

PODIATRY ULTRASOUND Injections

A red icon representing an ultrasound probe or waves, positioned over the letter 'O' in the word 'ULTRASOUND'.

Cortisone, HA, Prolotherapy, and PRP

	CORTISONE
TIMING	Not usually in first 6 weeks of pain
OPTIMAL CANDIDATE	Moderate symptoms (any stage OA)
SUBOPTIMAL CANDIDATE	Pt with prior cortisone injection to same area with pain relief < 4 weeks
ANESTHETIC	Lidocaine 1%
• SYRINGE	3mL
• NEEDLE	25g x 1.5"
• TARGET	Into the skin and superficial muscles, right down to the talus until certain lidocaine is flowing along talar dome
CORTISONE	Triamcinolone 20mg or Methylprednisolone 20mg
• SYRINGE	3mL filled with 1mL Lidocaine 1%
• NEEDLE	25g x 1.5"
• TARGET	Touching the cartilage of the talus
• TOP TIPS	
POST PROCEDURE	Follow up FOAS at 12 weeks
• ORAL PAIN MEDS	Acetaminophen is likely adequate
• IMMOBILIZE	No
• RETURN TO ADLs	Immediately
• RETURN TO THERAPY	1 week
• RETURN TO SPORT	2 weeks
REPEAT TREATMENT	Minimum 12 weeks interval

	HYALURONIC ACID
TIMING	Usually after DX cartilage injury/OA
OPTIMAL CANDIDATE	Mild symptoms without effusion
SUBOPTIMAL CANDIDATE	- VAS > 7 / 10 with ADLs - High grade OA - Recurrent effusions
ANESTHETIC	Lidocaine 1%
• SYRINGE	3mL
• NEEDLE	27g x 1.25"
• TARGET	Into the skin and superficial muscles, right down to the talus until certain lidocaine is flowing along talar dome
HYALURONIC ACID	2mL, 3mL or 4mL
• SYRINGE	A full pre-filled syringe
• NEEDLE	22g x 1.5"
• TARGET	Touching the cartilage of the talus
• TOP TIPS	Start the patient with a 2mL dose and see how they respond.
POST PROCEDURE	Follow up FOAS at 12 weeks
• ORAL PAIN MEDS	Acetaminophen is likely adequate
• IMMOBILIZE	No
• RETURN TO ADLs	Next day
• RETURN TO THERAPY	1 week
• RETURN TO SPORT	2 weeks
REPEAT TREATMENT	As early as 2 months if needed. Usually 3 - 6 months.

	PROLOTHERAPY
TIMING	Usually after DX cartilage injury/OA
OPTIMAL CANDIDATE	Mild symptoms without effusion
SUBOPTIMAL CANDIDATE	- VAS > 7 / 10 with ADLs - High grade OA - Recurrent effusions
ANESTHETIC	Lidocaine 1%
• SYRINGE	3mL
• NEEDLE	27g x 1.25"
• TARGET	Into the skin and superficial muscles, right down to the talus until certain lidocaine is flowing along talar dome
PROLOTHERAPY	2mL Dextrose 50% + 2mL Lidocaine 1% = 25% Dextrose
• SYRINGE	5mL with 4mL of 25% Dextrose
• NEEDLE	25g x 1.5"
• TARGET	Touching the cartilage of the talus
• TOP TIPS	Prolotherapy usually includes treatment the joint and most ligaments
POST PROCEDURE	Follow up FOAS q 4 weeks x 6
• ORAL PAIN MEDS	Acetaminophen is likely adequate
• IMMOBILIZE	No
• RETURN TO ADLs	Next day
• RETURN TO THERAPY	1 week
• RETURN TO SPORT	Must discuss progress with therapist
REPEAT TREATMENT	Repeat prolo q 4 weeks x 3 - 6 total

	PRP
TIMING	Usually after DX cartilage injury/OA
OPTIMAL CANDIDATE	Mild symptoms without effusion
SUBOPTIMAL CANDIDATE	- VAS > 7 / 10 with ADLs - High grade OA - Recurrent effusions
ANESTHETIC	1 part Lidocaine 1% + 9 parts Normal saline or simply use Ropivicaïne 0.2%
• SYRINGE	3mL
• NEEDLE	27g x 1.25"
• TARGET	Into the skin and superficial muscles, right down to the talus until certain lidocaine is flowing along talar dome
PRP	Leukocyte-Poor PRP (Yellow PRP) Aim for 5 Billion Platelets
• SYRINGE	5mL
• NEEDLE	25g x 1.5"
• TARGET	Touching the cartilage of the talus
• TOP TIPS	Inject maximum 6mL, 4mL is a common amount
POST PROCEDURE	Follow up FOAS q 4 weeks x 6
• ORAL PAIN MEDS	Acetaminophen is likely adequate
• IMMOBILIZE	No
• RETURN TO ADLs	Next day
• RETURN TO THERAPY	1 week
• RETURN TO SPORT	2 weeks
REPEAT TREATMENT	Repeat PRP if needed after 8 weeks

ANKLE: ANKLE LIGAMENTS (ATFL, AITFL)

	CORTISONE
TIMING	
OPTIMAL CANDIDATE	Rarely used for this body part
SUBOPTIMAL CANDIDATE	
ANESTHETIC	
• SYRINGE	
• NEEDLE	
• TARGET	
CORTISONE	
• SYRINGE	
• NEEDLE	
• TARGET	
• TOP TIPS	
POST PROCEDURE	
• ORAL PAIN MEDS	
• IMMOBILIZE	
• RETURN TO ADLs	
• RETURN TO THERAPY	
• RETURN TO SPORT	
REPEAT TREATMENT	

	HYALURONIC ACID
TIMING	Anytime
OPTIMAL CANDIDATE	No tears and only mild thickening
SUBOPTIMAL CANDIDATE	- VAS > 7 / 10 with ADLs - ATFL Complete Tear - AITFL Thickening > 3mm
ANESTHETIC	Lidocaine 1%
• SYRINGE	3mL
• NEEDLE	27g x 1.25"
• TARGET	Into the skin and superficial fat, right down to the ligaments until certain lidocaine is flowing adjacent ligament
HYALURONIC ACID	1-2mL of soft-tissue adapted HA
• SYRINGE	1.2mL pre-filled syringe
• NEEDLE	25g x 1.5"
• TARGET	Adjacent area of abnormality or pain
• TOP TIPS	This might mean spreading the HA around a few different areas
POST PROCEDURE	Follow up FOAS at 12 weeks
• ORAL PAIN MEDS	Acetaminophen is likely adequate
• IMMOBILIZE	No
• RETURN TO ADLs	Immediately
• RETURN TO THERAPY	1 week
• RETURN TO SPORT	2 weeks
REPEAT TREATMENT	Treatment is 2 injections, 7 days apart

	PROLOTHERAPY
TIMING	Not usually in first 6 weeks of pain
OPTIMAL CANDIDATE	No tears and only mild thickening
SUBOPTIMAL CANDIDATE	- VAS > 7 / 10 with ADLs - ATFL Complete Tear - AITFL Thickening > 3mm
ANESTHETIC	Lidocaine 1%
• SYRINGE	3mL
• NEEDLE	27g x 1.25"
• TARGET	Into the skin and superficial fat, right down to the ligaments until certain lidocaine is flowing into ligament
PROLOTHERAPY	1mL Dextrose 50% + 3mL Lidocaine 1% = 12.5% Dextrose
• SYRINGE	5mL with 4mL of 12.5% Dextrose
• NEEDLE	25g x 1.5"
• TARGET	Into ligaments and around ligaments
• TOP TIPS	Inject maximum 2mL each ligament, 1.5mL is a common amount
POST PROCEDURE	Follow up FOAS q 4 weeks x 6
• ORAL PAIN MEDS	Acetaminophen is likely adequate
• IMMOBILIZE	No
• RETURN TO ADLs	Next day
• RETURN TO THERAPY	1 week
• RETURN TO SPORT	Must discuss progress with therapist
REPEAT TREATMENT	Repeat prolo q 4 weeks x 3 - 6 total

	PRP
TIMING	Not usually in first 6 weeks of pain
OPTIMAL CANDIDATE	No tears and only mild thickening
SUBOPTIMAL CANDIDATE	- VAS > 7 / 10 with ADLs - ATFL Complete Tear - AITFL Thickening > 3mm
ANESTHETIC	1 part Lidocaine 1% + 9 parts Normal saline or simply use Ropivicaïne 0.2%
• SYRINGE	3mL
• NEEDLE	27g x 1.25"
• TARGET	Into the skin and superficial fat, right down to the ligaments until certain lidocaine is flowing into ligament
PRP	Leukocyte-Poor PRP (Yellow PRP) Aim for 2.5 Billion Platelets
• SYRINGE	5mL
• NEEDLE	25g x 1.5"
• TARGET	Into ligaments and around ligaments
• TOP TIPS	Inject maximum 2mL each ligament, 1.5mL is a common amount
POST PROCEDURE	Follow up FOAS q 4 weeks x 6
• ORAL PAIN MEDS	Acetaminophen is likely adequate
• IMMOBILIZE	No
• RETURN TO ADLs	Next day
• RETURN TO THERAPY	1 week
• RETURN TO SPORT	Must discuss progress with therapist
REPEAT TREATMENT	Repeat PRP if needed after 8 weeks

	CORTISONE
TIMING	Not usually in first 6 weeks of pain
OPTIMAL CANDIDATE	Any tear / thickening
SUBOPTIMAL CANDIDATE	Pt with prior cortisone injection to same area with pain relief < 4 weeks
ANESTHETIC	Lidocaine 1%
• SYRINGE	3mL
• NEEDLE	25g x 1.5"
• TARGET	Into the skin and superficial fat, right down to the calcaneus until certain lidocaine is flowing adjacent fascia
CORTISONE	Triamcinolone 20mg or Methylprednisolone 20mg
• SYRINGE	3mL filled with 1mL Lidocaine 1%
• NEEDLE	22g x 1.5"
• TARGET	Medial calcaneal tubercle (medial and deep to plantar fascia on the screen)
• TOP TIPS	Use Dexamethasone 5mg to reduce fat atrophy risk
POST PROCEDURE	Follow up FOAS at 12 weeks
• ORAL PAIN MEDS	Acetaminophen is likely adequate
• IMMOBILIZE	No
• RETURN TO ADLs	Immediately
• RETURN TO THERAPY	1 week
• RETURN TO SPORT	2 weeks
REPEAT TREATMENT	Minimum 12 weeks interval

	HYALURONIC ACID
TIMING	Anytime
OPTIMAL CANDIDATE	No tears and normal thickness
SUBOPTIMAL CANDIDATE	- VAS > 7 / 10 with ADLs - Any Tear - Thickening > 8mm
ANESTHETIC	Lidocaine 1%
• SYRINGE	3mL
• NEEDLE	27g x 1.25"
• TARGET	Into the skin and superficial fat, right down to the calcaneus until certain lidocaine is flowing adjacent fascia
HYALURONIC ACID	1-2mL of soft-tissue adapted HA
• SYRINGE	1.2mL pre-filled syringe
• NEEDLE	25g x 1.5"
• TARGET	Adjacent area of abnormality or pain
• TOP TIPS	This might mean spreading the HA around a few different areas
POST PROCEDURE	Follow up FOAS at 12 weeks
• ORAL PAIN MEDS	Acetaminophen is likely adequate
• IMMOBILIZE	No
• RETURN TO ADLs	Immediately
• RETURN TO THERAPY	1 week
• RETURN TO SPORT	2 weeks
REPEAT TREATMENT	Treatment is 2 injections, 7 days apart

	PROLOTHERAPY
TIMING	Not usually in first 6 weeks of pain
OPTIMAL CANDIDATE	No tears and normal thickness
SUBOPTIMAL CANDIDATE	- VAS > 7 / 10 with ADLs - Any Tear - Thickening > 8mm
ANESTHETIC	Lidocaine 1%
• SYRINGE	3mL
• NEEDLE	27g x 1.25"
• TARGET	Into the skin, superficial to tendon, and consider a small amount into the fascia itself
PROLOTHERAPY	1mL Dextrose 50% + 3mL Lidocaine 1% = 12.5% Dextrose
• SYRINGE	5mL with 4mL of 12.5% Dextrose
• NEEDLE	25g x 1.5"
• TARGET	Into fascia and around fascia
• TOP TIPS	Inject maximum 4mL, 2mL is a common amount
POST PROCEDURE	Follow up FOAS q 4 weeks x 6
• ORAL PAIN MEDS	Acetaminophen+Tramadol/Codeine
• IMMOBILIZE	Only if worried about high pain, then boot for 2-3 days
• RETURN TO ADLs	Next day
• RETURN TO THERAPY	1 week
• RETURN TO SPORT	Must discuss progress with therapist
REPEAT TREATMENT	Repeat prolo q 4 weeks x 3 - 6 total

	PRP
TIMING	Not usually in first 6 weeks of pain
OPTIMAL CANDIDATE	No tears and normal thickness
SUBOPTIMAL CANDIDATE	- VAS > 7 / 10 with ADLs - Any Tear - Thickening > 8mm
ANESTHETIC	1 part Lidocaine 1% + 9 parts Normal saline or simply use Ropivacaine 0.2%
• SYRINGE	3mL
• NEEDLE	27g x 1.25"
• TARGET	Into the skin, superficial to tendon, and consider a small amount into the fascia itself
PRP	LR PRP (Red PRP) or LP-PRP (Yellow PRP) Aim for 2.5 Billion Platelets
• SYRINGE	3mL
• NEEDLE	25g x 1.5"
• TARGET	Into fascia and around fascia
• TOP TIPS	Very Painful! Inject maximum 3mL, 1.5mL is a common amount
POST PROCEDURE	Follow up FOAS q 4 weeks x 6
• ORAL PAIN MEDS	Acetaminophen+Tramadol/Codeine
• IMMOBILIZE	Only if worried about high pain, then boot for 2-3 days
• RETURN TO ADLs	Next day
• RETURN TO THERAPY	1 week
• RETURN TO SPORT	Must discuss progress with therapist
REPEAT TREATMENT	Repeat PRP if needed after 8 weeks

	CORTISONE
TIMING	When Disabled! VAS > 7 / 10 w ADLs
OPTIMAL CANDIDATE	Healthy Tendon in a non-runner
SUBOPTIMAL CANDIDATE	VAS > 7 / 10 with ADLs Tear > 10 % of tendon Very poor strength
ANESTHETIC	Lidocaine 1%
• SYRINGE	3mL
• NEEDLE	30g x 1"
• TARGET	The retrocalcaneal Bursa
CORTISONE	Triamcinolone 10mg or Methylprednisolone 10mg
• SYRINGE	3mL
• NEEDLE	25g x 1.5"
• TARGET	The retrocalcaneal Bursa
• TOP TIPS	Cousel the patient extensively about risk of rupture and document this
POST PROCEDURE	Follow up VISA-A at 12 weeks
• ORAL PAIN MEDS	Acetaminophen is likely adequate
• IMMOBILIZE	No
• RETURN TO ADLs	1 week
• RETURN TO THERAPY	1 week
• RETURN TO SPORT	2 weeks
REPEAT TREATMENT	No + counsel about rupture risk

	HYALURONIC ACID
TIMING	Anytime
OPTIMAL CANDIDATE	No tears (just tendinosis)
SUBOPTIMAL CANDIDATE	VAS > 7 / 10 with ADLs Tear > 10 % of tendon Very poor strength
ANESTHETIC	Lidocaine 1%
• SYRINGE	3mL
• NEEDLE	30g x 1"
• TARGET	Into the skin and superficial to tendon, until certain lidocaine is flowing adjacent tendon
HYALURONIC ACID	1-2mL of soft-tissue adapted HA
• SYRINGE	1.2mL pre-filled syringe
• NEEDLE	25g x 1.5"
• TARGET	Adjacent area of abnormality or pain, including possibly the retrocalc bursa
• TOP TIPS	This might mean spreading the HA around a few different areas
POST PROCEDURE	Follow up VISA-A at 12 weeks
• ORAL PAIN MEDS	Acetaminophen is likely adequate
• IMMOBILIZE	No
• RETURN TO ADLs	Immediately
• RETURN TO THERAPY	1 week
• RETURN TO SPORT	2 weeks
REPEAT TREATMENT	Treatment is 2 injections, 7 days apart

	PROLOTHERAPY
TIMING	Not usually in first 6 weeks of pain
OPTIMAL CANDIDATE	No tears (just tendinosis)
SUBOPTIMAL CANDIDATE	VAS > 7 / 10 with ADLs Tear > 10 % of tendon Very poor strength
ANESTHETIC	Lidocaine 1%
• SYRINGE	3mL
• NEEDLE	30g x 1"
• TARGET	Into the skin, superficial to tendon, and consider a small amount into the tendon itself
PROLOTHERAPY	1mL Dextrose 50% + 3mL Lidocaine 1% = 12.5% Dextrose
• SYRINGE	5mL with 4mL of 12.5% Dextrose
• NEEDLE	25g x 1.5"
• TARGET	Into tendinosis + tear and around tear
• TOP TIPS	Very Painful! Inject maximum 4mL, 2mL is a common amount
POST PROCEDURE	Follow up cq 4 weeks x 6
• ORAL PAIN MEDS	Acetaminophen+Tramadol/Codeine
• IMMOBILIZE	Only if worried about high pain, then boot for 2-3 days
• RETURN TO ADLs	Next day
• RETURN TO THERAPY	1 week
• RETURN TO SPORT	Must discuss progress with therapist
REPEAT TREATMENT	Repeat prolo q 4 weeks x 3 - 6 total

	PRP
TIMING	Not usually in first 6 weeks of pain
OPTIMAL CANDIDATE	No tears (just tendinosis)
SUBOPTIMAL CANDIDATE	VAS > 7 / 10 with ADLs Tear > 25 % of tendon Very poor strength
ANESTHETIC	1 part Lidocaine 1% + 9 parts Normal saline or simply use Ropivicaïne 0.2%
• SYRINGE	3mL
• NEEDLE	30g x 1"
• TARGET	Into the skin, superficial to tendon, and consider a small amount into the tendon itself
PRP	LR PRP (Red PRP) or LP-PRP (Yellow PRP) Aim for 2.5 Billion Platelets
• SYRINGE	3mL
• NEEDLE	25g x 1.5"
• TARGET	Into tendinosis + tear and around tear
• TOP TIPS	Inject maximum 4mL, 2mL is a common amount
POST PROCEDURE	Follow up VISA-A q 4 weeks x 6
• ORAL PAIN MEDS	Acetaminophen+Tramadol/Codeine
• IMMOBILIZE	Only if worried about high pain, then boot for 2-3 days
• RETURN TO ADLs	Next day
• RETURN TO THERAPY	1 week
• RETURN TO SPORT	Must discuss progress with therapist
REPEAT TREATMENT	Repeat PRP if needed after 8 weeks