

Achilles Tendinitis and Tendinosis

Achilles Tendinitis & Tendinosis

with Rick Kaselj, MS

Rick Kaselj – ExercisesForInjuries.com 

My Story

Rick Kaselj

- BSc – 1997
- MS – 2008 / RC
- Work – physio, studio, gym, rehab
- Courses – live, webinars
- Writing – books, manuals
- Blog – ExercisesForInjuries.com



Rick Hiking 4300 km / 5 months from Mexico to Canada

Rick Kaselj – ExercisesForInjuries.com 

Objectives



- **Part 1** – What is Achilles Tendinitis and Tendinosis?
- **Part 2** – Exercise Considerations for Achilles Tendinitis and Tendinosis
- **Part 3** – 12 Week Exercise Program for Achilles Tendinitis and Tendinosis

Rick Kaselj – ExercisesForInjuries.com 

Achilles Tendinitis and Tendinosis

Part 1 – What is Achilles Tendinitis & Tendinosis?

Rick Kaselj – ExercisesForInjuries.com



What is Achilles Tendinitis & Tendinosis?

- **Tendinitis** – Acute irritation of the Achilles tendon that leads to inflammation and swelling that can be seen and touched.
- **Tendinosis** – Chronic and is a result of degenerative changes (aging) of the Achilles Tendon

Rick Kaselj – ExercisesForInjuries.com



Few Things to Know About Achilles Tendinitis & Tendinosis



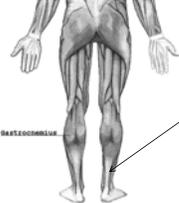
- Most frequently reported overuse injury
- Very common in people that are active (recreational & competitive)
- 7 to 9% of runners report Achilles tendinopathy (disease of the tendon) on a yearly basis
- Runners are most effected

Rick Kaselj – ExercisesForInjuries.com



Achilles Tendinitis and Tendinosis

Key Structures Involved in Achilles Tendonitis & Tendinosis



- Key Structures
 - Achilles Tendon
 - 15 cm in length
 - From calf (tendon junction) to Calcaneus
 - Made up of 50% of Gastrocnemius and 50% Soleus

Rick Kaselj – ExercisesForInjuries.com

Exercises For Injuries

Key Structures Involved in Achilles Tendonitis & Tendinosis



- Key Structures
 - Achilles Tendon
 - Starts off broad and flat and goes rounded and then broad

Rick Kaselj – ExercisesForInjuries.com

Exercises For Injuries

Key Structures Involved in Achilles Tendonitis & Tendinosis



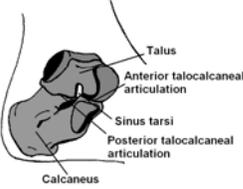
- Key Structures
 - Gastrocnemius (Calf)
 - Soleus
 - Achilles tendon
 - Calcaneus (Heel)

Rick Kaselj – ExercisesForInjuries.com

Exercises For Injuries

Achilles Tendinitis and Tendinosis

Key Structures Involved in Achilles Tendonitis & Tendinosis



- Key Structures
 - Subtalar joint or Talocalcaneal Joint
 - Allows inversion and eversion (foot in and out)
 - Meeting of talus and calcaneus
 - Calcaneus = heel
 - Talus = lower leg attaches

Rick Kaselj – ExercisesForInjuries.com



Most Common Causes Leading to Achilles Tendinitis & Tendinosis

- Intrinsic Factors
 - Abnormal ankle dorsiflexion range of motion
 - Less than 11.5 degrees increase risk by 3.5 times
 - Too much
 - Subtalar joint range of motion
 - Too much or too little
 - Decrease in ankle plantar flexion strength
 - Increase foot pronation



Rick Kaselj – ExercisesForInjuries.com



What Else Can It Be?

- Acute Achilles tendon rupture
- Partial tear of the Achilles tendon
- Retrocalcaneal bursitis
- Posterior ankle impingement
- Irritation of neuroma of the sural nerve
- Os trigonum syndrome
- Accessory soleus muscle
- Achilles tendon ossification
- Systemic inflammatory disease
- Insertional Achilles tendinopathy



Rick Kaselj – ExercisesForInjuries.com



Achilles Tendinitis and Tendinosis

Remember!

1. **Get things check out**
2. **Get an accurate diagnosis**
 1. Ultrasound
 2. Magnetic Resonance Imaging - MRI
3. **Get clearance to start an exercise program**
4. **Bring this exercise program to your doctor to see if it is right for you**





Rick Kaselj - ExercisesForInjuries.com

Assessing of Achilles Tendinitis & Tendinosis?



- **Self Assessment or Client Assessment**
 1. Feet on Wall (Dorsiflexion range of motion)
 2. Single Leg Toe Raises (Plantar flexion strength – 1 time)
 3. Multiple Single Toe Raises (Plantar flexion endurance – 10 to 20 times)
 4. Pain with palpation



Rick Kaselj - ExercisesForInjuries.com

Assessing of Achilles Tendinitis & Tendinosis?



- **Self Assessment or Client Assessment**
 - Use to show a starting point
 - Measure progress



Rick Kaselj - ExercisesForInjuries.com

Achilles Tendinitis and Tendinosis

Assessing of Achilles Tendinitis & Tendinosis?



- **How are they or you with?**
 - Walking
 - Descending stairs
 - Single Leg Hopping

Rick Kaselj – ExercisesForInjuries.com 

Part 2 – Exercise Considerations for Achilles Tendinitis & Tendinosis

Rick Kaselj – ExercisesForInjuries.com 

Most Common Causes Leading to Achilles Tendinitis & Tendinosis

- **Extrinsic Factors**
 - Training errors
 - Increase in mileage
 - Increase in intensity
 - Hill training
 - Return off of a break
 - Environmental factors
 - More prone in Winter
 - Faulty equipment



Rick Kaselj – ExercisesForInjuries.com 

Achilles Tendinitis and Tendinosis

Most Common Causes Leading to Achilles Tendinitis & Tendinosis

- **Other Conditions**
 - Obesity
 - Hypertension
 - Diabetes

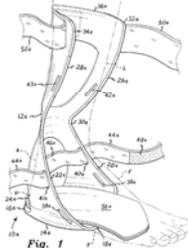


Rick Kaselj - ExercisesForInjuries.com

Exercises For Injuries

What Else Could Help Other than Exercise?

- **Low-level laser therapy**
- **Manual Therapy**
- **Taping**
- **Foot Orthotics**
 - Custom
- **Night Splints**



Rick Kaselj - ExercisesForInjuries.com

Exercises For Injuries

What Else Could Help Other than Exercise?

- **Surgery**
 - 29% of people needed surgery
 - 4 to 6 months to recover



Rick Kaselj - ExercisesForInjuries.com

Exercises For Injuries

Achilles Tendinitis and Tendinosis

Important Training Techniques for Recovering from Achilles Tendinitis & Tendinosis

- **Abnormal Ankle Dorsiflexion Range of Motion**
 - Need to improve
 - Mobility
 - Stretching



Rick Kaselj – ExercisesForInjuries.com **Exercises For Injuries**

Important Training Techniques for Recovering from Achilles Tendinitis & Tendinosis



- **Abnormal Subtalar joint range of motion**
 - Work on balance

Rick Kaselj – ExercisesForInjuries.com **Exercises For Injuries**

Important Training Techniques for Recovering from Achilles Tendinitis

- **Decreased Calf Strength**
 - Ankle plantar flexion (Go onto toes) strength



Rick Kaselj – ExercisesForInjuries.com **Exercises For Injuries**

Achilles Tendinitis and Tendinosis

Important Training Techniques for Recovering from Achilles Tendinitis & Tendinosis

- **Increase Foot Pronation**
 - Flattening of feet
 - Good set of shoes
 - Over the counter foot inserts
 - Work on balance
 - Calf strength



Rick Kaselj - ExercisesForInjuries.com **Exercises For Injuries**

Important Training Techniques for Recovering from Achilles Tendinitis & Tendinosis



- **When To Do Training**
 - End of exercise program
 - End of day

Rick Kaselj - ExercisesForInjuries.com **Exercises For Injuries**

Important Training Techniques for Recovering from Achilles Tendinitis & Tendinosis

- **Manage Conditions**
 - Obesity
 - Hypertension
 - Diabetes



Rick Kaselj - ExercisesForInjuries.com **Exercises For Injuries**

Achilles Tendinitis and Tendinosis

Important Training Techniques for Recovering from Achilles Tendinitis & Tendinosis

- **Extrinsic Factors**
 - Training errors
 - Environmental factors



Rick Kaselj - ExercisesForInjuries.com **Exercises For Injuries**

Important Training Techniques for Recovering from Achilles Tendinitis & Tendinosis



- **Education**
 - What is Achilles tendinitis and tendinosis?
 - What make it worse?
 - What to do about it?
 - How to do exercise program properly?

Rick Kaselj - ExercisesForInjuries.com **Exercises For Injuries**

Part 3 – 12 Week Exercise Program for Achilles Tendinitis & Tendinosis

Rick Kaselj - ExercisesForInjuries.com **Exercises For Injuries**

Achilles Tendinitis and Tendinosis

Week Exercise Program for Achilles Tendinitis			
	Stage 1	Stage 2	Stage 3
Self Massage	Foam Roller Calf Toe Up	Foam Roller Calf Toe Out	
Self Massage	Self Massage with Ball Toe Up	Self Massage with Ball Toe Out	
Self Massage	Self Massage with Thumb		
Ankle Mobility	Knee to Wall	Knee to Wall (Toe Away)	Three Way Knee to Wall
Calf Stretch	Natural	Straight	Toe In
Soleus Stretch	Natural	Straight	Toe In
Calf Strength	Calf Raises Both Toes	Calf Raises One Toe	Calf Raises Hoping
Balance	Single Leg Balance	Single Leg Deadlift	Single Leg on Toe
Hip Stability	Lateral Walking	Lateral Tubing Walk	Monster Walking
Stepping	Step Up	Step Down	Step Over

The Exercise NOT to DO if You Have Achilles Tendonitis



- **Non-weight Bearing**
- **Weight Bearing**
 - Standing
 - Squatting
 - Single Leg Balance
 - Single Leg Squat
 - Lunge
- **Functional**
 - Walking
 - Jumping
 - Running
 - Hiking
 - Cutting

Rick Kaselj - ExercisesForInjuries.com


Exercises for Achilles Tendinitis



- **Equipment**
 - Foam roller or soda bottle
 - Medicine Ball or Ball
 - A thumb
 - Riser or stair step
 - Tubing
 - Dumbbells or backpack

Rick Kaselj - ExercisesForInjuries.com


Achilles Tendinitis and Tendinosis

Exercises for Achilles Tendinitis

#1 - Foam Roller Calf

- Toe up
- Toe out
- No foam roller use 2L soda / pop bottle
- Hold until subside and go up leg once
- 1 to 3 times a day

Rick Kaselj – ExercisesForInjuries.com



Exercises For Injuries

Exercises for Achilles Tendinitis

#2 - Self Massage with Ball

- Ball
 - Tennis
 - Dog toy
- Hold until subside and go up leg once or twice
- 1 to 3 times a day

Rick Kaselj – ExercisesForInjuries.com



Exercises For Injuries

Exercises for Achilles Tendinitis

#3 - Self Massage with Thumb

- Thumb
- Massage around sore area
- 1 to 3 times a day

Rick Kaselj – ExercisesForInjuries.com



Exercises For Injuries

Achilles Tendinitis and Tendinosis

Exercises for Achilles Tendinitis

#4 - Ankle Mobility

- Knee to wall
- Knee to Wall (Toe Away)
- Three Way Knee to Wall
- 10 times
- Smooth controlled movement
- 1 to 3 times a day



Rick Kaselj – ExercisesForInjuries.com

Exercises For Injuries

Exercises for Achilles Tendinitis

#5 - Calf Stretch

- Natural
- Straight
- Toe In
- 2 times for 30 seconds
- 1 to 3 times a day



Rick Kaselj – ExercisesForInjuries.com

Exercises For Injuries

Exercises for Achilles Tendinitis

#6 - Soleus Stretch

- Natural
- Straight
- Toe In
- 2 times for 30 seconds
- 1 to 3 times a day



Rick Kaselj – ExercisesForInjuries.com

Exercises For Injuries

Achilles Tendinitis and Tendinosis

Exercises for Achilles Tendinitis

- **#7 - Calf Raises**
 - Both toes
 - One toe
 - Hopping
 - 10 to 20 times
 - 1 to 3 times a day



Rick Kaselj - ExercisesForInjuries.com

Exercises For Injuries

Exercises for Achilles Tendinitis

- **#8 - Balance**
 - Single Leg Balance
 - Single Leg Deadlift
 - Single Leg on Toe
 - 10 times
 - 2 sets for a 30 second hold
 - 1 to 3 times a day



Rick Kaselj - ExercisesForInjuries.com

Exercises For Injuries

Exercises for Achilles Tendinitis

- **#9 - Lateral Movement**
 - Lateral Walking
 - Lateral Tubing Walk
 - Monster Walking
 - 10 times each way
 - Smooth controlled movement
 - 1 to 3 times a day



Rick Kaselj - ExercisesForInjuries.com

Exercises For Injuries

Achilles Tendinitis and Tendinosis

Exercises for Achilles Tendinitis

- **#10 - Step Ups**
 - Up
 - Down
 - Over
 - 10 times
 - Smooth controlled movement
 - 1 to 3 times a day



Rick Kaselj - ExercisesForInjuries.com

Exercises for Achilles Tendinosis

- **Heel Drop Program**
 - Both Legs
 - One Leg
 - One Leg with Weight



Rick Kaselj - ExercisesForInjuries.com

Exercises for Achilles Tendinosis

- **Heel Drop Program**
 - Return to start with uninjured leg
 - Controlled movement
 - Knee straight and knee bent



Rick Kaselj - ExercisesForInjuries.com

Achilles Tendinitis and Tendinosis

Exercises for Achilles Tendinosis

- **Heel Drop Program**
 - Progress to a leg press machine
 - 12 weeks
 - 2 times a day
 - 3 sets of 15 repetitions
 - Moderate pain but not disabling pain



Rick Kaselj - ExercisesForInjuries.com

Objectives



- Part 1** – What is Achilles Tendinitis and Tendinosis?
- Part 2** – Exercise Considerations for Achilles Tendinitis and Tendinosis
- Part 3** – 12 Week Exercise Program for Achilles Tendinitis and Tendinosis

Rick Kaselj - ExercisesForInjuries.com



Other Exercises & Injuries

- Scapular Stabilization Exercises
- Plantar Fasciitis and Exercise
- The Most Effective Rotator Cuff Exercise Program
- Exercises for Prevention, Rehabilitation and Overcoming Knee Injuries
- Corrective Exercises for Running Injury-free
- Lumbar Spinal Fusion and Exercise



Rick Kaselj - ExercisesForInjuries.com

Achilles Tendinitis and Tendinosis

**More FREE Information on
Exercise & Injuries**

- **\$299 Fitness Education**
 - Returning the Shoulder Back to Optimal Function Seminar
 - Exercise Modification for the Sensitive Shoulder Seminar
 - Visit www.ExercisesForInjuries.com

Rick Kaselj – ExercisesForInjuries.com 

Thank You

- **Send me your questions!**
- **Visit ExercisesForInjuries.com to get \$299 in Fitness Education Gifts**
- **Rick Kaselj**
 - rick@ExercisesForInjuries.com
 - www.ExercisesForInjuries.com

Rick Kaselj – ExercisesForInjuries.com 

End

Rick Kaselj – ExercisesForInjuries.com 
