

# HOW TO FABRICATE RIGID DRESSINGS

## REMOVABLE RIGID DRESSINGS

A Removable Rigid Dressing (RRD) extends to mid patella level allowing removal for frequent wound inspection and simulates the donning and doffing of a prosthesis. Check if the patient requires pain control before starting.

### Materials required

- Padding material
- Bowl of water
- Thick stump socks
- Stockinette
- Permanent marker
- Plastic bags
- Plaster scissors
- Gloves
- Casting material (Plaster of Paris or fibreglass bandage)

### Don stump sock

A thin post-operative dressing should be applied along the suture line to avoid bulk at the distal end.



A stump sock should be worn to decrease pressure at the edges of the RRD. Be careful to smooth out wrinkles.

### Apply padding

Apply padding material such as felt, cotton wool, or softban over tibial crest and suture line and secure with tape.



If the limb is bulbous in shape, apply padding in the area of the medial tibial flare to ease donning and doffing. Alternatively, the cast can be cut on the medial side after finishing and taped back together.

### Cover with plastic bag

Pull a plastic bag over the limb and secure at the proximal end. The patient may hold onto the bag if they are able. Freezer bags are often a suitable size.



This allows the RRD to be removed once the cast has set.

### Apply cast material

Place stockinette sock over the plastic bag and tape at the end. This creates a smooth surface on the inside. Fully soak the plaster/fibreglass bandages in the water.

Beginning at mid-patella level, wrap the bandages onto the limb using figure-eight or circumferential style bandaging.



To allow sufficient knee flexion, do not wrap higher than the posterior knee crease.

**DO NOT** pull bandages tightly as this will create a tourniquet effect. Use even tension and avoid wrinkles and ridges. Apply a second wrap of fibreglass if desired for strength. Add stirrups medio-lateral and antero-posterior.



Ensure good coverage at the distal end, smooth the surface until the material sets and ensure the proximal trimlines are smooth.



**DO NOT** allow the limb to rest on the bed until the cast is set as this will cause flat spots and increased pressure.

### Doff cast and remove plastic bag

When the cast is set, remove it from the limb. If it is difficult to remove due to a bulbous shape, cut down the medial side with plaster scissors.

Remove the plastic bag and immediately reapply the rigid dressing. If the cast was split with scissors for removal, ensure the edges are taped together after re-application.

If donning is difficult due to friction, place a plastic bag part-way around the limb to reduce friction, don the rigid dressing and remove the plastic bag.

### Mark front of RRD

Using a permanent marker, mark the front of the cast by outlining the patella or writing "Front". This assists other staff in identifying correct orientation and application of the RRD.



### Apply suspension device

To prevent the RRD from falling off or losing distal contact, use a method of suspension. This could be a tubigrip sock, a stockinette sock with a suprapatellar cuff, or even a knee sleeve.



It is very important to ensure that the suspension method does not create a tourniquet above the knee. It should be secure but not tight.

### Medical Reviews

It is important to provide a number of spare stump socks as the stump oedema will reduce and the RRD will become loose. Educate the patient regarding the purpose of the rigid dressing and if the RRD can be twisted or moved on the limb, stump socks should be added to improve fit.

The RRD should be worn 24 hours a day and not left off the limb for more than 10 minutes at a time. When it becomes loose with 3 or 4 socks, a new RRD should be fabricated. The new removable rigid dressing can be moulded more effectively as the patient's limb matures.