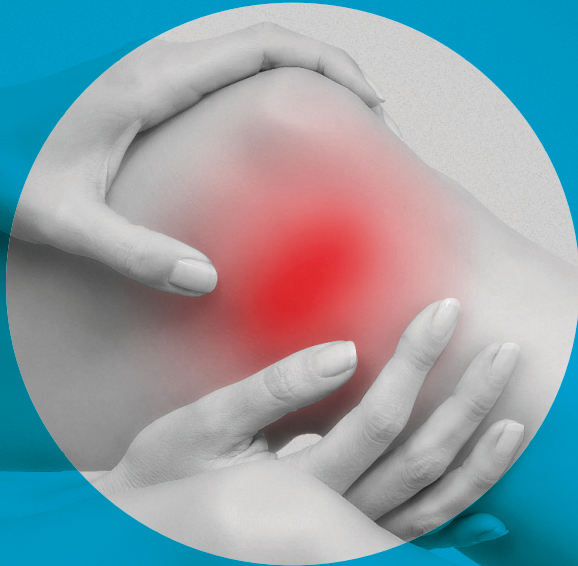


NUsurface[®] Meniscus Implant

Patient Rehabilitation Program



This patient rehabilitation guide is made possible through cooperation between your physician and Active Implants, LLC. It is not designed as a replacement to professional medical care or advice. Only your surgeon is qualified to diagnose and appropriately treat your pain and related problems.

For more information contact:
Active Implants B.V. • Zijlweg 148 B 3rd Floor
2015 BJ • Haarlem • THE NETHERLANDS
Office: +31.343.200.140

www.activeimplants.eu

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OBJECTIVE

After knee surgery, patients want to resume their daily activities as soon as possible. Adherence to a rehabilitation protocol following insertion of the NUsurface® Meniscus implant, or any other type of knee surgery, is therefore just as important as the surgery itself.

It is essential to remember that even though the operated knee is no longer a source of discomfort, the actual healing process has just begun and the patient should exercise caution when resuming activities.

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Care After Surgery

The NUsurface® surgery may be performed in an outpatient setting. Your physician may recommend a short hospital stay.

For the best possible outcome, follow the rehabilitation program after post-surgery. It may include, but is not limited to:

- Icing the knee
- Compression bandage for up to 7 days
- The use of an assistive device, as needed
- Leg strengthening program

It is important for the patient to realize that they should not participate in strenuous activities until cleared by the physician. Patients must follow the doctor's and physical therapist's instructions from surgery.

Rehabilitation Goals	Protect implant, knee mobility.
Range of Motion	Immediate: Full knee extension Heel slides for Passive Flexion Propped Calf/Hairline
Weight Bearing	Weight Bearing as tolerated
Brace & Crutch Use	Wear a locking brace for Ambulation (Can be discontinued)
Strengthening	Quad Sets, Straight Leg Raises quad reduction).
Modalities	Ice and Compression

Criteria For A

- ≥ 0 Degree Knee Extension and
- ≥ 10 Straight Leg Raises without
- Minimal Effusion, Pain at Rest
- MD or PT Approval

	Phase Two - Strength, ROM, Balance (1 - 6 weeks)
Rehabilitation Goals	Improve Quad/Hamstring Control, Normalize Gait, No Pain with Functional Movements
Range of Motion	Maintain Passive/Active Extension and Progress to Full Flexion Heel slides, wall slides, prone quad stretch, calf/hamstring stretch, prone hangs
Weight Bearing	1-2 Weeks - WBAT DC Brace, Initiate Normal Gait Pattern 2 + Weeks - Full WB and Ambulation as Tolerated
Strengthening	Continue Quad Strengthening from Phase 1 Leg Press, Chair Squats, Step Ups for Quad Hamstring Curls, Romanian Dead Lifts Core and Hip Strengthening (Stabilization, Bridging, Hip Abduction) Single Leg Balance Stationary Biking (After Achieve 105 Degree Knee Flexion)

	Phase Three - Return to Sport
Rehabilitation Goals	Improve Single Leg Control, Prepare for Return to Sport
Range of Motion	Full with pain free
Strengthening	Continue Exercises from Phase 2 Squat Progression Single Leg RDLs, W Core Exercises (Mo Single Leg Balance
Conditioning	Biking, Rowing, Elliptical Jogging progression of 1 minute of jogging every 2 minutes Progress interval jogging

Criteria For Advancement to Phase 3

- Full ROM
- Pain < 3/10 at Worst
- Ability to perform 5 Single Leg Squats
- Quad/Hamstring Strength < 60% Normal
- MD or PT Approval

Criteria For Return to Sport

- Pain ≤ 2 at Worst
- Quad/Ham Strength 90% Normal
- Ability to Jog for 10 minutes
- MD or PT Approval

Continuation of Care

By the sixth week after surgery, the patient may be ready to explore some leisure activities or sports. In general, it is best to avoid activities that place too much stress on the injured knee since they may lead to the damage of your artificial meniscus over time due to wear and tear.

Physical activity **limitations** may include, but are not limited to:

Recommended	Recommended with Experience	Not Recommended
Walking Low-impact aerobics Bowling Golf Dancing Swimming Yoga Boating/canoeing	Cycling Hiking Rowing Cross-country skiing Stationary skiing Speed walking Doubles tennis Ice skating	Raquetball/squash Contact sports (football, hockey, soccer) Rock climbing Jogging/running Singles tennis Water-skiing Baseball/softball Handball Martial arts High-impact aerobics

The more vigorous the activity, the higher the risk of damaging the implant. Before pursuing sports or leisure activities, the patient should talk with their physician about whether or not they are appropriate following your meniscus replacement.

Postoperative medication is generally not required. Your physician will provide exact instructions on activities and recommended duration of these activities. Walking is fine as long as it does not create discomfort or pain in the knee.

It is important for you to realize that you have undergone a surgical operation and that you should not participate in strenuous activities until your doctor has indicated you may do so. You must follow your doctor's directions carefully in order to fully recover from your surgery.

If you are planning to have other diagnostic procedures or treatments, not related to your NUsurface® surgery, please tell your doctor that you had NUsurface® surgery.

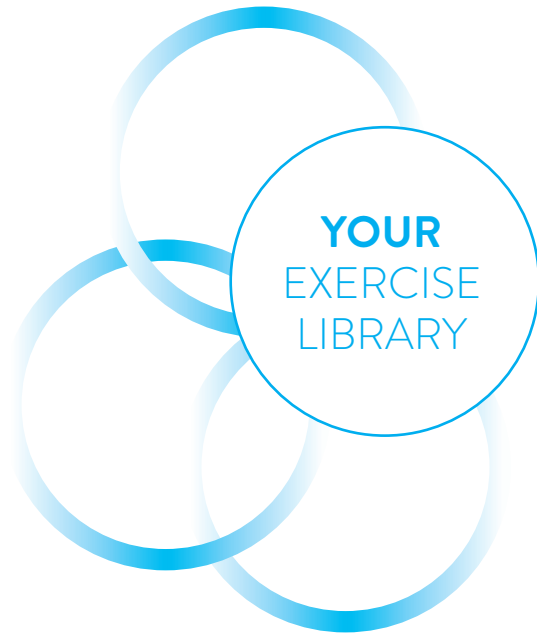
Your NUsurface® Device

You may wish to record important information about your NUsurface® Meniscus Implant.

NUsurface® Size: _____

Left/Right: _____

NUsurface® LOT # _____



NEEDS REVIEWING/UPD

The exercises in this library will
muscles and increase

HOW D

Either alone or together with a
are going to use that particul
your weekly action planner to
time, how many). But pleas

TEXT NEEDS REVIEWING/ UPDATING

Warming-up (Do we need anything here?)

During your warm-up, all muscle groups are involved. You prepare your body gradually for the training. Your warm-up should last approximately 5-10 minutes, but may take longer. Start with four or five exercises which are not too intensive to prepare yourself for the strength exercises.

During the warm-up, your heart rate goes up and you begin to perspire. Do listen to your body. Do not go too fast or start too hard. Are you breathing heavily, then rest a while.

A nice walk outside, or cycling, is also an excellent warming-up before this training.

TEXT NEEDS REVIEWING/ UPDATING

Strengthening

By warming up your body and muscles before strength exercises. With these exercises you will not only improve your strength but it also helps with your coordination and balance. These exercises will help you notice that your body is getting stronger. Exercises with weights will help strengthen the leg of the body. These exercises should be done three times a week for 10-15 seconds. How many exercises?

Tip: Buy your own equipment for performance.

1



QUAD SETS

REPEAT FOR 10 MINUTES

Keeping back of knee on table, flex quadriceps muscle to force knee straight. Try to get heel to elevate off table. Hold 10 seconds, relax 10 seconds.

2

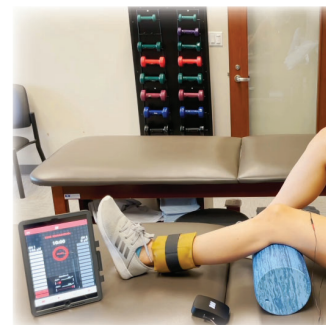


STRAIGHT LEG RAISE

REPEAT FOR 5 MINUTES

Perform quad set and lift straight leg 6-12" off table. Hold 3 seconds and return to starting position.

3



SH...

REP...

Place a foam roll under kn... on the foam roll. Hold 3 se... for 5 minutes. (Add 5 lbs...

4



Prop heel with towel rol...

5



HEEL SLIDES

REPEAT FOR 5 MINUTES

Use strap and arms to slide heel along table in order to bend the knee. Hold at point of stretch for 10-20 seconds and return to starting position.

6

WALL SLIDES

REPEAT FOR 5 MINUTES

Put on 5-10 lb ankle weight. While lying on your back, slide buttox as close to wall as possible with legs straight in air on wall. Allow affected leg to slide down wall into flexion as far as possible. Hold for 20 seconds and return to starting position.



7



PRONE EXTENSION HANG

PERFORM FOR 10 MINUTES

Put on 2-3 lb ankle weight. Lie on stomach with top of knees hanging off table. Allow leg to relax and straighten as much as possible. Perform for 10 minutes.

8



QU
REP

While lying on stomach with opposite shoulder to bend knee return

9



SING

PROGRESS FRO

Stand on one foot with finger seconds. Increase difficulty by duration of hold,

10



HAMSTRING CURLS

PERFORM 3 SETS OF 20 REPETITIONS

Put on ankle weights. Stand with thighs up against table and curl foot back to bend knee as far as possible, hold 1-2 seconds, and return to starting position.

11



CHAIR SQUATS

PERFORM 3 SETS OF 20 REPETITIONS

Stand with feet shoulder width apart in front of a chair. Begin squat by sitting back slowly, keeping your chest up. Touch buttox to chair and return to starting position by pushing through heels and maintaining proper posture. Increase difficulty by adding dumbbell resistance.

12



STEP UPS

PERFORM 3 SETS OF 20 REPETITIONS

Start with affected leg on elevated box or stair step. Push through affected leg to straighten knee and balance for 1-2 seconds. Simultaneously lift unaffected leg to 90 degrees to finishing position as shown. Return to starting position by slowly lowering to

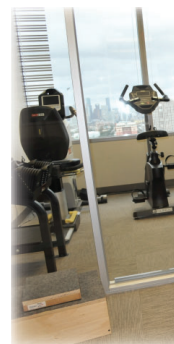
13



PERFORM

Start in seated position (80-90 degrees) and perform proper squat posture, oscillate up and down.

14



ROMANIAN

P

With dumbbells, start in standing position with feet hip width apart, back and knees straight, hinge at hips and lift dumbbells. Lower legs. Return to starting position.

15



SINGLE LEG ROMANIAN DEAD LIFT

PERFORM 3 SETS OF 20 REPETITIONS

Perform Romanian Dead Lift while standing on affected leg and lowering opposite arm dumbbell. Simultaneously extend unaffected leg behind body and keep back straight. Return to starting position.

17



FO

PERFORM 3

Stand in a split stance with affected leg in front. Knee to bend to ~80-90 degrees. Return to starting position. Increase difficulty by adding dumbbell.

16



ASSISTED SINGLE LEG SQUATS

PERFORM 3 SETS OF 10 REPETITIONS

Stand between 2 stable surfaces and plant hands for stability. Stand on affected leg and lower yourself into a squat position using arms for assistance (progressing toward 90 degrees). Return to starting position.

18



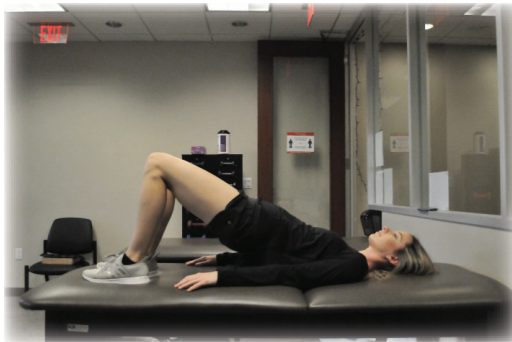
LAT

AIM

1

Stand behind a chair or table and hold on to it for stability. Stand on affected leg and lower yourself slowly. Keep this position for 15 seconds. After 15 seconds, return to starting position.

19



GLUTE BRIDGE

PERFORM 3 SETS OF 20 REPETITIONS

Lying on your back with knees bent, tighten your lower abdominals, squeeze your buttocks, and then raise your buttocks off the floor/bed as creating a "Bridge" with your body. Hold 3 seconds and then lower yourself and repeat.

21



HIP EXTENSION

PERFORM 3 SETS OF 20 REPETITIONS

Lie on side with affected leg straight, raise leg, and activate side of glute. Hold for 3 seconds and repeat.

20



HIP EXTENSION

PERFORM 3 SETS OF 20 REPETITIONS.

Lying on stomach with affected knee bent to 90 degrees, squeeze buttox and lift front of leg off table without arching your low back. Hold for 3 seconds and return to starting position.

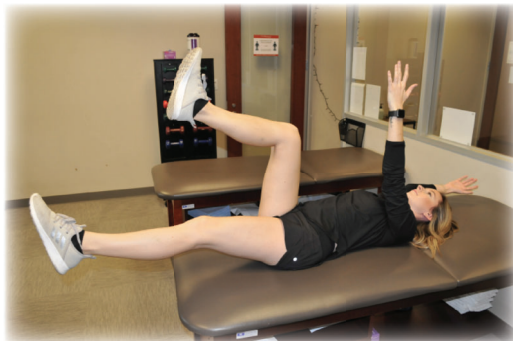
22



PERFORM

Start on hands and knees in a quadrupedal position, keeping foot in toward midline.

22



DEAD BUG

PERFORM 3 SETS OF 20 REPETITIONS

Lie face up with your arms straight out and your legs in the air with your knees bent to 90-degrees. Then, lower opposite arm and leg toward the floor in a slow and controlled manner. Return to starting position and repeat on the other side.

23



PLANK

PERFORM 5 SETS FOR 10-30 SECONDS.

Start face down with your elbows on the ground directly under your shoulders and your legs kicked straight out with feet shoulder width apart. Tighten your abdominals, quadriceps, and gluteals to maintain straight line from top of your head to your heels.