

PRP, Stem Cell and Tenex Procedure Knee

The most important part of the PRP, Stem Cell and Tenex procedures is that you follow the post-procedure instructions in order to optimize the healing of the tissue and decrease the risk of causing further damage. Limit any movement of the treated area for the first three days after the procedure. Avoid lifting or any strenuous activity for the first seven days. Below is the post-PRP rehabilitation program to guide you and your physical therapist. On average, sports-related drills begin at 10 to 12 weeks from the procedure, and return to play of sports without restrictions usually occurs at 12 to 16 weeks from the procedure.

Patient Response:

Day 1 and 2: painful in the joint

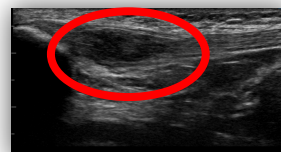
Day 3-6: Diminishing pain and improving significantly

Day 7 up to 8 weeks: Sometimes minimal pain to no pain

Pain:

If there is **NO PAIN** respect the healing process

If there is **PAIN** do not progress, indication tissue is still healing



Before



After

Phase I: Post -Injection 1-14 days:

Initiation of inflammatory process, activation of platelets, and stem cells, recruitment of growth factors to the defect.

Goal: Maintain homeostasis of the area as the defect is filled with growth factors

Phase I: 0-10 days	Intra- Articular	Patellar Tendinosus	Hamstring Strain	Quadriceps Strain	Ligaments MCL/ LCL
Device	none	Knee immobilizer x 3 weeks	Knee immobilizer x 3 weeks	Knee immobilizer x 3 weeks	ROM brace Locked at 30 degree
Weight Bearing	none	No weight x1 week then progress to WBAT w brace	No weight x1 week then progress to WBAT w brace	No weight x1 week then progress to WBAT w brace	none
PROM	Full ROM	0-45 degree	10-60 x 2 weeks	0-60 x 2 weeks	0-30 x week 1 0-60 x week 2
Suggested exercises	AROM only, no resistive exercises	Gentle isometrics only	Gentle isometrics only	Gentle isometrics only	Gentle isometrics only
Precautions	Very low-level activities at home	NO STRETCHING No ice or modalities	NO STRETCHING No ice or modalities	NO STRETCHING No ice or modalities	NO STRETCHING No ice or modalities

Phase II: Protection Phase Week 3-Week 4:

The repair process begins. Maintain the integrity of the scaffold. ROM in lines of stress. Allow for tensile strength

Goal: Advance Weight bearing, Progress ROM and low intensity contraction with isometric strength

Phase II:	Intra- Articular	Patellar Tendinosus	Hamstring Strain	Quadriceps Strain	Ligaments: MCL/ LCL
Device	none	DC Brace	DC Brace	DC Brace	ROM brace 10 to 90
Weight Bearing	WBAT <i>walk only</i>	WBAT <i>walk only</i>	WBAT <i>walk only</i>	WBAT <i>walk only</i>	none
PROM	Full ROM	0-90 degree	10-90	0-90	0-90
Suggested exercises	Begin open chain exercises, Bike Pool exercises	Heel slide, calf raises, bridge, plank, activate hamstrings SLR's: Forward, back, side	Heel slides, calf raises, Knee extension SLR's: Forward, back, side	Heel slides, calf raises, Hamstring curl SLR's: Forward, back, side	Heel Slides, calf raises, knee extension, Hamstring curls to 90 SLR's: Forward, back, side
Precautions	Low intensity ADL's	Limit ROM No squat or lunge May begin icing	Limit ROM No squat or lunge May begin icing	Limit ROM No squat or lunge May begin icing	Limit ROM No squat or lunge May begin icing

Phase III: Light Activity Phase: Week 5-7:

Increase tensile strength of defect, pain has decreased significantly

Goal: Progress ROM to full, low intensity strength and activities, return to basic ADL's

Phase I: 10-21 days	Intra- Articular	Patellar Tendinosus	Hamstring Strain	Quadriceps Strain	Ligaments: MCL/ LCL
Device	none	none	none	none	Unlock brace, DC week 6
Locomotion	Speed walk	Walk to speed walk	Walk to speed walk	Walk to speed walk	Walk WBAT
PROM	Full ROM	0-90 degree progress to full by week 7	0-90 degree progress to full by week 7	0-90 degree progress to full by week 7	0-90 degree progress to full by week 7
Suggested exercises	Begin open chain exercises, Bike Pool exercises	Begin light resistance exercises, marching steps, posterior chain exercises, glut strengthening, RDL's gentle quad strength	Begin light resistance exercises, marching steps, glut strengthening, gentle hamstring strength	Begin light resistance exercises, marching steps, posterior chain exercises, RDL's, glut strengthening, gentle quad strength	Begin straight plane light resistance exercises
Precautions	Return to normal activities	No squat or lunge Low intensity Stretch	No squat or lunge Low intensity stretch	No squat or lunge Low intensity stretch	No squat or lunge Low intensity stretch

Phase IV: Return to Activity: Week 8 - 11 weeks

Defect is now 75-90% repaired and normal tensile strength

Goal: Begin progressive strengthening, Incorporate speed, agility and power, repetitive load, cardio

Phase IV:	Patellar Tendinosus	Hamstring Strain	Quadriceps Strain	Ligaments: MCL/ LCL
Device	none	none	none	Stability brace sports
Locomotion	trot to jog to run	Same	Same	Same
Agility	Low level agility, Begin 2-legged jump progression, plyo progression	Same	Same	Same
Suggested exercises	Begin Progressive Resistance Exercises, Controlled Lifts Begin Bike May begin BFR	Same	Same	Same
Precautions	Squat to 90 or lunge	Same	Same	Same

Phase V: 3 months + Begin return to sports progression