

The background features a dark blue gradient with faint, light-colored technical diagrams. On the left, a large circular scale with numerical markings from 40 to 260 is visible. Several circular diagrams with arrows and dashed lines are scattered across the page, suggesting a technical or scientific theme.

PHYSICAL THERAPY REHABILITATION PROTOCOL POST-OPERATIVE MENISCECTOMY

BY:

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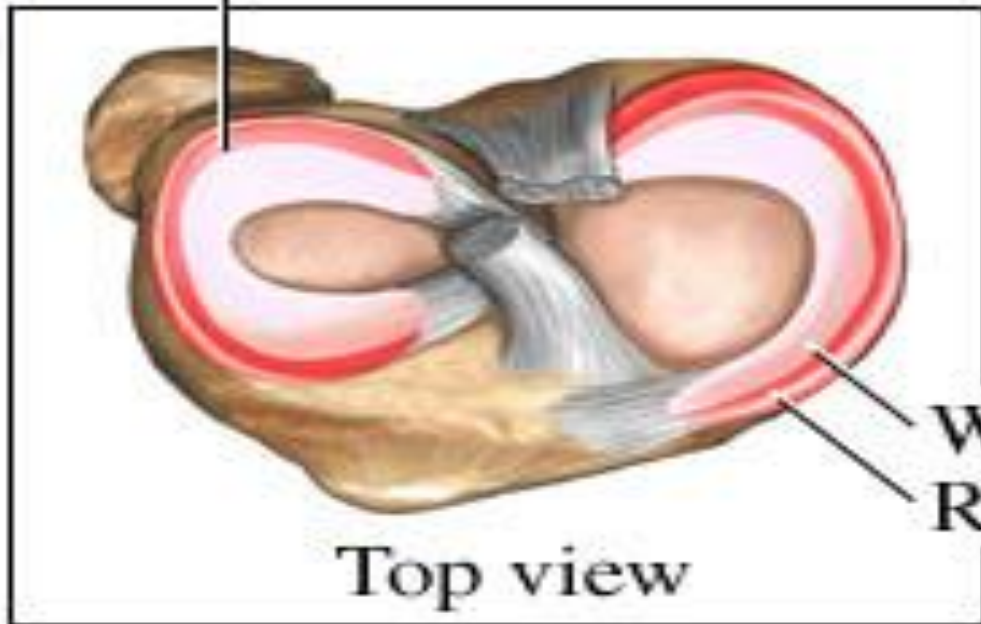
PHYSICAL THERAPY CONSULTANT

TEARS AND ZONES

Right knee joint



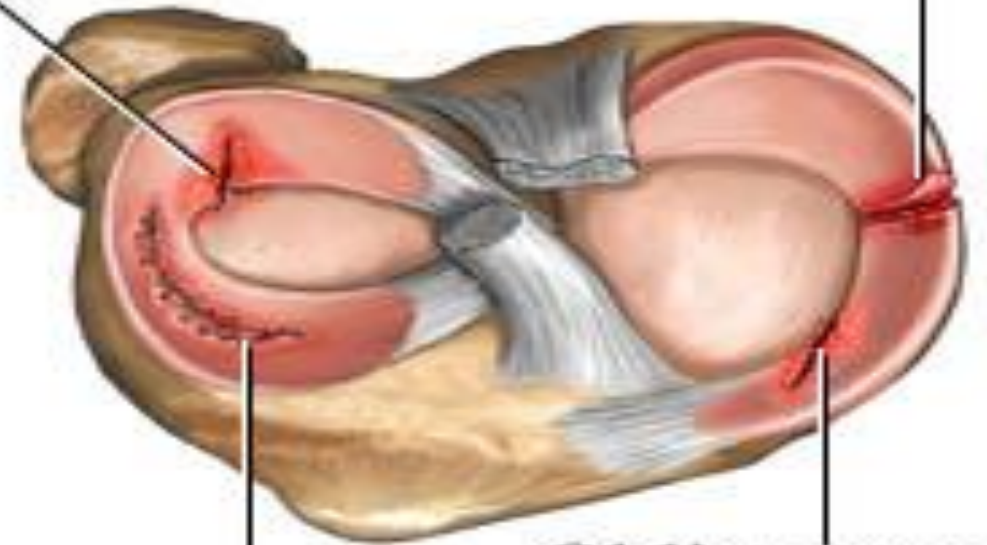
Meniscus



Top view

Radial tear

Horizontal tear



Oblique tear

Longitudinal tear

White zone

Red zone

OBJECTIVE

- Discuss Physical Therapy (PT) intervention plan protocol after meniscectomy
- Understand the short and long term outcomes of meniscectomy in each phase

Each phase should include:

- Physical Therapy (PT) treatment modality
- Home Exercise Program (HEP) as indicated
- 12-15 repetitions with 1-2 sets of each exercise
- Perform ≥ 8 exercises within each phase
- Protocol to include land based exercises only

The background features a dark blue gradient with a subtle pattern of white stars and technical diagrams. On the right side, there is a large circular gauge with a scale from 0 to 210 and a white arrow pointing towards the top. Below it, there are several concentric circles and dashed lines, some with arrows indicating a clockwise direction. In the bottom left corner, there are more faint circular diagrams with arrows.

PHASE I: ACUTE PHASE

(1-10 DAYS POST-OP)

PHASE I: ACUTE PHASE

GOALS:

- Diminish inflammation and swelling
- Restore ROM
- Re-establish quadriceps muscle activity

PT INTERVENTION IN PHASE I

- Brace: Knee immobilizer
- TED hose to be worn until ambulation has returned to normal pre-surgery level or two week
- Crutches: weight bearing as tolerated
- Cryotherapy
- Therapeutic Exercises
- Gait Training
- Electrical Stimulation/Biofeedback

Knee immobilizer



TED hose



Partial Weight Bearing



CRYOTHERAPY

Cryo cuff



Game Ready



THERAPEUTIC EXERCISES OF PHASE I

- Open Chain
- Closed Chain
- Proprioceptive drills



“INITIALLY EXERCISES ARE DONE WITHOUT WEIGHTS;
WHEN PATIENT IS ABLE TO PERFORM 2 SETS OF AN
EXERCISE, EXERCISES ARE PROGRESSED TO
REPETITIONS WITH WEIGHTS AS INDICATED”

OPEN CHAIN EXERCISES

- Quadriceps sets
- Straight Leg Raise (SLR), progress to PRE
- Hip adduction and abduction and extension, progress to PRE
- Knee extension-progress to knee extension 90-40 degrees
- AA/PROM stretching, emphasizing full knee flexion and extension to tolerance
- Stretching (hamstrings, gastrosoleus, ITB and quadriceps)

quadriceps set



Passive knee extension



Heel slide



Standing calf stretch



Hamstring stretch on wall



Straight leg raise



Prone hip extension



Clam exercise

CLOSED CHAIN EXERCISES

- Terminal knee extension using elastic band as resistance
- Standing hamstring curls, progress to PRE
- Toe raises
- Modified squats (wall squats, ½ squats)
- Stationary bicycle-no resistance

Closed chain exercise



Step-up



Knee stabilization: A



Knee stabilization: B



Knee stabilization: C



Knee stabilization: D



Resisted terminal knee extension

PROPRIOCEPTIVE DRILLS EXERCISES

- One-foot standing balance
- One-foot standing balance with hip extension
- One-foot standing balance using weights in diagonal pattern
- One-foot standing balance while playing catch
- Exercises in balance boards

PROPRIOCEPTIVE DRILLS



PROPRIOCEPTIVE DRILLS



GAIT TRAINING EXERCISES

“weight bearing as tolerated initially with crutches
progression to no device, full weight bearing”

ELECTRICAL STIMULATION/BIOFEEDBACK

“Muscle re-education to quadriceps during quadriceps exercises if unable to perform quad set”



CRITERIA FOR PROGRESSION TO PHASE II

Patient must meet 3 of the 4 criteria

- 1- 0° extension to $\geq 115^\circ$ A/PROM (goniometer)
- 2- Moderate to minimal effusion
- 3- Mild to moderate knee pain ($\leq 4/10$ pain on VAS)
- 4- Muscle Strength $\geq 3/5$ MMT quads and hams

The background features a dark blue gradient with a subtle pattern of white stars and technical diagrams. On the right side, there are several circular diagrams resembling gauges or dials with numerical scales (e.g., 100, 120, 140, 160, 180, 200, 210) and arrows. On the left, there are faint circular outlines and arrows. The overall aesthetic is futuristic and scientific.

PHASE II: SUBACUTE PHASE

(10 DAYS TO 4 WEEKS POST-OP)

PHASE II: SUBACUTE PHASE

GOALS OF PHASE II:

- Restore and improve muscular strength and endurance
- Re-establish full pain free AROM
- Gradual return to functional activities
- Minimize gait deviations

PT INTERVENTION IN PHASE II

- Cryotherapy
- Therapeutic Exercises
 - (open/closed chain)
 - Proprioceptive
 - Agility training

OPEN CHAIN EXERCISES

- Stretching (hamstrings, gastrosoleus, ITB and quadriceps)
- Passive/Active-assisted/Active ROM knee flexion (if necessary)
- SLR (PRE)
- Knee extension 90-40 degrees (PRE)
- Hamstring curls (PRE)
- Hip abduction and adduction and extension (PRE)

CLOSED CHAIN EXERCISES

- Bicycle, treadmill or elliptical for motion, strength and endurance
- Terminal knee extension using elastic band as resistance
- Modified squats (wall squats, ½ squats, unsupported squats)
- Step-ups/downs progression (forward/lateral with increasing height)
- Leg press, Total Gym™, etc
- Toe raise

CRITERIA FOR PROGRESSION TO PHASE III

Patient must meet 4 of the 5 criteria

- 1- 0° extension to $\geq 125^\circ$ A/PROM
- 2- Normal Joint Play
- 3- Minimal effusion
- 4- $\leq 2/10$ pain on VAS
- 5- Muscle Strength 5/5 MMT quads and hams

PHASE III: ADVANCED ACTIVITY PHASE

(4 TO 7 WEEKS POST-OP)

PHASE III: ADVANCED ACTIVITY

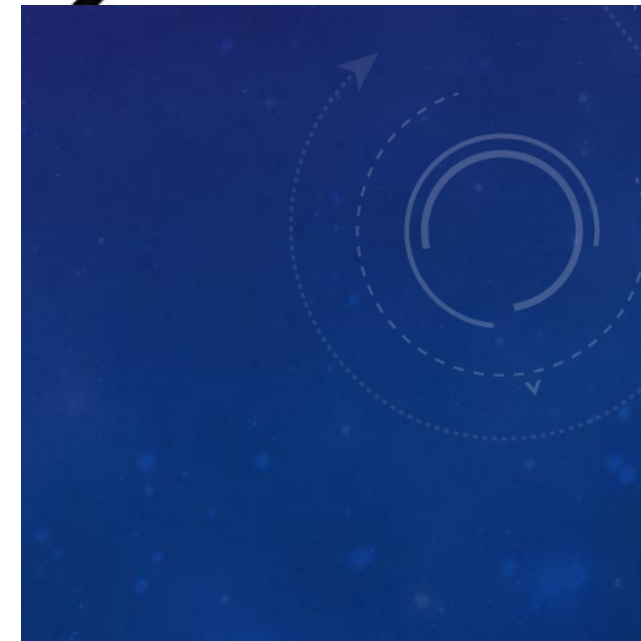
GOALS OF PHASE III :

- Enhance muscular strength and endurance
- Maintain full ROM
- Return to sport/functional activities

PT INTERVENTION IN PHASE III THERAPEUTIC EXERCISES

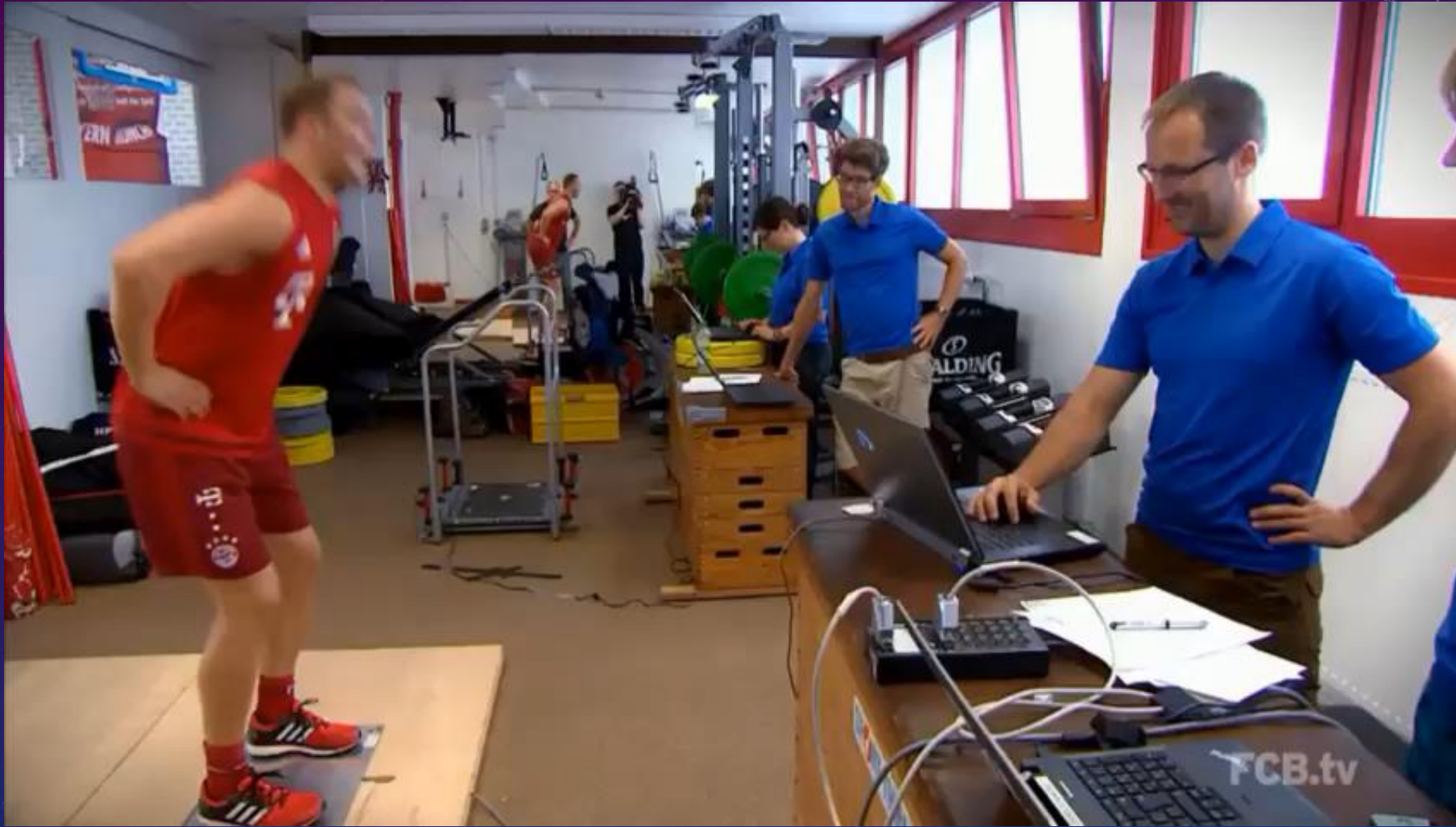
- Emphasis on closed-kinetic chain exercises (leg press, Total Gym™, modified squats, step-ups/downs)
- Closed Chain terminal knee extension using elastic band as resistance
- Continue PRE exercise program
- Stretches (hamstrings, gastrosoleus, ITB & quadriceps)
- Stationary bicycle with resistance, treadmill, elliptical
- Proprioceptive and agility training (dynamic single leg stance, plyometrics, running, carioca, figure 8s)

ALTERNATING CARIOCA 90-SEC



SUMMARY

- Early physical therapy treatment considerations of meniscectomy include controlling edema and pain, increasing ROM, WBAT to full WB, early balance and proprioception by day 10-12
- 10 days to 2 weeks include progression of closed chain eccentrics and proprioception
- Begin running and sport specific activities weeks 4-7 as tolerated



The background is a blue gradient with faint white circular patterns and a scale on the left side. The scale has numbers from 140 to 260 in increments of 10. There are also several circular diagrams with arrows indicating direction.

THANK YOU!