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REGENERATIVE ORTHOPAEDICS

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KNEE REHAB STRATEGIES for PRP, Bone Marrow INTRA TENDON/LIGAMENT injections

Overlap of timelines is based on the patient's condition, severity of injury, and monitored progress

Patient Response:

Day 1-5: Inflammatory stage, can be moderate to severe pain

Day 6-14: Diminishing pain and improving

Initial response: effects will take 4-6 weeks

Full response: by 3 months

Goals:

- Initiate safe and gradual passive range of motion
- Diminish pain and inflammation, decrease muscle tightness and spasms
- Progress to strength and gradual return to sport when ready

Modalities:

- Do not heat or ice for 72 hours post injection, after ok.
- Manual therapies (deep tissue, ART, Graston): Start with peripheral tissues from injected joint. Incorporate joint 2 weeks after last injection. U/S and TENS unit ok after 1st week post injection

RANGE OF MOTION AND WEIGHT BEARING:

- **Week 1:** Begin passive and active ROM
- **Week 2:** Begin passive ROM to 45 degrees. Weight bearing as tolerated, walking only, with brace locked at 30 degrees.
- **Week 3:** Progress passive ROM to 60 degrees. Weight bearing as tolerated with brace locked at 60 degrees.
- **Week 4:** Progress passive ROM to 90 degrees. Weight bearing as tolerated, Wean off brace.
- **Week 5+:** Progress to full passive and active ROM.
- **Week 4:** Begin gentle stretching **Begin squats and lunges**
Initiate jog, stride and light run straight planes...no deceleration
- **Week 5-6:** Begin Stretching of muscles
Initiate jump progression, cutting activities, sprints, change of direction

STRENGTH: All pathologies must go through week 1 and 2. Weeks 3 and so on.... can be modified depending on the above pathologies and sport related in season vs post season. This schedule is optimal for tissue healing.

- **Week 1:** no strengthening, no activity, no modalities,
- **Week 2:** Gentle PROM only Towel slides to 60.
- **Week 3:** begin PROM and AAROM exercises within pain free range (no stretching).
- **Level 1 exercises:** SLR's, bridging, planks, heel raises, form run @ walk pace. Selective dynamic warm- Up. Begin straight leg closed chain exercises on stable surface only
- **Week 2- 3:** Initiate Leg press or assisted squat and lunge, Dynamic warm-up, Form run @ trot to jog pace ladder @ jog pace. Resisted walk outs -all directions. Begin Bike for cardio
- **Week 3-5:** Begin Squat and lunges, Controlled and low intensity (in place) return to sport drills. Progressive 40-60 yards (jog, and stride). Begin elliptical for cardio
- **Week 4-7:** Begin Jump Progression, increase speed of agility, change direction, Jogging for cardio
- **Week 5-10:** Begin sprinting and Return to sport activities 50-75%. Effort
- **Week 6-12:** Return to competition in a very gradual, progressive, manner.