PATIENT INFORMATION ABOUT TRICEPS RECONSTRUCTION
THE SURGERY

After a cervical spinal cord injury you may lack an elbow extensor (function of the triceps). Elbow extension can be restored by moving one third of a muscle at the shoulder (deltoid), lengthening with a tendon from the leg and suture it in the triceps origin.

Deltoid to triceps –
Restoration of elbow extensor

The aim of the surgery and the subsequent rehabilitation is to restore the possibility to reach out in space and to achieve an increased precision of arm movements.
Below you will find essential information for your preparations:

BEFORE THE SURGERY

In order for the ward to be able to prepare in advance for your visit, a nurse will contact you the week before you arrive to Mölndal’s hospital, ward 233 C.A.R.E. You will be asked to provide us with the following information:

- Your need of assistance
- Specific procedures you use for bladder and bowel care
- Any need for special mattress or other needs
- If you are accompanied by an assistant / relative

Hygiene preparation
Remember to shower according to the instructions you received in order to minimize the risk of infections. You also find these instructions on the webpage: www.sahlgrenska.se/omraden/omrade-3/avancerad-rekonstruktion-av-extremiteter/enheter/mottagning-avancerad-rekonstruktion-av-extremiteter/.

The day before surgery
You will be admitted to the ward the day before surgery. You will then meet with several professionals from C.A.R.E. It is therefore important to arrive before noon, preferably at 09:30 a.m. Should you have difficulties to arrive early, please discuss with our coordinator well in advance. The hand surgeon in charge will admit you and inform you about the surgical procedure. The occupational and physical therapists will make assessments prior to surgery such as muscle strength and range of motion. You will be asked to set your own goals with the surgery. Pictures will be taken of your arm in order for us to be able to monitor improvements of arm function over time. Anaesthetic assessment and blood sampling will also be carried out before surgery. Please look at the timetable on page 7 for more details.

Changes in your independence
Restrictions after surgery will result in an increased need for assistance for about 3 months. Therefore, you need to increase the amount of assistance. In order to adhere to the restrictions, the following aids are recommended to be tried out before surgery:

- **Wheelchair**
  You will sit in the powered or manual wheelchair with the arm positioned in a special arm rest (see photography to the next side). The arm rest is borrowed from the hospital and mounted on the wheelchair the day before surgery. If you have a power chair, the maneuver control must be positioned on the side contralateral to the arm that will be reconstructed. It is recommended that the powered wheelchair is equipped with a tilt function in order for you to have the possibility to relieve pressure easier. If you prefer to use a manual wheelchair after surgery, an auxiliary motor and joystick (ea Vortex) is recommended. It is important that you are well aware of optimal pressure relief techniques as you become more sedentary with the arm immobilised in the special arm rest.
• **Pressure-relieving cushion**
  Since you will become more fixed in the chair related to the arm rest there is an increased risk for pressure ulcer.

• **Lift and lift sling with a short backrest** (see photography on the next side).
  The arm needs to be positioned outside the lift sling. The lift sling should not cause any pressure in the armpit. When making transfers after the surgery assisting personnel may need to support the operated arm in the beginning in order to minimize pain/discomfort.

• **Mobile commode**
  A mobile commode can be useful since transfers are more complicated to perform during restriction time.

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**TRAINING AFTER THE SURGERY**

The first day after the surgery you will start to activate the new muscle that power extension of the elbow. A physiotherapist will guide and coach you throughout the rehabilitation. The innervation training is performed with the arm in the splint and consists of isometric contractions of the transferred muscle. You will get an individually adjusted training program with photographs depicting the exercises. You will be instructed to do the training program at home, four times a day. In order to optimize the outcome of surgery it is important that you do the training according to the instructions and adhere to the restrictions. Upon request or if necessary, we can arrange for you to have the follow-up assessment in a clinic nearby your own residency. If you have contact with an occupational therapist or physiotherapist in your home town, please bring his or her contact information.
SPLINT

The day after the operation you will get a custom-made splint that places your arm in an extended position. It starts just below the armpit and supports the arm all the way to the wrist. The splint has to be worn day and night the first 3 weeks. Thereafter, the static splint is replaced by an adjustable splint during daytime, which is to be used for additional two months. The adjustable splint will gradually increase the flexion of the elbow.

Restrictions to be followed after the surgery:
- The special arm rest on the wheelchair must be used for 10 weeks
- The arm must not be loaded when making transfers the first 10 weeks
- Splints must be used as prescribed
- No heavy weight training of the transferred muscle the first 4 months

The arm must not be moved forward and upwards, nor against or in front of the body (see photographs below).
To move the arm backwards is allowed and encouraged to maintain mobility and strength.

How to rest the arm in supine position
After surgery, you can lie on your back or on the non-operated side. A pillow should be placed under the arm in order to prevent swelling (see pictures below). When lying on the non-operated side, the arm must be placed slightly behind the trunk so it does not risk to fall forward. You should not lie on the operated side. You are not allowed to place your arm in front of your body (see photographs below).
Activities of daily living and personal care
When getting dressed, the easiest way is to start with the operated arm, see photographs below. Remember to bring shirts with wide sleeves. When taking a shower you will have to protect the arm/splint in a plastic bag or similar.

FOLLOW-UP AND REHABILITATION 3 WEEKS AFTER SURGERY

Three weeks after the surgery the next phase of the rehabilitation begins. At this stage a somewhat more intensive rehabilitation starts. The static splint will be replaced daytime by a dynamic splint which allows you to actively flex and extend the elbow in a gradually increasing range of motion. You will get instructed to increase the flexion of the splint 15 degrees every week in order for you to reach 90 degrees of flexion 6 to 7 weeks later. 7 to 10 weeks after the surgery, all restrictions are removed.

CONTINUED FOLLOW-UP

For patientes living in Sweden, follow-up is scheduled 6 and 12 months after surgery. You will then meet with the team for post-operative evaluation, training advices and assessments. At these occasions the assessment will include all the measurements performed prior to surgery. Be therefore prepared to set aside a day for these follow-up clinics.

We also have follow-ups on a regular basis at Spinalis (Stockholm), Orup (Skåne), Örebro and Sunderbyn (Norrrbotten). If you live nearby one of these regions, we try to schedule the follow-up there.
CONTACT DETAILS

For cancellations and enquiries, etc. please contact:
E-mail: careinfo@vgregion.se
Coordinate, Vivika Muller Phone: +46 31 - 342 88 06
Occupational therapist, Johanna Wangdell Phone: +46 702 99 21 12
Occupational therapist, Therése Ramström Phone: +46 761 35 74 16
Physiotherapist, Lina Bunketorp Käll Phone: +46 700 85 25 96

Hospital ward 233: +46 31 - 342 85 33 or +46 31 - 342 85 38
Visiting address: Mölndal hospital, building T, level 5, Göteborgsvägen 31, 431 30 Mölndal

TIMETABLE – OPERATION WEEK

<table>
<thead>
<tr>
<th>Monday</th>
<th>Tuesday</th>
<th>Wednesday</th>
<th>Thursday</th>
<th>Friday</th>
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<tbody>
<tr>
<td>09:30 Pre-operative assessments and interviews with Occupational therapist and Physiotherapist.</td>
<td>Surgery, all day</td>
<td>Post-operative treatment (wrapping, making splint) and functional training</td>
<td>Functional training several times during the day.</td>
<td>Changes of wrapping, if necessary.</td>
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<tr>
<td>Appointment with hand surgeon and anaesthetic</td>
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<td></td>
<td>Follow up on transfers and activities</td>
<td>Functional training.</td>
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<td></td>
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<td>Discharge after lunch.</td>
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TIMETABLE – REHABILITATION WEEK

<table>
<thead>
<tr>
<th>Day 1</th>
<th>Day 2</th>
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<tbody>
<tr>
<td>09:30 Removal of stitches</td>
<td>Assessment of team</td>
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<tr>
<td>Adjustment of the splint and testing of a dynamic splint</td>
<td>Functional Training</td>
</tr>
<tr>
<td>Functional Training</td>
<td>Follow-up of splints</td>
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<tr>
<td></td>
<td>Discharge</td>
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Mölndals sjukhus

C.A.R.E.
Ward and outpatient clinic
233
Elevator T1, floor 5