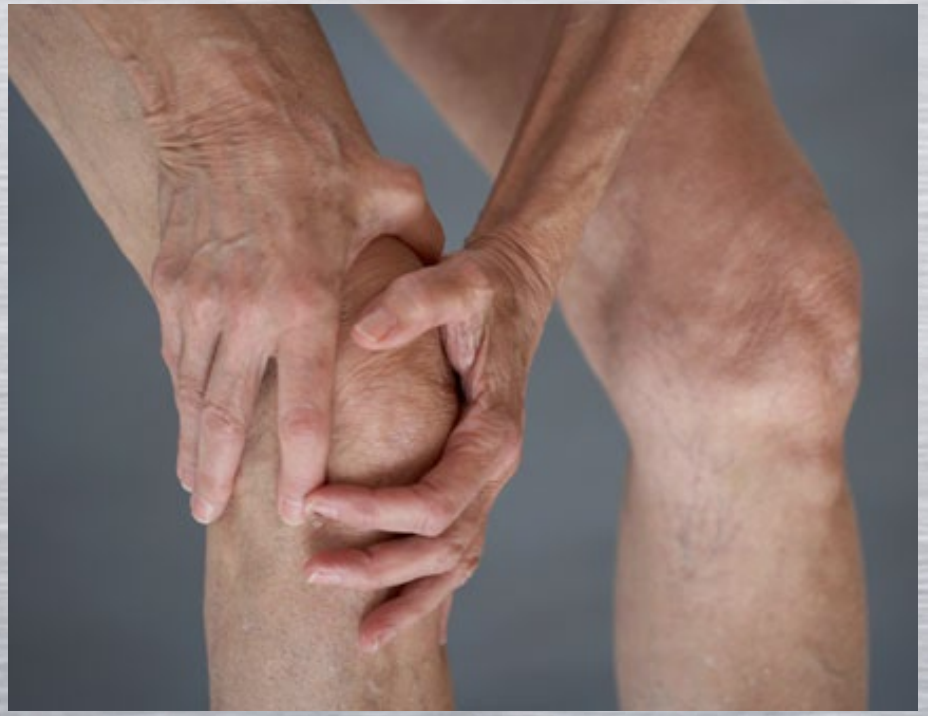
- **Compare a healthy joint vs an osteoarthritic joint**



What are the Symptoms of Osteoarthritis?

- **Symptoms can be variable**
  - Slowly progressing vs Sudden onset
  - Constant vs Episodic

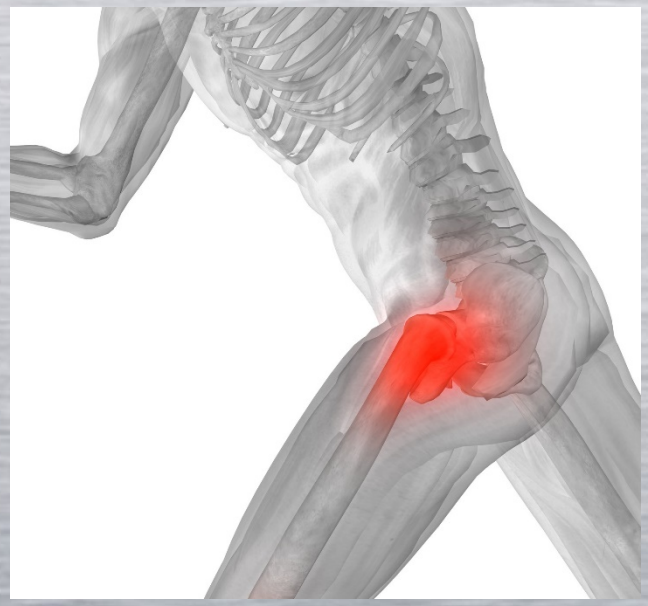
- **Symptoms**
  - Pain
  - Stiffness
  - Swelling
  - Cracking and creaking sounds



Who Gets Osteoarthritis?

- **Appears to have a genetic/hereditary component**

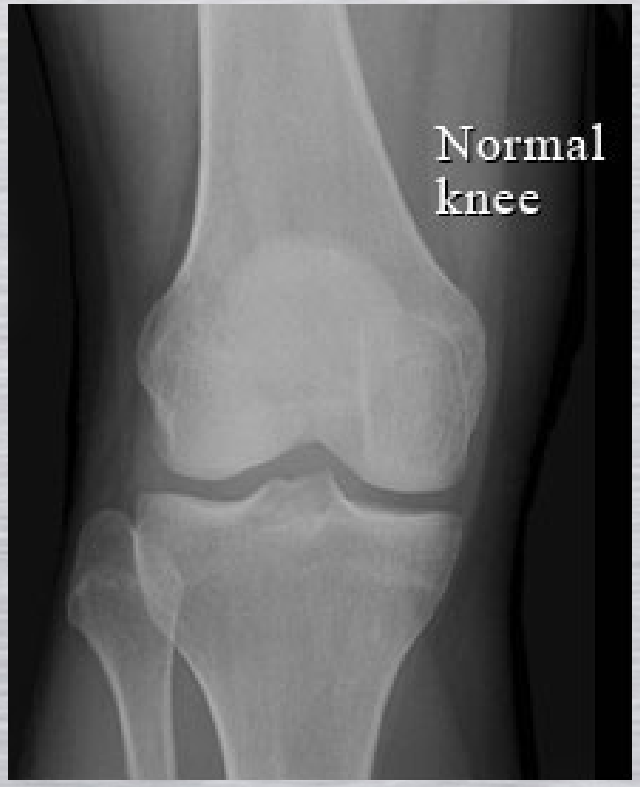
- **Risk factors for osteoarthritis include**
  - Age
  - Obesity
  - Sex (females more likely to develop than males)
  - Occupation or Activity (jobs or exercise that involve repetitive stress)



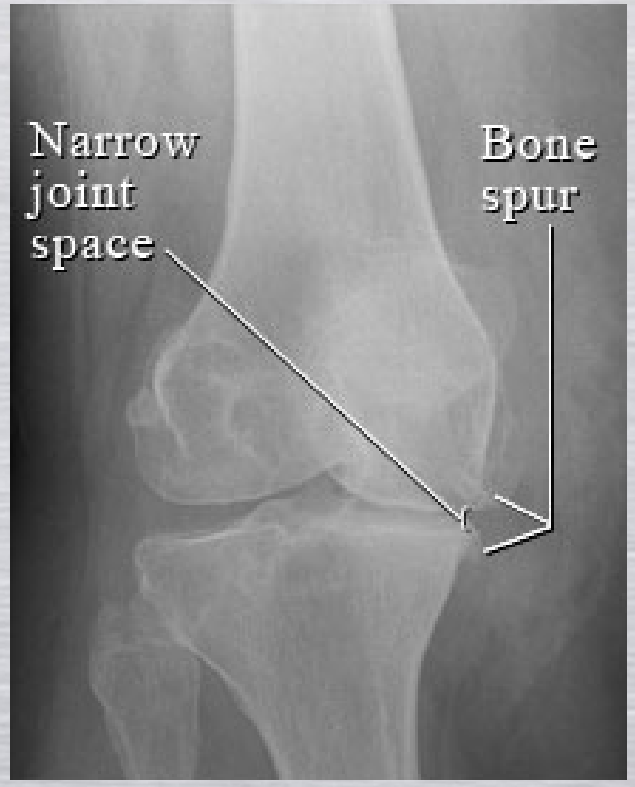
How Is the Diagnosis Made?

- **Careful History**
- **Physical Examination**
- **X-Ray Examination**
- **CT Scan?**
- **MRI?**

What is Osteoarthritis?

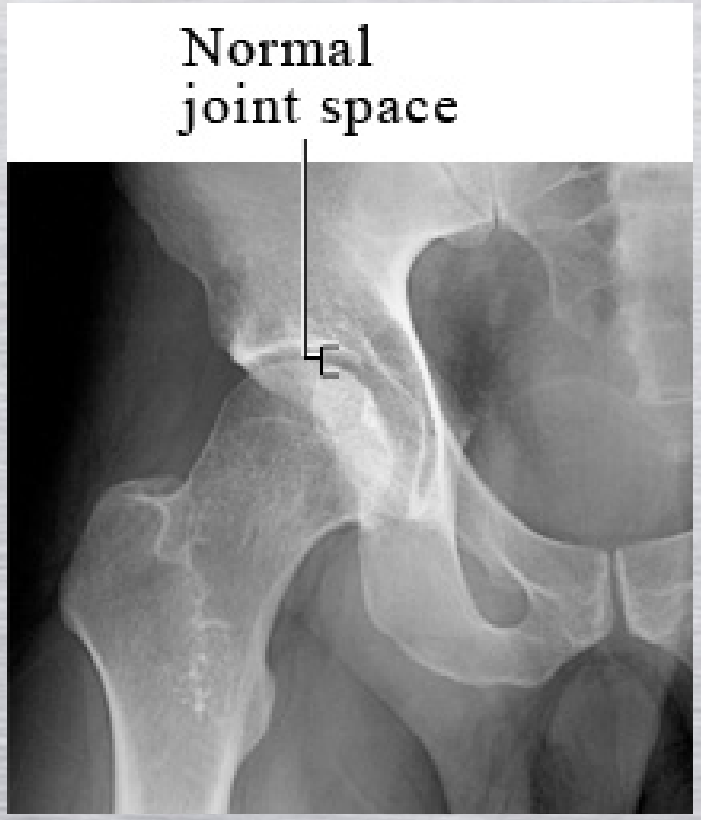


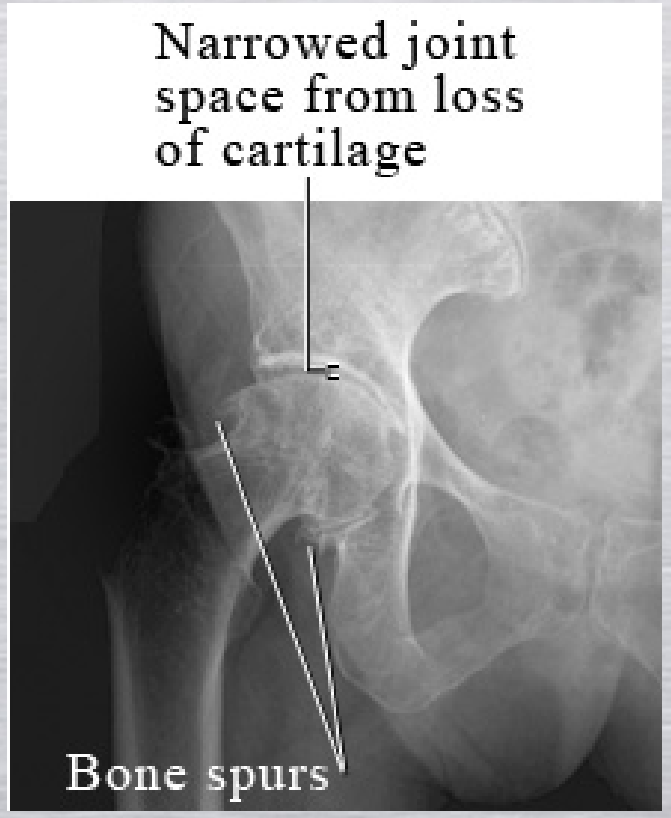
- **X-ray of a normal knee**
  - There is space between bones
  - This space is actually the cartilage between the bones



- **X-ray of an osteoarthritic knee**
  - Cartilage is worn away
  - Space between bones is gone
  - “Bone on Bone”
  - Bone spurs form

What is Osteoarthritis?





- **X-ray of a normal hip**
  - There is a space between bones

- **X-ray of an osteoarthritic hip**
  - Cartilage is worn away
  - “Bone on Bone”
  - Bone spurs form

Treatment Options

Can be divided into 2 broad categories

1. **Non-surgical**
   - Initial treatment of choice
   - Focuses on symptom management
   - No to minimal risk

2. **Surgical**
   - Total Joint Replacement

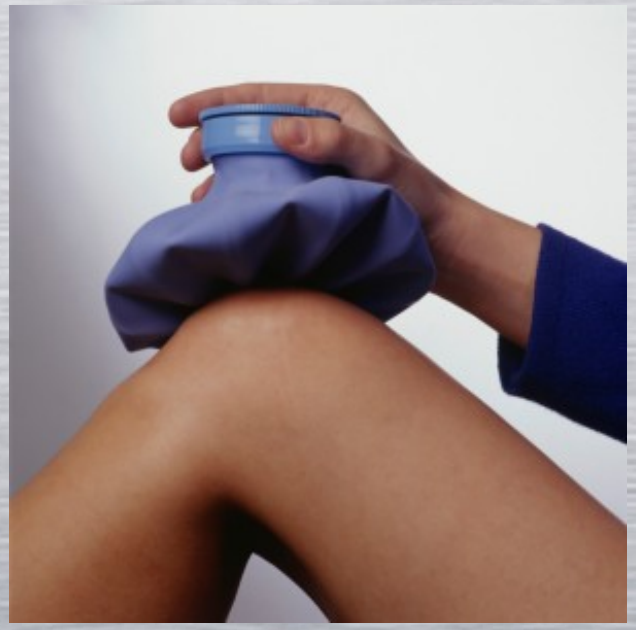
Non-surgical Treatment

Heat

- For stiffness
- Heat may help “loosen up” or soothe the joint
- Options: Warm showers, soaking in warm water, or using a heating pad

Ice

- Decreases inflammation
- Best for flares of pain and use at end of the day
- Ice should not be in direct contact with the skin



Non-surgical Treatment

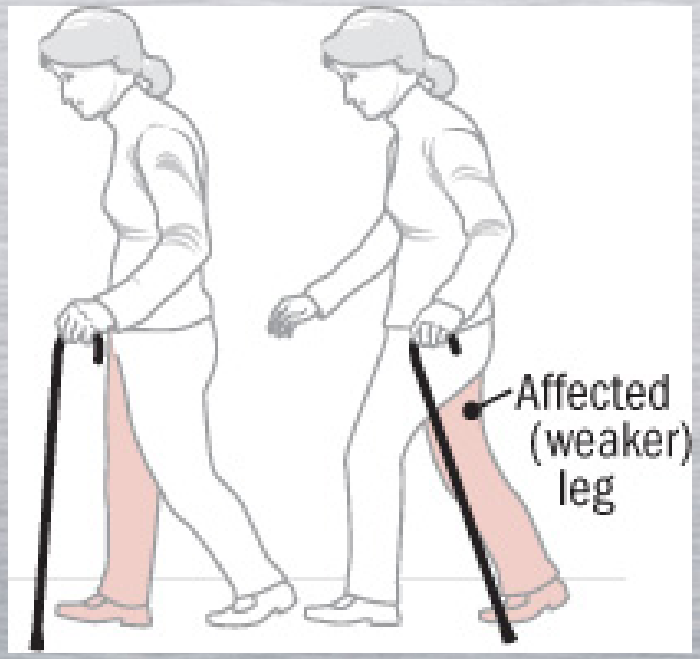
Braces

- A soft neoprene sleeve may help symptoms, reduce swelling, and provide comfort
- This can be purchased over the counter
- There is little evidence to support using metal hinged “unloader” braces

Non-surgical Treatment

Assistive devices

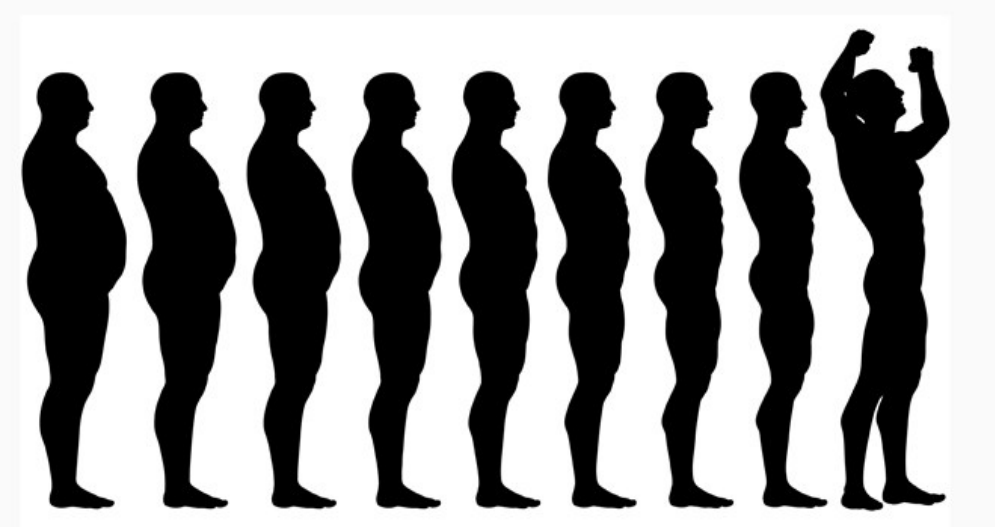
- A cane or walker can help with walking and unload the painful joint
- A cane should be used in the hand OPPOSITE the affected leg



Non-surgical Treatment

Weight Loss

- Easier said than done
- Body weight is multiplied 4 to 10 times through the joint depending on activity. This means that for every 10 pounds of extra weight, there is 40 to 100 pounds more weight on the cartilage
- For every 11 pounds of weight loss, the risk of knee osteoarthritis drops greater than 50%



Non-surgical Treatment

Weight Loss

1. **Diet with Proper Nutrition**
2. Exercise

Non-surgical Treatment

Healthy Weight Resources

Change your health, change your life. We offer an array of both in-person and online resources that can help you be successful in your weight loss goal.

CLASSES AND INDIVIDUAL APPOINTMENTS

Wellness Coach
Get more active, eat better and manage your weight by talking one-on-one on the phone at a time that's convenient for you. Make the first move by calling 1-866-251-4514 (toll free), 6 a.m. to midnight daily, to schedule your coaching appointment or book online at kp.org/mydoctor/wellnesscoaching. Coaching sessions are available weekdays from 7:00 a.m. to 7 p.m. and Saturdays from 8:30 a.m. to 5:00 p.m. **Fee:** Members only, Covered benefit*.

Healthy Weight Series
Feel better and enjoy a more positive self image as you develop a healthier lifestyle. This in-depth series is designed to help participants improve their health through permanent lifestyle changes. It provides guidance and support for physical activity, healthy eating, stress management, communication skills, and strategies for maintaining progress. **Locations:** Fairfield, Napa, Vacaville & Vallejo. Also available online.
Fee: Members - No fee*; Nonmembers - No fee*

Medical Weight Management
You can make it happen, and we're here to help you. If you have at least 40 pounds to lose and want to make positive, lasting changes that improve your health, increase your energy, and help you live life to its fullest, this might be the answer for you. You will have a Kaiser Permanente team by your side to help you achieve changes that last. Join us for a free, one-hour information session by calling your local Health Education Department, (707) 624-2235. **Location:** Vacaville. **Fee:** Members and Nonmembers - fee*

Body Composition Testing
We now have one of the most sophisticated body analysis machines available on the market today. Much more than just a body fat measurement, the SECA Body Composition Analyzer measures body composition using many frequencies of electro-magnetic waves that allow for accurate body composition measurement equal in accuracy to the gold standards of DEXA, hydrostatic weighing, and the Bod Pod – air displacement. The best part is you don't have to undress and the test takes only 20 seconds.
Location: Vacaville only. **Fee:** Members and Non-members - $50
Combined with Resting Metabolic Rate Testing: $85
Registration: call (707) 624-2237 / 707-624-2215.

Resting Metabolic Rate Testing
The KORR Metacheck resting metabolic rate machine measures how many calories your body requires at rest. With this information, we can provide you with accurate caloric target zones to meet your specific goals, whether it's to lose weight or improve athletic performance. This test is the gold standard for measuring resting metabolic rates. Participants must fast, avoid caffeine and tobacco, as well as refrain from exercising 4 hours prior to taking the test.
Location: Vacaville only. **Fee:** Members and Non-members - $50
Combined with Body Composition Analysis: $85
Registration: call (707) 624-2237/707-624-2215

ONLINE PROGRAMS AND RESOURCES

Health Coach
The virtual Health Coach is designed to help you become more physically active through our Let's Get Physical or improve your eating habits with our S.M.A.R.T Eating program. To access Health Coach, go to www.kp.org/mydoctor and search for your health care provider's homepage. You will see the Health Coach link in the right navigation bar.

Lose Weight – With a Balanced Outlook
This is an online healthy lifestyle program to help you reach your weight loss goals. You will get a personalized action plan to help you make healthy choices and stick with them. www.kp.org/healthylifestyles

Eat Healthy – Nourish Your Body
This program is a free and personalized, online action plan to help you make healthy choices and stick with them. This program is designed to help you make smart food choices. www.kp.org/healthylifestyles

COMMUNITY PARTNERSHIP AND RESOURCES

Choose Healthy
Receive discounts and preferred rates on services and products such as fitness clubs and health products.
www.kp.org/choosehealthy

Please call Health Education to register.

Vallejo: 707-651-2692
Napa: 707-258-4490
Fairfield: 707-427-4466
Vacaville: 707-624-2225

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KP Napa Solano Health Education
kp.org/napasolano/healthed

mind.body.life.THRIVE.
NAPA SOLANO HEALTH EDUCATION

*Program fees are subject to change and may depend on your health plan coverage. Please refer to your current *Evidence of Coverage (EOC)* to confirm the services covered under your plan."

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Non-surgical Treatment

Weight Loss

1. Diet with Proper Nutrition
2. **Exercise**
   - Low or non-impact exercise
     - Cycling, swimming/water aerobics, elliptical, upper body exercise
   - Benefits:
     - Reduce abnormal stresses on the joints
     - Improve mobility, mood, and sleep

Non-surgical Treatment

Non-Impact Exercise Program

- Studies have shown that a gentle non-impact exercise program of 30 to 40 minutes at a time, 3 to 4 times per week can DECREASE arthritis symptoms

Non-surgical Treatment

An extension of a Non-Impact Exercise Program is Physical Therapy

Physical Therapy can provide

- Guidance on joint protection
- Tips for modifying activity
- Exercises for strengthening the hip and knee
- Exercises for maintaining flexibility and mobility

Research Shows

- Treatment is low risk
- May prevent need for medication use, injection, and surgery

Non-surgical Treatment

Oral Supplements

- Safe to consume
- Effectiveness not predictable

- **Glucosamine and Chondroitin**
  - Does not regrow cartilage
  - Can provide anti-inflammatory properties and pain relief
  - Take up to 500mg 3 times per day
  - 50% of studies show a benefit, while 50% show no benefit
  - May take up to 2 months to see improvements

Non-surgical Treatment

Topical Agents

- **Because the ingredients are absorbed through the skin, these are best used on joints close to the skin's surface (i.e. hands and knees)**

- **Generally NOT as effective as oral medications**

Non-surgical Treatment

Topical Agents

- **There are many options for over the counter topical products to treat arthritis pain**
- **These include**
  - Capsaicin
  - Menthol/Camphor
  - Salicylates
- **All have limited effectiveness**

Non-surgical Treatment

Topical Agents

- **Capsaicin**
  - Depletes nerve cells of a chemical that helps send pain signals
  - Use 3 to 4 times per day
  - Best results after 2 weeks of continuous use
  - Examples: Capzasin and Zostrix

Non-surgical Treatment

Topical Agents

- **Counterirritants**
  - Menthol/Camphor
  - Produces a sensation of hot/cold that can temporarily override arthritic pain
  - Examples: Icy Hot, Biofreeze, and Bengay

Non-surgical Treatment

Topical Agents

- **Salicylates**
  - Contains the pain relieving medicine found in aspirin
  - Examples: Aspercreme and Bengay

Non-surgical Treatment

Topical Agents

- **Voltaren Gel (Prescription)**
  - Active ingredient is diclofenac (an anti-inflammatory medication)
  - Studies show:
    1. A “small” proportion of patients have good relief with Voltaren Gel
    2. “Limited efficacy” for hand and knee osteoarthritis pain

Non-surgical Treatment

Oral Agents

- **More effective than topical agents**
- **These include**
  - Acetaminophen (Tylenol)
  - Anti-inflammatory pain medication (NSAIDs)

Non-surgical Treatment

Oral Agents

- **Acetaminophen (Tylenol)**
  - Can provide pain relief in mild to moderate arthritis
  - Up to 3000mg per day
  - Can lead to liver and kidney toxicity in overdose

Non-surgical Treatment

Oral Agents

- **Anti-inflammatory pain medication (NSAIDs)**
  - Next step in treatment for moderate to severe pain
  - Include advil, motrin, ibuprofen, aleve, naproxen, Mobic
  - All are effective, but one may work better than another for you

Non-surgical Treatment

Oral Medications

- **Anti-inflammatory pain medication (NSAIDs)**
  - Should not be used in patients with kidney disease
  - Can cause heartburn and stomach ulcers/bleeding
  - If you experience such symptoms, stop taking these medications immediately
  - Check with your primary care doctor before starting any of these medications to ensure it is safe to take with your other medications and medical problems

Non-surgical Treatment

Oral Medications

- **Opioid and Narcotic Analgesics are NOT a treatment for osteoarthritis**
  - These include vicodin, norco, hydrocodone, Percocet, oxycodone
  - 80% of the global opioid supply is consumed in the United States
  - This has led to an opioid crisis
  - These medications do not address or treat the inflammation of arthritis
  - Highly addictive
  - Patients develop tolerance and these medications quickly become ineffective
  - Make future pain control difficult
  - Kaiser is leading the way to solve the current opioid epidemic

Non-surgical Treatment

Injections

- **Can be very effective in controlling pain**
- **Existing options include**
  - Cortisone
  - Viscosupplementation/Hyaluronic Acid/“Rooster Comb”
  - Platelet Rich Plasma (PRP)
  - Stem Cell

Non-surgical Treatment

Injections

- **Cortisone Injections**
  - Potent anti-inflammatory medication directly into the joint
  - Can provide 3 to 6 months of relief
  - Can repeat every 4 months as needed to control pain
  - If given repeatedly or more often than every 4 months, can damage surrounding soft tissues
  - Because of increased risks with hip joint injections, the main reason for a hip injection is differentiating hip vs spine issues

Non-surgical Treatment

Injections

- **Viscosupplement Injections**
  - Common brands: Supartz, Synvisc, Hyalgan, Euflexxa, Orthovisc
  - <u>Adverse effects</u>
    - Joint swelling, pain, redness, heat, and severe inflammatory reaction that can mimic an infection
    - Occur ~5% of the time

SUPARTZ FX™
sodium hyaluronate

Non-surgical Treatment

Injections

- **Viscosupplement Injections**
  - A panel of experts from The American Academy of Orthopedic Surgeons reviewed 14 studies and found that NONE of the symptom improvements met "minimum clinically important thresholds"
  - Conclusion based on strong evidence:

"We cannot recommend using hyaluronic acid for patients with symptomatic osteoarthritis of the knee"

AAOS
AMERICAN ACADEMY OF ORTHOPAEDIC SURGEONS

Non-surgical Treatment

- **Given the strong recommendation by the AAOS, Kaiser Permanente is moving away from using viscosupplementation injections**

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Non-surgical Treatment

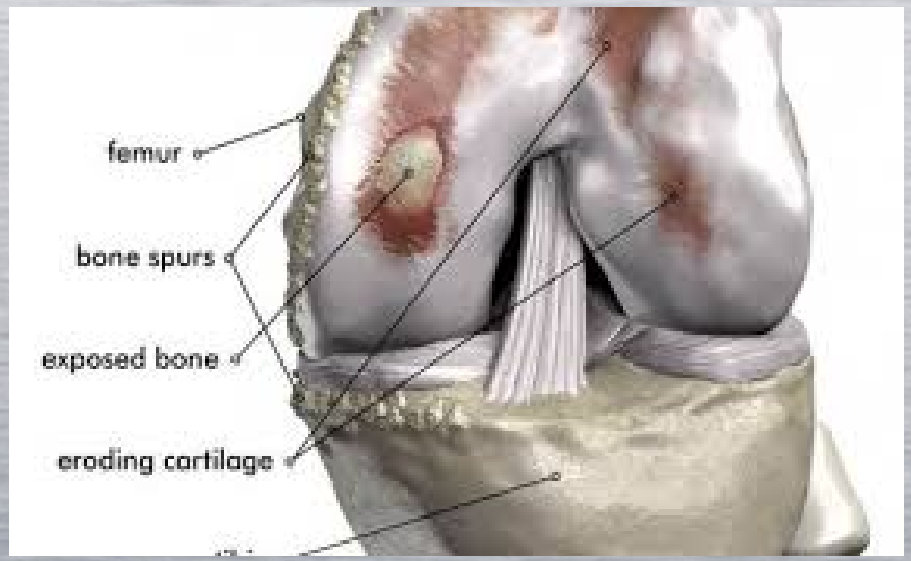
Injections

- **Platelet Rich Plasma Injections**
  - Platelets are thought to contain products that enhance soft tissue healing
  - Your own blood is spun down to increase the concentration of platelets
  - Conflicting clinical results on its effectiveness in mild to moderate arthritis
    - Conflicts of interest
  - Needs further high quality research

Non-surgical Treatment

Injections

- **Stem Cell Therapy**
  - Stem cells are immature cells that have the potential to transform into cartilage cells
  - Very few quality studies published
    - Major Conflicts of Interest
  - Currently not FDA approved to treat osteoarthritis
  - ➢ Expensive, not shown to be effective, unknown risks



Treatment Options

Can be divided into 2 broad categories

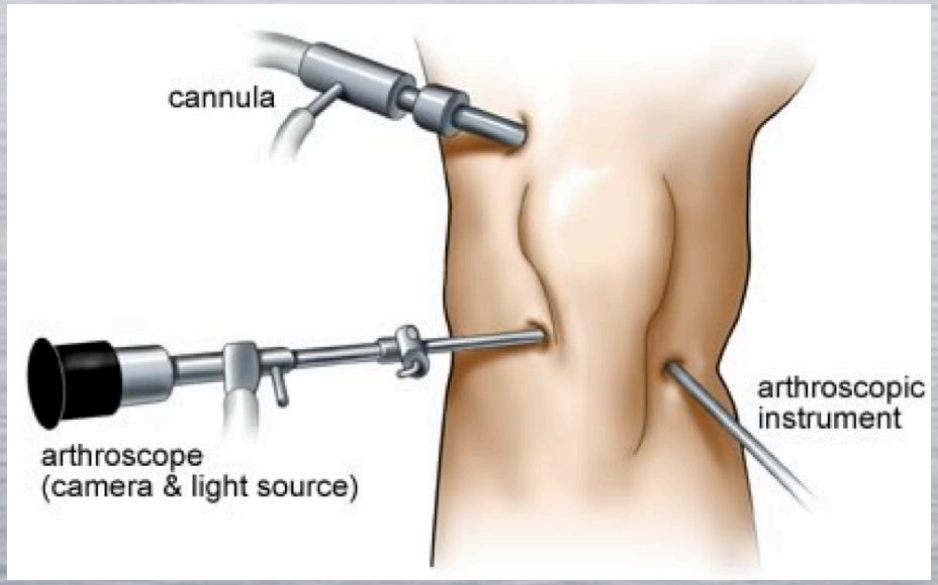
1. Non-surgical
   - Initial treatment of choice
   - Focuses on symptom management
   - No to minimal risk

2. **Surgical**
   - **Total Joint Replacement**
     - **Elective Surgery**
     - **Quality of Life Operation**

Surgical Treatment

Arthroscopic Surgery

- Minimally invasive surgery through two small incisions
- Main purpose is to “clean up” and “trim” damaged cartilage and meniscus
- Not able to restore or regrow cartilage



Surgical Treatment

Arthroscopic Surgery

- Review of 12 well-designed trials and 13 observational studies
- Conclusions: Arthroscopic surgery for degenerative knee arthritis and meniscal tears resulted in no lasting pain relief or improved function
- Authors make a “strong recommendation against the use of arthroscopy in nearly all patients with degenerative knee disease”


Arthroscopic surgery for degenerative knee arthritis and meniscal tears: a clinical practice guideline

Reed A C Siemieniuk,[1 2] Ian A Harris,[3 4] Thomas Agoritsas,[1 5] Rudolf W Poolman,[6] Romina Brignardello-Petersen,[1 7] Stijn Van de Velde,[8] Rachelle Buchbinder,[9 10] Martin Englund,[11] Lyubov Lytvyn,[12] Casey Quinlan,[13] Lise Helsingen,[14] Gunnar Knutsen,[15] Nina Rydland Olsen,[16] Helen Macdonald,[17] Louise Hailey,[18] Hazel M Wilson,[19] Anne Lydiatt,[20] Annette Kristiansen[21 22]

BMJ 2017;357:j1982

Surgical Treatment

Arthroscopic Surgery

- **Similar conclusion by the expert panel from the American Academy of Orthopaedic Surgeons based on strong evidence:**

"We cannot recommend performing arthroscopy with lavage and/or debridement in patients with a primary diagnosis of symptomatic osteoarthritis of the knee."

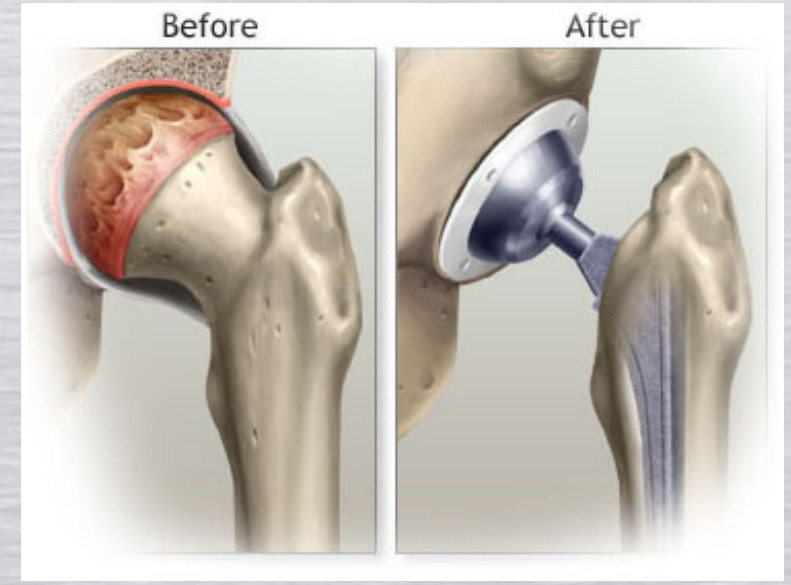
AAOS

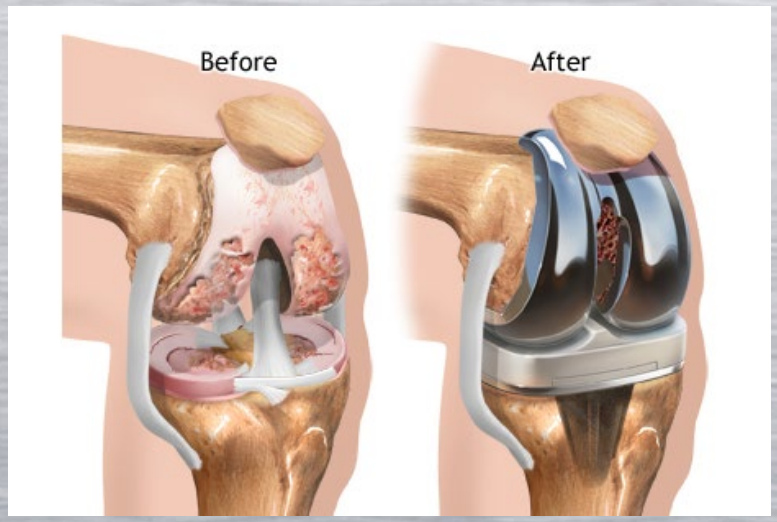
AMERICAN ACADEMY OF ORTHOPAEDIC SURGEONS

Surgical Treatment

Total Joint Replacement

- A total joint replacement resurfaces the joint with metal or ceramic and plastic
- Very high patient satisfaction (~85%) for correctly selected patients

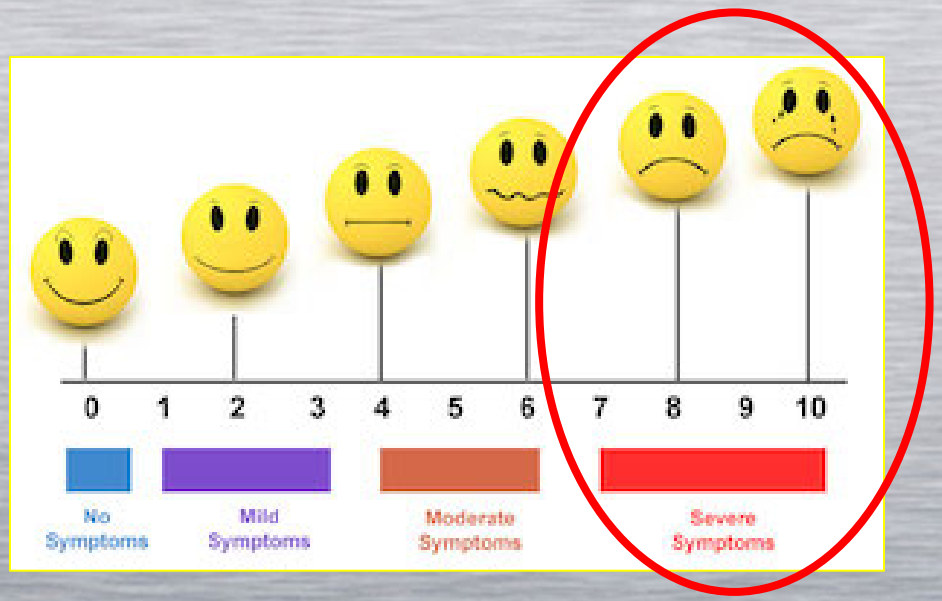




Surgical Treatment

When to consider a total joint replacement

- Severe osteoarthritis
- Medications not helping pain
- Injections are giving little or no pain relief
- Everyday pain is affecting activities of daily living
- **Quality of Life Operation**
  - ➢ It's all about **pain** and **function**



Surgical Treatment

Total Joint Replacement

- **What are the Criteria for Surgery?**
  - Categorized as having SEVERE arthritis (X-rays)
  - Failed non-operative treatment
  - Blood sugars well controlled
    - Hemoglobin A1c less than 7.0 to 7.5
  - Body Mass Index (BMI) less than 35
  - Must not be a current smoker

- **If blood sugars are poorly controlled, BMI >35, or currently smoking, the complication rates are significantly increased**

Summary of Treatment Options

Reward ↑

Low Risk/High Reward	High Risk/High Reward
✓ Weight Control ✓ Nutrition ✓ Low Impact Exercise ✓ Oral Agents (Tylenol, NSAIDs) ✓ Cortisone Injections	✓ Total Joint Replacement
Low Risk/Lower Reward	**High Risk/Low Reward**
✓ Heat/Ice ✓ Braces ✓ Assistive Devices ✓ Supplements ✓ Topical Agents ✓ Acupuncture	✓ Opioids/Narcotics ✓ Arthroscopy ✓ PRP/Stem Cell Injections

Risk →

Take Home Points

- **Osteoarthritis is the wear and tear of joint cartilage**
- **There is no cure for osteoarthritis**
- **Non-operative treatment focuses on managing symptoms**
- **Narcotics should not be used in non-operative treatment**
- **MRI is not indicated or helpful in diagnosis or management**
- **Arthroscopy has a limited role in treatment**
- **Total joint replacement surgery is for patients with severe arthritis who have failed non-operative treatment, whose pain is affecting their activities of daily living, and who are candidates for surgery**

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Total Joint Replacement for Hip and Knee Osteoarthritis

A Surgical Perspective

- **Department of Orthopedic Surgery**
- **Kaiser Permanente Vacaville/Vallejo**

Introduction

Most common first question about total joint replacement:

Does it Work?

Introduction

The answer is an unequivocal

YES!

This is especially true for properly selected patients

Success Rate

But what exactly is the Success Rate?

…it depends *who* you ask.

Success Rate

If you ask clinicians, most would say that success rate is

95%

***Largely based on objective measures such as improved pain scores**

Success Rate

But if you ask what percentage of patients are satisfied with the results of their total joint replacement, the answer is approximately

85%

Success Rate

Which perspective is more important?

Of course the

Success Rate

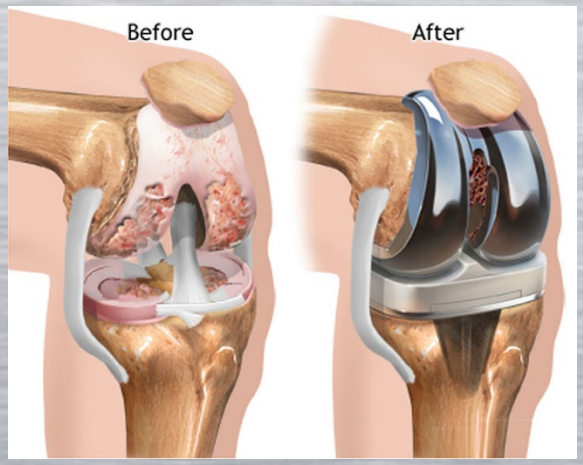
What are the most important factors determining patient satisfaction following a total joint replacement?

1. Meeting expectations of surgery
2. Achieving satisfactory pain relief

Expectations

After hip or knee replacement, will my joint be comparable to when I was 18 years old?

- Reasonably safe to say that the answer is no
- A joint replacement will not be comparable to the original healthy joint that you once had, but will likely be an improvement on the joint that you have now
- Remember that a joint replacement is made of metal and plastic and is not a perfect substitute for a healthy joint that is made of bone and cartilage



Expectations

Will I have future limitations?

- **Following total knee replacement**
  - Kneeling can be difficult or uncomfortable for some patients
  - Some patients choose to avoid kneeling altogether
  - If kneeling is uncomfortable, we recommend using a knee pad

- **Following total hip replacement**
  - Need to avoid extremes of motion to help prevent dislocation
  - Physical Therapy will educate patients what motions to avoid, if any

Expectations

Can I return to sports?

- Little research to guide us on how much activity is allowed
- High impact and repetitive loading activities (i.e. basketball, soccer, singles tennis) may shorten the implant life span

Expectations

Most surgeons recommend returning to low impact activities

Examples Include:

- Walking/Hiking
- Swimming
- Cycling
- Golf
- Doubles Tennis

Recovery

How difficult is the recovery?

- Unfortunately, recovery from any surgery is not a walk in the park
- Recovery is different for total hips vs total knees
- In general, recovery from a total knee replacement is tougher than from a total hip replacement

Recovery

What is the recovery time?

- **Everyone heals at a different pace**
- **On average**
  - Walker for 10 to 14 days
  - Some will transition to a cane
  - Independent ambulation 2 to 4 weeks after surgery
  - 6 weeks to 3 months to comfortably return to most activities
  - Patients will continue to improve up to a year after surgery
    - Strength, endurance, function, aches and pains

Recovery

When can I return to work?

- **Depends on the profession**
  - Deskwork around 4 to 6 weeks
  - Physical work around 3 months

Recovery

When can I drive?

- Typically 4 to 6 weeks after surgery
- Must be off narcotic pain medication
- Must be safe to slam on the brake as a life saving measure
- Check with your surgeon

Recovery

When can I travel?

- **No good data on when it is safe to travel after surgery**
- **The main concern about travel is developing a blood clot**
  - Patients should walk around every hour to improve circulation
  - Individual discussion with your surgeon

Lifespan

How long does a total joint replacement last?

- **Depends on activity level**
- **Joint replacements are mechanical devices and wear down eventually (like a car tire)**
- **On average**
  - ✓ 90 to 95% chance that the it will last 10 years
  - ✓ 80 to 85% chance that it will last 20 years
  - ✓ It may last longer, we don't have 20 year data on the newest materials yet

Surgery Process

Where will the surgery take place?

- All total joint replacements take place at the Vacaville Medical Center
- Kaiser Vacaville has been identified as a “Center of Excellence” for joint replacement surgery
- State of the art facility
- Surgeons, nurses, surgical technicians, and staff perform up to 40 total joint replacements per week and are extremely experienced and efficient in taking care of our patients

Surgery Process

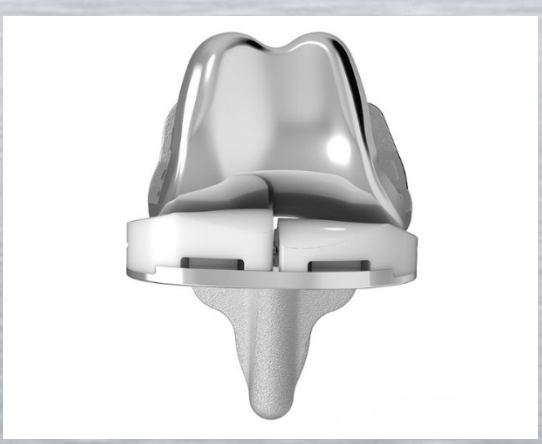
How long does the surgery take?

- **On average, the surgery takes around 2 hours**
- **Can vary depending on factors such as weight and amount of deformity**

Surgery Process

Am I getting the best hip and knee implants?

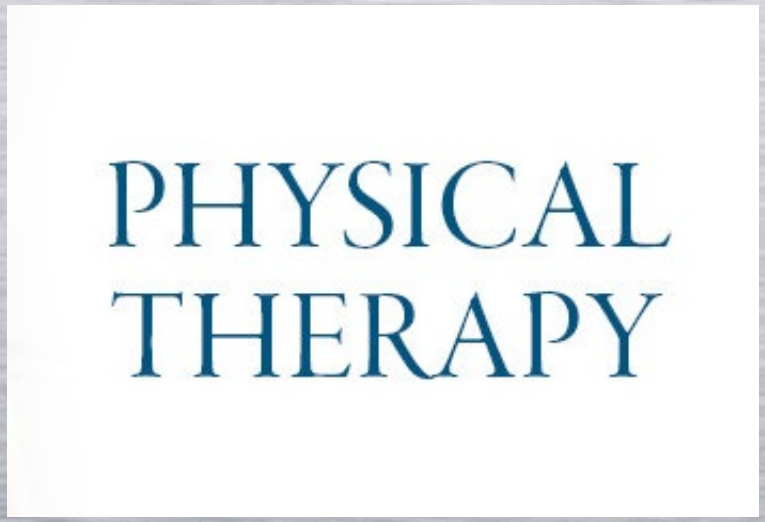
- Kaiser Permanente's Product Council includes orthopedic surgeons who are experts on research and the latest implants
- The implants that we use are well studied and state of the art, utilizing the latest materials



Surgery Process

Will I have physical therapy in the hospital?

- Absolutely
- You will work with a physical therapist immediately after your surgery, usually in the recovery room



Surgery Process

Will my pain be controlled?

- We collaborated with anesthesiology to provide multimodal pain control
- For patients on narcotic/opioid pain medication before surgery, pain will be more difficult to control
  - Weaning off and quitting prior to surgery is highly recommended or required
- Total knee patients also receive a pain reducing nerve catheter

Surgery Process

Will I stay overnight in the hospital?

- Most patients go home the day of surgery (>85%)
- Some stay overnight depending on pain control and other medical issues

Surgery Risks

- **Complication rates are low, but complications can and do happen with any procedure**
- **We do everything that we can to help prevent them**

Surgery Risks

The most common complications following total joint surgery include but are not limited to:

- Persistent Pain and Dissatisfaction (~15%)
- Knee stiffness (~3 to 4 %)
- Deep Vein Thrombosis (~1%)
- Pulmonary Embolus (~0.2%)
- Infection (~1%)
- Hip Instability (~1%)

Surgery Risks

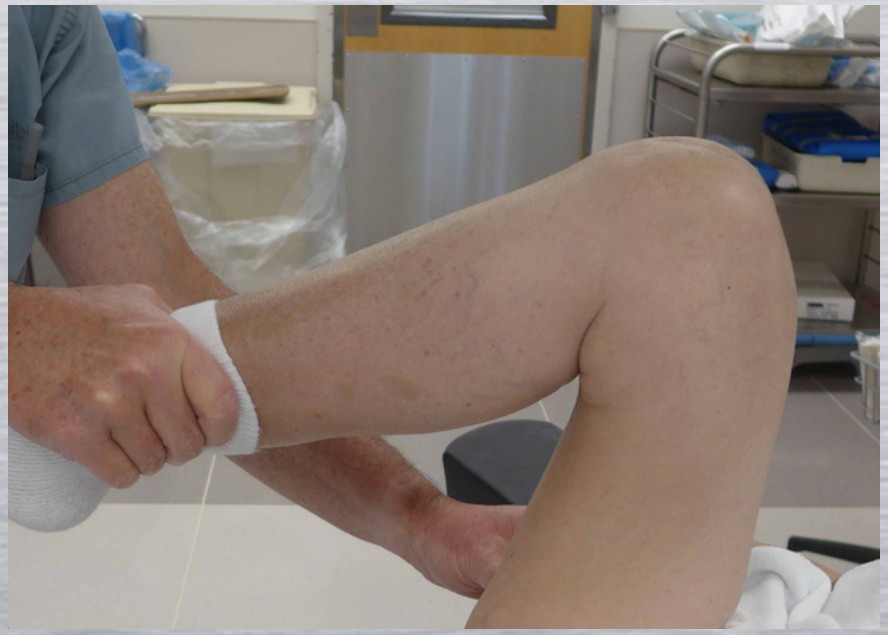
Persistent pain and dissatisfaction

- Approximately 15% of patients are not satisfied after joint replacement
- This dissatisfaction is primarily because the surgery did not meet patient expectations or did not provide adequate pain relief

Surgery Risks

Stiffness following total knee replacement (arthrofibrosis)

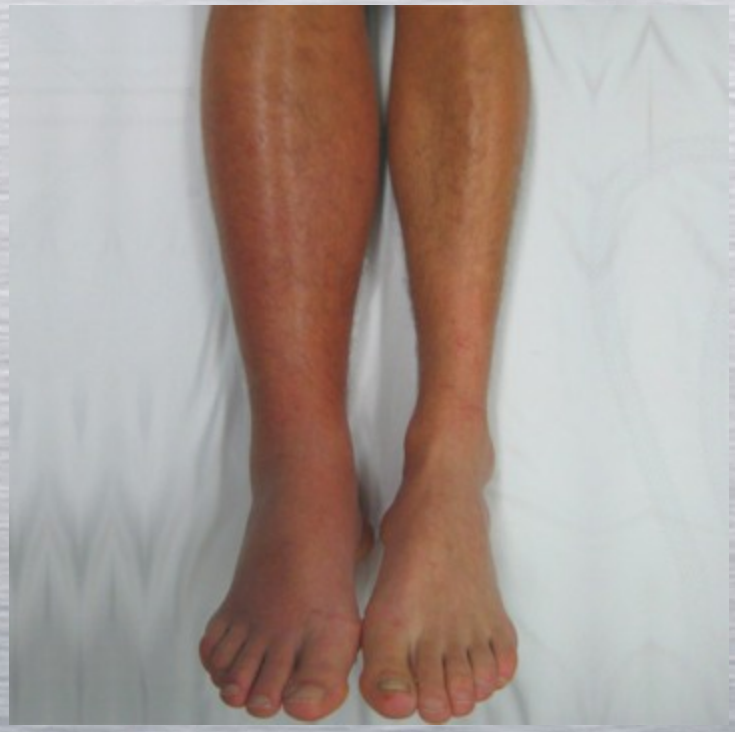
- Can occur 3 to 4% of the time
- May require a ‘Manipulation Under Anesthesia’ to break up scar tissue
- Note that we rarely see stiffness after a total hip replacement



Surgery Risks

Deep Vein Thrombosis (DVT)

- Commonly known as a blood clot in the leg
- Can have pain/redness/swelling/fevers or no symptoms at all



Surgery Risks

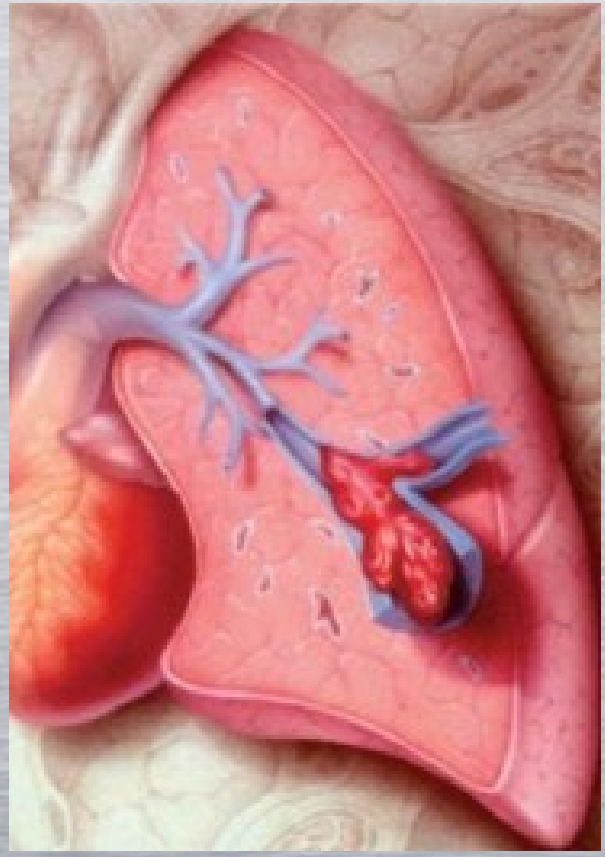
Deep Vein Thrombosis (DVT)

- Without blood thinners, DVT can occur 40 to 88% of the time
- With blood thinners, this rate decreases to approximately 1%
- Every patient having a joint replacement will be placed on a blood thinner after surgery

Surgery Risks

Pulmonary Embolus (PE)

- DVT can lead to a blood clot traveling to the lungs
- This is called a pulmonary embolus
- Symptoms include chest pain, shortness of breath



Surgery Risks

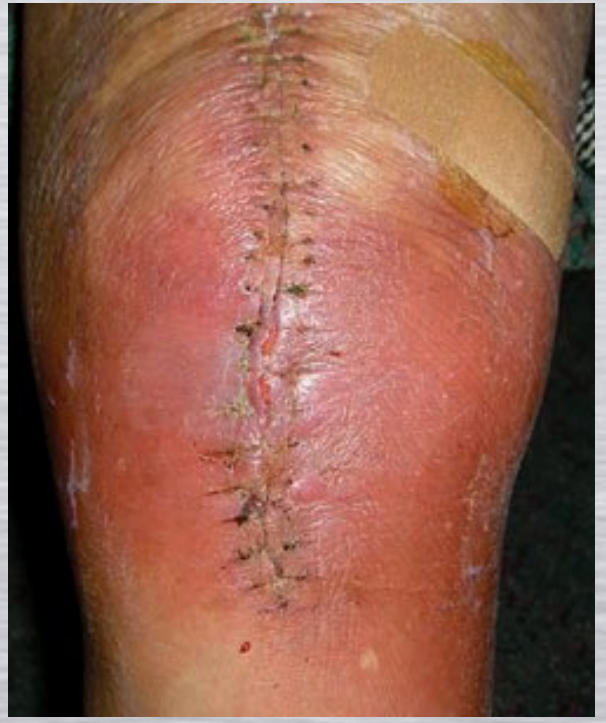
Pulmonary Embolus (PE)

- Occurs about 10 to 20% of the time without blood thinners
- With blood thinners, rate goes down to ~0.2%
- Can be serious or even fatal (~0.1% at 90 days postoperatively)
- Again, every patient having a joint replacement will be placed on a blood thinner after surgery

Surgery Risks

Infection

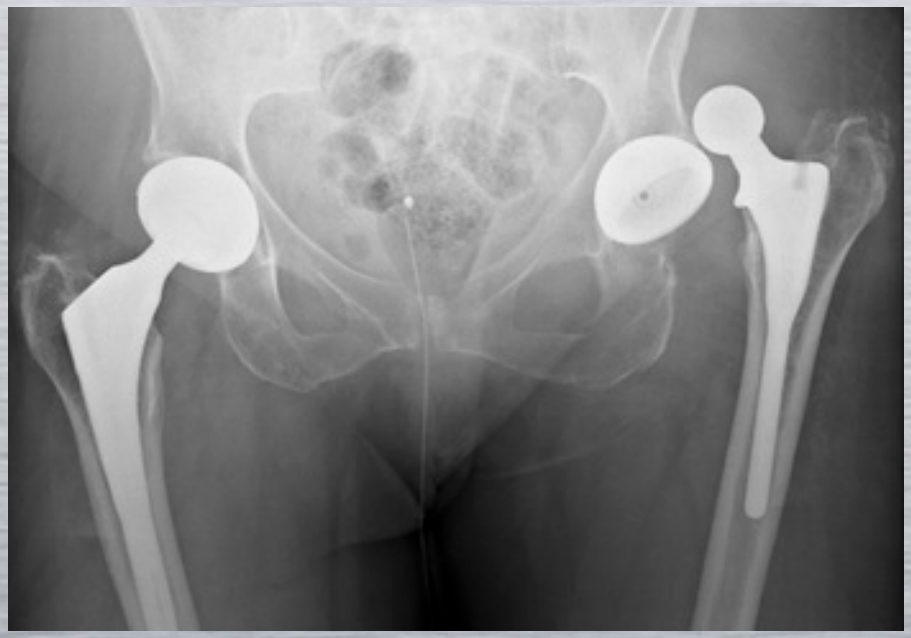
- Can occur ~1% of the time
- The joint prosthesis is foreign material to your body and bacteria can grow and hide on the components
- Infection rates are increased in patients with poorly controlled diabetes (HgbA1C > 7.0), obesity (BMI > 35), kidney disease, and smokers
- If a deep infection occurs, this is a serious problem which will likely require further surgery
- Every patient receives a dose of antibiotics within 1 hour of surgery to help decrease the infection rate



Surgery Risks

Hip Instability following Total Hip Replacement

- Occurs approximately 1% of the time
- Can occur at extremes of motion
- Therefore, you may have limitations on hip motion after your surgery



When to Consider a Total Joint Replacement

1. **Severe hip or knee pain that limits activity of daily living**
2. **Generally must be categorized as having SEVERE arthritis**
3. **Failed all non-operative treatment**

When to Consider a Total Joint Replacement

- **If a candidate, surgery is ultimately the patient's decision**
  - The surgery is elective
- **Quality of Life Operation**
- **Must balance the risk/benefit ratio**

Take Home Points

- **A total joint replacement is highly successful when performed under the correct circumstances (pain as a result of severe arthritis)**
- **A total joint replacement is not comparable to an original healthy joint, but should be an improvement over a severely arthritic joint**
- **Recovery is not a 'walk in the park' and will take dedication/hard work on the part of the patient to achieve a successful outcome**
- **Overall risks/complications are low, but they can and do happen**
- **We will do everything we can to help prevent a complication from happening**

Optional Session

- **Next Steps**
- **Question and Answer**

Thank You!

Department of Orthopedic Surgery

Kaiser Permanente Vacaville/Vallejo