




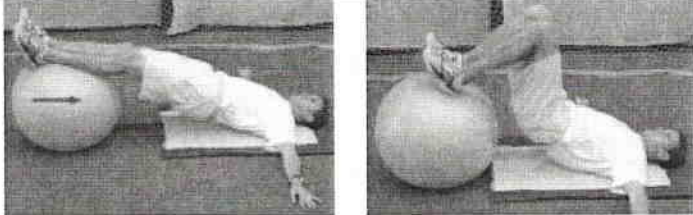
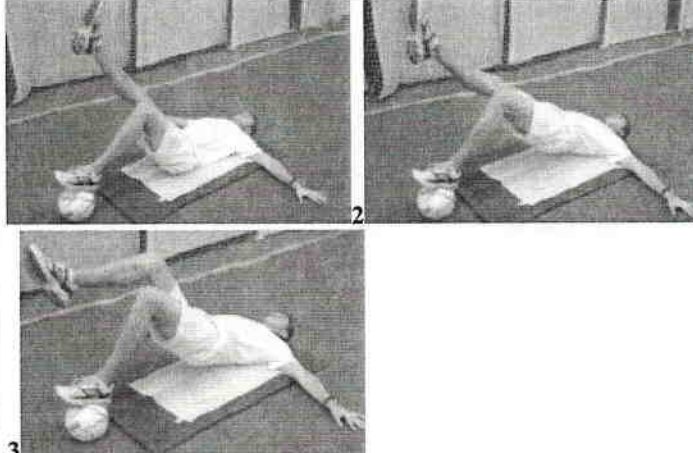
JASON CRANE

KNEE STRENGTHENING AND LOW IMPACT CONDITIONING PROGRAM

INSTRUCTIONS:

- Complete knee rehab exercises 3 times per week, following the set and repetition progression.
- Never complete any exercise which causes pain. If you feel pain decrease the weight, if this does not help then drop that exercise for a week. If the pain continues when you restart then leave that exercise out of your routine

KNEE REHAB EXERCISES	Sets & Reps: Wk 1	Sets & Reps: Wk 2	Sets & Reps: Wk 3	
1 leg ½ squats with isometric hold	2x10 10 sec hold each leg	2x12 15 sec hold each leg	2x15 15 sec hold each leg	
Isometric lunges	2x5 10 sec hold each leg	2x6 15 sec hold each leg	2x8 15 sec hold each leg	
Unilateral Step ups (up 2 – assisted, down 6 seconds)	2x10 each leg	2x12 each leg	2x15 each leg	
Balance work: <ul style="list-style-type: none"> • Eyes open 5 sec / eyes closed 10 sec • On 1 leg with ball rebounding against wall. 	2x75sec Each leg 3x35sec Each leg	3x75sec Each leg 3x35sec Each leg	2x90sec Each leg 3x45sec Each leg	

Squats with ball squeeze	3x45 sec hold	3x60 sec hold	3x 90 sec hold	
Bridging on ball with leg curls	2x12	2x1 ² ₅	2x20	
Bridging on ball with single leg flex / ext		2x5 each leg	2x10 each leg	

Pool rehab work (25-30 minutes)

- **2 lengths swimming with pool buoy between knees**
- **Inner thigh**
 - Balancing on 1 leg (knee bent) inner thigh movement (20 reps each side)
- **Outer thigh**
 - Balancing on 1 leg (knee bent) outer thigh movement (20 reps each side)
- **Front running (1 length)**
 - Feet off the ground, facing the direction that you are running
 - Body tilted at 60 degree angle, pumping knees up to chest and extending back behind you (as though you were running)
 - Arms reaching out and grabbing the water and pulling towards you.
- **Back kicking (1 length)**
 - Feet off the ground and back facing the direction you are moving.
 - Drop you buttocks down (into 'sitting' position), and keep your upper body almost vertical in the water.
 - Bring knees up to chest alternately, pushing the water back with your feet as you extend each leg.
 - Use hands and arms to push water back and propel you in the direction you need to go.

Repeat all above 2-3 times

- **Pull Throughs**
 - Sculling with arms and hands in water and feet together and off the ground
 - Bring knees up to chest – then extend both legs forward straightening the body to almost horizontal position in the water – then bring knees back to tucked position at the chest – then extend back behind you straightening the body to almost horizontal position in the water. (Repeat the process for 30 seconds)
- **Hamstring curls**
 - Balancing on 1 leg, bend alternate knee and curl lower leg up so that foot reaches buttocks. (20 reps each side)
- **2 lengths swimming with pool buoy between knees**

Repeat pull throughs, hamstring curls, swimming 2-3 times

Stretching: hamstrings, glutes, quads, inner thigh, calves, pecs, triceps, posterior capsule. Hold for 2x 30 seconds each stretch.

- Session should last 20-30 minutes

Low impact cardio - Cycling:

- NB: make sure that saddle height is correct
- If pain occurs **during cycling**, decrease resistance and intensity; if pain still occurs, discontinue and call me.
- If pain occurs **after cycling** also call me and we will adapt or discontinue the cycle training.
- You must complete **1x interval bike session (total: at least 30 minutes)** and **1x long duration, low intensity (total: 45-60minutes)** session per week

Interval Cycle Session: Option 1		
DURATION	LEVEL / RESISTANCE	CADENCE / INTENSITY
MINUTE 1 – 5	WARM UP - LEVEL 4	60 – 70 RPM
MINUTE 6	HARD	75 – 85 RPM
MINUTE 7	MODERATE	85 – 95 RPM
MINUTE 8	MODERATE	85 – 95 RPM
MINUTE 9	HARD	75 – 85 RPM
MINUTE 10	EASY	65 – 75 RPM
MINUTE 11	HARD	75 – 85 RPM
MINUTE 12	MODERATE	85 – 95 RPM
MINUTE 13	MODERATE	85 – 95 RPM
MINUTE 14	HARD	75 – 85 RPM
MINUTE 15	EASY	65 – 75 RPM
MINUTE 16	HARD	75 – 85 RPM
MINUTE 17	MODERATE	85 – 95 RPM
MINUTE 18	MODERATE	85 – 95 RPM
MINUTE 19	HARD	75 – 85 RPM
MINUTE 20-24	EASY	65 – 75 RPM
MINUTE 25	HARD	75 – 85 RPM
MINUTE 26	MODERATE	85 – 95 RPM
MINUTE 27	MODERATE	85 – 95 RPM
MINUTE 28	HARD	75 – 85 RPM
MINUTE 29	EASY	65 – 75 RPM
MINUTE 30	EASY	65 – 75 RPM

Interval Cycle Session: Option 2		
DURATION	LEVEL / RESISTANCE	CADENCE / INTENSITY
MINUTE 1 – 5	WARM UP - EASY	60 – 70 RPM
30 SEC	HARD	85+ RPM
30 SEC	EASY	75+ RPM
30 SEC	HARD	85+ RPM
30 SEC	EASY	75+ RPM
30 SEC	HARD	85+ RPM
30 SEC	EASY	75+ RPM
30 SEC	HARD	85+ RPM
30 SEC	EASY	75+ RPM
30 SEC	HARD	85+ RPM
30 SEC	EASY	75+ RPM
MINUTE 10 – MINUTE 20	MODERATE	85 RPM
30 SEC	HARD	85+ RPM
30 SEC	EASY	75+ RPM
30 SEC	HARD	85+ RPM
30 SEC	EASY	75+ RPM
30 SEC	HARD	85+ RPM
30 SEC	EASY	75+ RPM
30 SEC	HARD	85+ RPM
30 SEC	EASY	75+ RPM
30 SEC	HARD	85+ RPM
30 SEC	EASY	75+ RPM
30 SEC	HARD	85+ RPM
30 SEC	EASY	75+ RPM
MINUTE 30	EASY	75+ RPM

Interval Cycle Session: Option 3		
DURATION	LEVEL / RESISTANCE	CADENCE / INTENSITY
MINUTE 1 – 5	WARM UP - EASY	70 RPM
MINUTE 6	MODERATE	85+RPM
MINUTE 7	HARD	90+ RPM
MINUTE 8	EASY	70 RPM
MINUTE 9	MODERATE	85+RPM
MINUTE 10	HARD	90+ RPM
MINUTE 11	EASY	70 RPM
MINUTE 12	MODERATE	85+RPM
MINUTE 13	HARD	90+ RPM
MINUTE 14	MODERATE	85+RPM
MINUTE 15	HARD	90+ RPM
MINUTE 16 – 20	EASY	70 RPM
MINUTE 21	MODERATE	85+RPM
MINUTE 22	HARD	90+ RPM
MINUTE 23	EASY	70 RPM
MINUTE 24	MODERATE	85+RPM
MINUTE 25	HARD	90+ RPM
MINUTE 26	EASY	70 RPM
MINUTE 27	MODERATE	85+RPM
MINUTE 28	HARD	90+ RPM
MINUTE 29	EASY	70 RPM
MINUTE 30	EASY	70 RPM