Physiatry: Medicine's best kept secret

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Holistic Medicine

Help achieve optimal health via

- Patient education on life style changes
  - diet and exercise
- Medications
- Physical Therapy
- Procedures including surgery
- Complementary and alternative therapies
  - Acupuncture
  - Massage therapy
Are you sure you want to fix your trick knee? This is pretty cool.
The Basics

- Activity Modification
- Weight Loss
- Physical Therapy and Fitness
- Bracing/Orthotics
- Diet
- Medications
- Supplements
- Injections
- Other treatments
Weight Loss and Joint Pain

- 1/3 of individuals over the age of 60 are obese
- Joints are exquisitely sensitive to body weight
- Each pound of body weight lost = 4 pound reduction in knee joint stress
Weight Loss

• 7% to 10% weight loss should be the aim to achieve pain relief.
• Obesity is a risk factor for complications with surgery
Physical Therapy and Exercise

- Muscle mass and strength are lost in the natural aging process
- Therapy can reduce pain and improve function
- 12 or more sessions will have the best impact on pain reduction
- Patients will continue to benefit for 2 to 6 months after therapy
Physical Therapy and Exercise

- **Muscle strengthening** can improve pain
- **Aerobic exercise** can improve function
- Exercise programs that involve and encourage integration of exercise into daily life are most beneficial
Bracing/Orthotics
Diet

- Anti-inflammatory and well balanced diet that is low in sugar and simple carbs and high in vegetables is recommended.
- Mediterranean diet
  - high consumption of vegetables and olive oil and moderate consumption of protein
Diet

Slow carbohydrates diet

- No to sugar and simple carbs (i.e. bread, pasta, grains)
- Limit fruit
- Yes to complex carbs (i.e. Legumes, vegetables), fats and proteins

What are Slow Carbs?

<table>
<thead>
<tr>
<th>All Vegetables (except potatoes, corn, winter squashes)</th>
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<tbody>
<tr>
<td>These Fruits:</td>
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<tr>
<td>All berries and apricots</td>
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<tr>
<td>All Beans</td>
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<tr>
<td>All Peas</td>
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<tr>
<td>All Legumes (except nuts)</td>
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</tbody>
</table>
Medications

Topical NSAIDs

- Achieve local anti-inflammatory effect with minimal systemic absorption
- Gastrointestinal, cardiac, and renal adverse effects are usually rare
Medications

Capsaicin

• Found in the root of hot peppers
• Applied in a thin layer 4 times daily in order to achieve pain relief
• Local skin irritation occurs commonly, and care must be taken not to accidentally touch eyes or other sensitive areas
Pain patches:
- **Lidocaine patch:**
  - numbing pain
- **Anti-inflammatory patch:**
  - sprains, strains
  - gastrointestinal, cardiac, and renal adverse effects are usually rare
Medications

Oral anti-inflammatory

• Pros:
  – usually provide good pain relief

• Cons:
  – potential for side effects to kidneys, cardiovascular and gastrointestinal systems
Medications

Acetaminophen

- May not be as effective as anti-inflammatory
- Contraindicated if liver problems
- Doses up to 3 g daily may be required to achieve a pain relief benefit
- Often found in other medications and care must be exercised to avoid overdosing
Supplements

• Disclaimer:
  – more studies are needed but are usually worth a try

• Glucosamine and Chondroitin
  – usually safe and that makes them attractive agents
  – could have similar efficacy as anti-inflammatory medications
  – but the jury is still out
Supplements

Others:
- MSM, Boswellia, SAMe, Turmeric/Curcumin, Fish Oil
- May have potentially dangerous interactions with Rx medications
- should be discussed with your healthcare provider before initiating
Corticosteroid Injection

- Joints, tendons, bursae, muscles, spine
- Most useful for acute inflammation and pain
- Relief may be variable in duration on average 4 to 6 weeks
- Can cause local side effects
  - Skin color change
  - Fatty atrophy
Ultrasound guided injection

- Improves accuracy and safety
- Can provide better outcomes and less injection site complications as compared with blinded injections.
Trigger point injections

- Painful area of muscle
- Palpable nodules in taut bands of muscle
- Muscles are in spasm and no longer contract
- May cause neck and back pain, decreased range of motion, headaches
Trigger point injections

- Needle placed directly into a trigger point
- Numbing medicine and possibly steroid are used
- May be repeated every few weeks
Viscosupplementation ("Gel shots")

- Used since 1997
- Provide improved lubrication and pain relief in a joint
- Have anti-inflammatory and regenerative properties
- Frequency ranges from single to multidose injections
- Can be repeated every 6 months.
Platelet Rich Plasma (PRP)

- Used since 1987
- The healing effects are caused by growth factors released from platelets
- Has shown promising results in plantar fasciitis, tendinosis, strains, sprains and tears, osteoarthritis
- However, its long-term efficacy remains unclear
Platelet Rich Plasma and Arthritis

- Has shown efficacy for 9-12 months
- Patients with less severe osteoarthritis achieve superior outcomes
- The effectiveness of PRP may be better and more prolonged than that of “gel shots”
PRP Injection for Arthritis

- 1 to 3 injections are administered during the treatment course approximately 3-4 weeks apart
- Takes approximately 2 months to feel the effect
- Most common adverse reactions are local swelling and pain
- Currently, not covered by insurance
PRP Injection

• Obtain a sample of your blood
• Place in a centrifuge
• Collect a portion with platelets (and growth factors)
• Administer the injection
Stem cell treatment

- First bone marrow aspirate to assist in orthopedic treatment was used in 1986
- Bone marrow aspiration is performed under imaging guidance
- 20-30 minute procedure
- Concentrating and injecting
- Paucity of solid clinical data
Regenerative medicine

- Promising
- Long-term implications are unknown.
- Lack of strong clinical support
- Continues to grow as patients seek novel therapies to treat conditions with few alternatives.
Other treatments

- Transcutaneous electrical nerve stimulation (TENS)
  - can provide short-term relief by inhibiting pain transmission to the brain
- Acupuncture
  - insertion of thin, flexible needles into the body at specific points
  - generally safe
- Tai chi
  - promotes mental focus and attention alongside movement exercises.
- Meditation
THANK YOU FOR YOUR TIME AND ATTENTION!