*Please realize that no two individuals or surgeries are alike. Keep in mind that:*

“As tolerated” means be safe and use common sense; pain, a limp, and swelling are indicators that you are doing too much too soon. If any of these should occur, decrease activity level, ice and elevate the leg.

Ice is your friend. Please ice for 20 minutes following each exercise, therapy, or training session. While your knee remains swollen icing should also be done separate from exercise at least three times per day.

Progression through the protocol should be based upon criteria as opposed to dates listed and will vary depending on each individual patient. These are merely guidelines.

Progress should be agreed upon by the patient and his/her team of providers.

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***Phase 1 – Weeks 0 – 2 Healing***

**Brace:**

Locked in full extension

Off for bathing and dressing only.

**Crutches/Function:**

Non-weight bearing

**Therapeutic Exercise:**

Quad sets

Straight leg raises with brace

Ankle and foot ROM and strengthening (non-weight bearing)

**Manual:**

Scar and soft tissue massage, patella mobilizations

**Modalities:**

NMES (neuromuscular electrical stimulation) for quadriceps atrophy, strengthening as needed

HVPC (high volt pulsed current) for effusion (swelling) reduction as needed

Cryotherapy six to eight times per day for 15 to 20 minutes each

**Progression to Phase 2:**

No pain

Minimal joint effusion

***Phase 2: Weeks 3 – 4 Protective/Early Motion***

**Brace**

On at all times except for bathing, dressing, and therapy

Open to 30 degrees as muscle strength allows

**Crutches/Function:**

Progress weight bearing as tolerated with two crutches and brace

**ROM:**

0 to 30 degrees

**Therapeutic Exercises:**

Quad sets

Four-way straight leg raises

Core strengthening

**Manual:**

Scar and soft tissue massage, patella mobilizations

**Cardio:**

UBE

**Modalities:**

NMES for quadriceps atrophy

HVPC for effusion reduction as needed

Cryotherapy: After activity and therapy and twice more per day for 15 to 20 minutes each

**Progression to Phase 3:**

Knee ROM 0°-30°

No effusion

No pain at rest

***Phase 3: Weeks 4 – 6 Advanced healing***

**Brace**

Continue brace wear at all times except bathing, dressing, and therapy

Open to 60 degrees as strength allows

**Therapeutic Exercises:**

Isometric quad and hamstring strengthening

Closed chain exercises within allowed ROM

Hip and core strengthening

**Manual:**

Patellar mobilization

Scar mobilization

**Cardio:**

UBE

**Modalities:**

NMES for quadriceps atrophy

HVPC for effusion reduction as needed

Cryotherapy after activity for 15 to 20 minutes

**Progression to Phase 4:**

ROM to 60 degrees

***Phase 4: Weeks 6 – 10 Strengthening***

**Brace**

Wean out of brace at night

Continue to wear brace with ambulation

Open to 100 degrees as strength allows

**Therapeutic Exercises:**

Isotonic quad and hamstring strengthening within allowed ROM

Progress closed chain exercises within allowed ROM

Hip and core strengthening

**Manual:**

As needed

**Cardio:**

UBE

Treadmill walking as tolerated

**Modalities:**

Cryotherapy after activity for 15 to 20 minutes

**Progression to Phase 5:**

ROM to 100 degrees

No effusion

***Phase 5: Weeks 10 – 16 Advanced strengthening***

**Brace**

Wean as strength allows

**ROM:**

Progress to full

**Therapeutic Exercises:**

Proprioceptive training

Continue to progress isotonic training

Hip and core strengthening

**Manual:**

As needed

**Cardio:**

Stationary bike as motion allows

Begin jogging/running – treadmill initially

**Modalities:**

Cryotherapy after activity for 15 to 20 minutes

**Progression to Phase 6:**

Full range-of-motion

***Phase 6: Return to Activities***

**ROM:**

Full range-of-motion

**Therapeutic Exercises:**

Plyometric training

Multi-plane exercises

**Manual:**

As needed

**Cardio:**

Stationary bike

Jogging/running – provided no analgias exists

**Modalities:**

Cryotherapy after activity for 15 to 20 minutes

***Return-to-Sport***

**Recommend pursuing Transitional Therapy for return to sport activities during this phase**

Transitional Therapy – a strength and conditioning program that is led by medical professionals with a sports medicine background with the goal of transitioning from therapy back to sport

Contact PRISM Sports Medicine for details

In addition to ongoing strength, balance, agility, and cardio conditioning, initiate sport specific plyometric activities as tolerated such as:

Soccer/Football: Two foot ankle hop, double-leg hop, front barrier hop, lateral barrier hop, single-leg hop, power skip, backward skip, double arm alternate leg bound, and cycled split squat jump

Basketball/Volleyball: Two foot ankle hop, double-leg hop, squat jump, double-leg vertical jump, single-leg hop, single-leg vertical jump, power skip, backwards skip, double-arm alternate-leg bound, alternate leg push off box drill, and side-to-side push off box drill

Baseball/Softball/Overhead throwing sports: Two foot ankle hops, double-leg hop, front barrier hop, lateral barrier hop, single-leg hop, power skip, backward skip, double arm alternate leg bound, cycled split squat jump, and return to throwing program