

Knee Surgery vs Holistic Conservative Care

TUCK VS LEARY





Joshua A. Tuck DO, M.S.





LECOM Health

Orthopedic Sports Medicine Surgeon

- Orthopedic Surgeon – treating wide variety of operative / non-op MSK.
- Dual fellowship: Umass Sports medicine / arthroscopy
- Prior medical staff / Boston Red Sox organization
- NASA Shuttle Medical Response Team
- Former U.S. Navy LCDR / Flight Surgeon
- LECOM / MCH orthopedic surgery residency core faculty / trainer
- LECOM Adjunct Clinical Assistant Professor – Surgery / Orthopedic
- Board Certified in Orthopedic Surgery
- M.S. in Medical Education
- Author of several articles / text book chapters.
- Overall awesome guy

Patrick F. Leary DO
LECOM HEALTH
Sports Medicine Program Director

- Ultrasound Guided Injections of Steroid, Visco, Prolotherapy, PRP, Stem Cells
- MSK Ultrasound Instructor
- Fellow of ACOFP, AOASM, ACSM, AAFP
- Primary Care Sports Medicine Program Director
- Trained 17 Fellows LECOM, 16 Fellows Notre Dame
- Author/Editor 5th PPE Monograph
- 35 years experience
- Board Certified Family Medicine
CAQ Sports Medicine & Geriatrics
Masters of Science Education
Immediate Past President AOASM
PIAA Sports Advisory Committee
ACSM Team Physician Consensus Panel
NCAA Cardiac Task Force

	 1:00 				
	RUNDOWN				
 Are steroid injections worthwhile?					
3:00	2:00	30sec	Pause	Sto	GO!



1:00 **PTI**

RUNDOWN

?

 **Nsaids?**

3:00 2:00 30sec Pause Stop GO!

New England Journal of Medicine

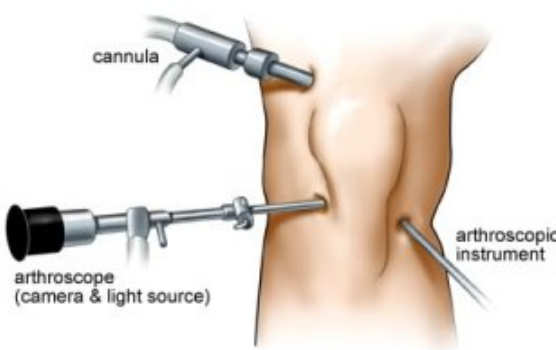
September 11, 2008

Kirkley, Pope, Feagan

- 2 Year review of 178 moderate arthritics

Medicine and rehab vs arthroscopic surgery and rehab.

Same result, same pain



1:00
RUNDOWN

When and why do we scope?

3:00 2:00 30sec Pause Stoo GO!

Non Pharmacological Treatments

- MICE not RICE
 - Relative Rest
 - Weight Loss
 - Physical Therapy (ART)TENS(McKenzie)
 - Manual Medicine
 - Bracing (unloader)OA Lite
 - Shoes and Orthotics, Lift
 - Three Dimensional Exercise Prescription
 - AquaTherapy
 - Education
 - Support
 - Nutraceuticals
 - Diet & Nutrition& Botanicals
 - Corticosteroid
 - Acupuncture
 - Sleep Hygiene
 - Prolotherapy
 - Viscosupplementation
 - PRP, STEM Cells
 - General Anesthesia & Surgery-TKR,Scope, Meniscal removal,repair or transplant
- 25 OARSI Study 20/25 Non Surgical Feb 2008

“Wellness 5”

- Exercise
- Sleep
- Nutrition
- Mental Health
- Substance Abuse



Steroid,Visco,Prolotherapy,PRP



A-Z

Integrative

- Education
- Bracing/DME
- Weight Loss
- Injections Steroid, Visco, Prolo, PRP, Stem Cells Precise Placement with Ultrasound
- Posture, Gait, Stance
- Shoe wear
- Emollient Creams
- Physical Therapy
- OMT
- Home Exercise Program (Wand, Foam Roller)
- Sleep
- Nutrition

Surgical

- Physical therapy
- Injections
- NSAIDS/Narcotics
- Surgery

or 35,000\$

700,000/year 93% Increase/10 years



Summary

- Take the Stairs
- Limit Screen Time, Read a book
- Stay Hungry
- Drink more water, Floss your gums
- Swim, walk and or run in water
- Walk, run, jog or bike for thirty-sixty minutes daily
- More pushups, sit-ups, pull-ups
- Walk as fast as you can as often as you can
- Eliminate fast foods and tobacco products Limit alcohol
- Eat orange and vivid colored fruits and vegetables found on the perimeter of the grocery
- More fruits and vegetables less carbs More fresh fish> poultry>pork>beef,
- Garlic, Ginger, Green Tea, 70% Cocoa, Almonds, Raisins, Red Wine

Live better longer

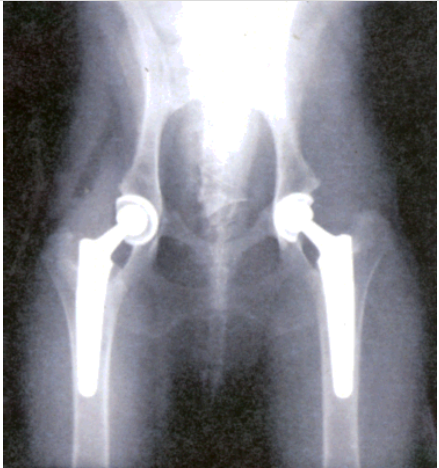
- Vitamin D level at 50
- Multi Vitamin
- Practice Good Posture
- Proper Footwear
- Restful Sleep/Naps/Meditation/Laughter/Sex
- Sunshine Exposure
- Keep it less than 200lbs
- Seat Belts/Vaccinations

Risks

- Infection
- Anesthesia
- DVT
- Blood Loss
- Death
- Nerve Damage
- Poor Outcome
- Post Op Pain
- Loss of Mobility
- Aggravation of Comorbid conditions
- Allergy
- Fearful State of Mind


Expense

- Loss of productive time
- Hospital
- Surgical Suite
- Anesthesia
- Medications
- Titanium Appliances
- Rehabilitation
- Post op DME
- Insurability
- Subsequent Surgery
- Lost wages
- State of Mind
- Job security
- Travel & Parking
- Household responsibilities
- Deductibles



1:00

THE BIG FINISH

 Multiple Surgeries

3:00 2:00 30sec Pause Stop GO!

The image is a screenshot of a video player. On the left, there is an X-ray of a patient's hips showing two hip replacements. To the right of the X-ray, there is a black box with a white timer showing '1:00'. Below the timer is a purple box with the text 'THE BIG FINISH' in red. Underneath that is a large yellow area with horizontal lines, resembling a notepad. At the bottom left of the video player, there is an orange box with a hand pointing icon and the text 'Multiple Surgeries'. At the bottom right, there is a control bar with buttons for '3:00', '2:00', '30sec', 'Pause', 'Stop', and 'GO!'.

Return to Play

- Minimal Blood Loss
- Good as New



Pain Therapies Injectable

SYSTEMIC

- Ketorolac
- MS
- Demerol
- Steroid
- Nubain




Intra/Extra-Articular

- Dextrose 15%/25%
- Normal Saline
- P2G
- Pumice
- Sodium Morrhuate
- Steroid (DepoM, Celestone)
- Platelet Rich Plasma,
- Hyaluronic Acid
- Novicaine, Xylocaine, Bupivacaine



50 of Vicodin with 5 refills



1:00

RUNDOWN

3:00
2:00
30sec
Pause
Stop
GO!

Pain T

ORAL

- NSAIDS
- Acetaminophen
- Prednisone
- COX-2
- Lyrica, Neurontin
- Methadone, Vicodin, Oxycontin
- Ambien Lunesta, Cymbalta, Elavil, Flexeril, Tramadol,

TOPICAL

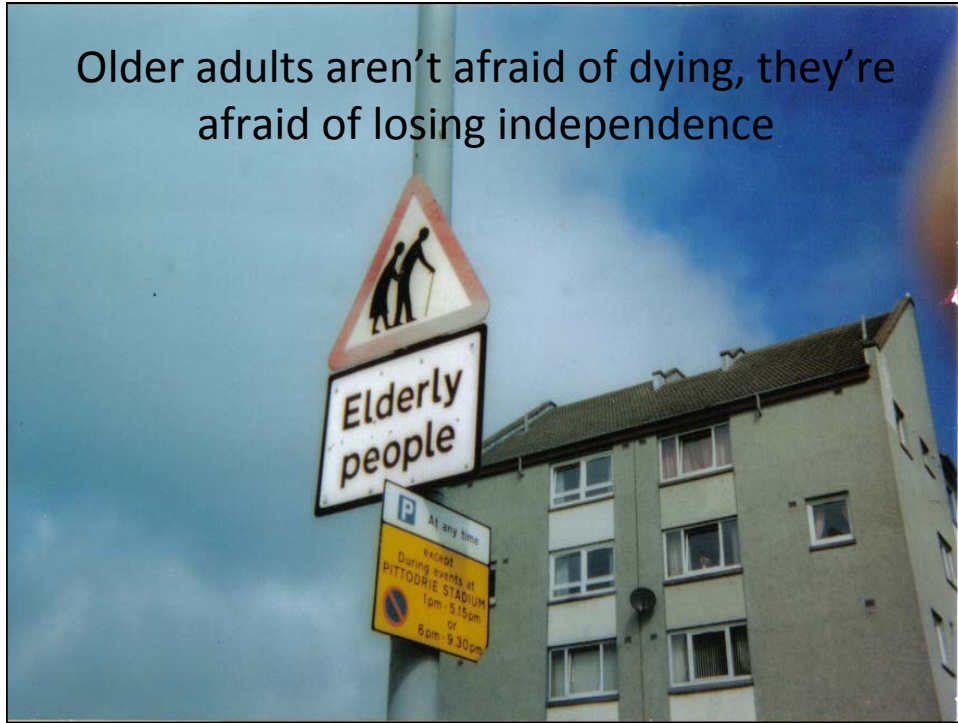
- Capsaicin
- Ketoprofen gel
- Lidoderm, EMLA
- Diclofenac(flector)








Older adults aren't afraid of dying, they're afraid of losing independence



"Wellness 5"

- Exercise
- Sleep
- Nutrition
- Mental Health
- Substance Abuse



Importance of Vitamin D for Athletes
REALFOODFUEL.COM

1:00

THE BIG FINISH

Mind Body Spirit

3:00 2:00 30sec Pause Stoo GO!

Evidence Based

- Locking
- Swelling
- Giving way
- Mechanical= NPO

The image is a composite graphic. On the left, there is a photograph of a person's knee wearing a grey and black brace. Below the photo is a small icon of a hand pointing to the right. To the right of the photo is a vertical progress bar with a black top section containing a white '1:00' timer and the word 'RUNDOWN' in white on a purple background. Below this are several horizontal bars: one red bar and several yellow bars. At the bottom of the graphic is a brown bar with the word 'Bracing' in white text. At the very bottom, there is a small grey bar with the text '3:00 2:00 30sec Pause Stoo GO!'.



TREATMENT OF OSTEOARTHRITIS OF THE
KNEE
EVIDENCE-BASED GUIDELINE 2ND EDITION

Adopted by the American Academy of
Orthopaedic Surgeons
Board of Directors May 18, 2013

AAOS Guidelines for Treatment of Knee OA

AAOS Guidelines	Strength of Recommendation
• Self management / educational program / act. Modification	• Strong
• Weight loss	• Moderate
• Against acupuncture/TENS/manual therapy	• Strong
• Bracing	• Inconclusive
• Against lat. heel wedge	• Moderate
• Against glucosamine /CS	• Strong
• NSAID's or Tramadol	• Strong
• Tylenol, opioids, pain patches	• Inconclusive



AAOS Guidelines for Treatment of Knee OA


AAOS Guidelines

- Intra-articular steroids
- Against HA injections
- PRP or growth factor inj.
- No needle lavage
- No arthroscopy for debridement
- Arthroscopic meniscectomy

Strength of Recommendation

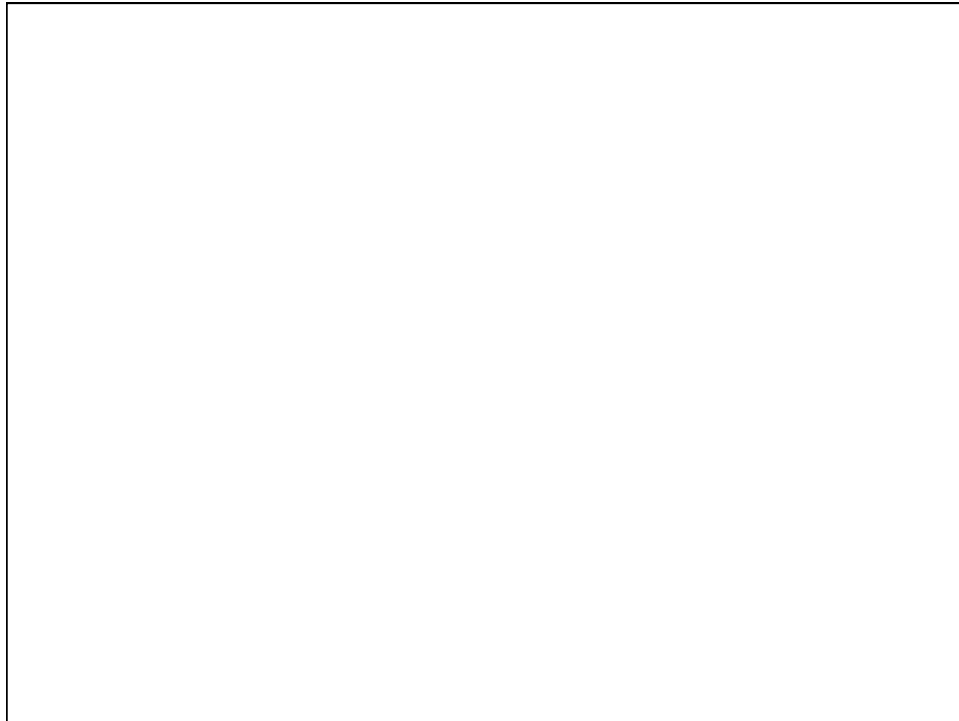
- Inconclusive
- Strong
- Inconclusive
- Moderate
- Strong
- Inconclusive

 What is your position on using PRP and stem cell injections?

1:00
RUNDOWN

3:00 2:00 30sec Pause Stoo GO!



Non Pharmacological Treatments

- MICE not RICE
 - Relative Rest
 - Weight Loss
 - Physical Therapy
(ART)TENS(McKenzie)
 - Manual Medicine
 - Bracing (unloader)OA Lite
 - Shoes and Orthotics
 - Three Dimensional Exercise Prescription
 - AquaTherapy
 - Education
 - Support
 - Nutraceuticals
 - Diet & Nutrition & Botanicals
 - Corticosteroid
 - Acupuncture
 - Sleep Hygiene
 - Prolotherapy, PRP, Stem Cells
 - Viscosupplementation
 - General Anesthesia & Surgery-
TKR, Scope, Meniscal removal, repair
or transplant
- 25 OARSI Study 20/25 Non Surgical
Feb 2008/Jan 2014


1:00

RUNDOWN

Weight Loss?

3:00 2:00 30sec Pause Stop GO!

Alternatives




1:00

RUNDOWN

Visco?

3:00 2:00 30sec Pause Stoo GO!

This slide features a photograph of a medical professional performing a procedure on a patient's leg. To the right of the photo is a vertical bar with a black top section containing a timer set to 1:00 and a purple section labeled 'RUNDOWN'. Below these are several yellow horizontal bars. At the bottom left of the slide is an orange section with a hand icon pointing to the text 'Visco?'. At the bottom right is a control bar with buttons for '3:00', '2:00', '30sec', 'Pause', 'Stoo', and 'GO!'.



1:00

RUNDOWN

Ultrasound Guidance

3:00 2:00 30sec Pause Stoo GO!

This slide features an ultrasound image showing a dark, anechoic region within a tissue structure. To the right of the image is a vertical bar with a black top section containing a timer set to 1:00 and a purple section labeled 'RUNDOWN'. Below these are several yellow horizontal bars, with two red bars interspersed. At the bottom left of the slide is an orange section with a hand icon pointing to the text 'Ultrasound Guidance'. At the bottom right is a control bar with buttons for '3:00', '2:00', '30sec', 'Pause', 'Stoo', and 'GO!'.

When you operate on a patient, you marry them.

www.FriedmanArchives.com

1:00

RUNDOWN


Anesthesia

3:00 2:00 30sec Pause Stoo GO!

Outcomes

- Grading Our Own Paper
 - Incision clean and dry
 - Well healed
 - Coming along nicely
 - Looks good from the door
 - Minimal blood loss
 - “Good as New”
- Vicodin 7.5 #50 refills 5
Revision








 1:00

THE BIG FINISH

 **Kinesiotaping: Fact or Fiction?**

3:00 2:00 30sec Pause Stop GO!

	<table border="1"><tr><td></td><td>1:00</td></tr><tr><td colspan="2">RUNDOWN</td></tr><tr><td colspan="2">Numb?</td></tr><tr><td colspan="2"></td></tr><tr><td colspan="2"></td></tr><tr><td colspan="2"></td></tr><tr><td colspan="2"></td></tr><tr><td colspan="2"></td></tr><tr><td colspan="2"></td></tr><tr><td colspan="2"></td></tr><tr><td colspan="2"></td></tr><tr><td colspan="2"></td></tr><tr><td colspan="2"><small>3:00 2:00 30sec Pause Stoo GO!</small></td></tr></table>		1:00	RUNDOWN		Numb?																				<small>3:00 2:00 30sec Pause Stoo GO!</small>	
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	1:00																										
RUNDOWN																											
<small>3:00 2:00 30sec Pause Stoo GO!</small>																											
 Supplements?																											

Voltaren® Emulgel®
Topical anti-inflammatory
50 g Emulgel 1%
For external use only.
Relieves pain and reduces swelling.
For aches and pains, back, neck and shoulder pain.
Contains diclofenac sodium 1% w/w (as diclofenac diethylamine).

Flector EP
Tisugel

PENNSAID
FOR EXTERNAL USE ONLY
3.00 2.00 30sec Pause Stop GO!

1:00
THE BIG FINISH

Emollients

- [Arthritis Rheum.](#) 2005 Jul;52(7):2026-32.
- **Weight loss reduces knee-joint loads in overweight and obese older adults with knee osteoarthritis.**
- [Messier SP¹](#), [Gutekunst DJ](#), [Davis C](#), [DeVita P](#).

Each pound of weight lost will result in a 4 – fold reduction in load per step (Arthritis & Rheumatism 2005)

New England Journal of Medicine
September 11, 2008
Kirkley, Pope, Feagan

- 2 Year review of 178 moderate arthritics

Medicine and rehab vs arthroscopic surgery and rehab.

Same result, same pain


The image is a composite graphic. On the left, a photograph shows a person's shoulder with purple surgical markings, including a circle and the number '55'. To the right of the photo is a vertical timer bar with a black top section showing '1:00' and a purple section below it with the word 'RUNDOWN' in white. Below the photo is an orange section with a hand icon pointing to the right and the word 'Prolotherapy' in white. At the bottom right, a control bar contains the text '3:00 2:00 30sec Pause Stoo GO!'.


Studies

- ▣ [Semin Arthritis Rheum](#). 2015 Apr 30.
- ▣ **Consensus statement on visco supplementation with hyaluronic acid for the management of osteoarthritis.**
- ▣ [Henrotin Y¹, Raman R², Richette P³, Bard H⁴, Jerosch J⁵, Conrozier T⁶, Chevalier X⁷, Migliore A⁸](#).
 - the expert panel achieved unanimous agreement in favor of the following statements:
 - 1. VS is an effective treatment for mild to moderate knee OA;
 - 2. VS is not an alternative to surgery in advanced hip OA;
 - 3. VS is a well-tolerated treatment of knee and other joints OA;
 - 4. VS should not be used only in patients who have failed to respond adequately to analgesics and NSAIDs;
 - 5. VS is a "positive" indication but not a "lack of anything better" indication;
 - 6. cross-linking is a proven means for prolonging IA residence time of H


Studies

- ▣ [Am J Sports Med](#). 2015 Jul;43(7):1575-82.
- ▣ **Platelet-Rich Plasma Intra-articular Knee Injections Show No Superiority Versus Viscosupplementation: A Randomized Controlled Trial.**
- ▣ [Filardo G¹, Di Matteo B², Di Martino A¹, Merli ML¹, Cenacchi A³, Fornasari P³, Marnacchi M⁴, Kon E⁴](#).
 - Randomized controlled trial; Level of evidence, 1.
 - 192 patients. Criteria: Unilateral, > 4mos symptoms, radiographic changes
 - 3 weekly injections
 - Evaluation at time zero, 2, 6, and 12 months International Knee Documentation Committee (IKDC) subjective score (main outcome), Knee injury and Osteoarthritis Outcome Score, EuroQol visual analog scale, and Tegner score. Range of motion, transpatellar circumference, patient satisfaction, and adverse events were also recorded
 - Also they noted increased postinjection pain and swelling with PRP



 **1:00**

THE BIG FINISH

 Corrections, Errors,
and Comments

3:00 2:00 30sec Pause Stop GO!

This slide features a photograph of several birds perched on a hillside covered in trash. The right side of the slide contains a timer set to 1:00, a purple banner with the text 'THE BIG FINISH', a large yellow area with horizontal lines for notes, and a control bar at the bottom with buttons for 3:00, 2:00, 30sec, Pause, Stop, and GO!



 **1:00**

THE BIG FINISH

 Nutrition

3:00 2:00 30sec Pause Stop GO!

This slide features a photograph of two children eating at a fast-food restaurant. The right side of the slide contains a timer set to 1:00, a purple banner with the text 'THE BIG FINISH', a large yellow area with horizontal lines for notes, and a control bar at the bottom with buttons for 3:00, 2:00, 30sec, Pause, Stop, and GO!



*Thank You Drs. Tuck and
Leary!*