



Problem solving

Simple solutions to common problems



MA.9

Introduction

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In this session participants will:

- Look at simple solutions to some of the common fitting problems caused by limitations in the sizes and range of wheelchairs available
- Note that making modifications and providing more postural support is covered in much more detail in the intermediate level training.

MA.9

Common fitting problems

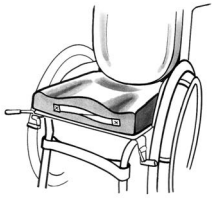
2

- What are some common fitting problems that you have already seen, or think may happen?
- Common fitting problems include:
 - Seat depth is too long or too short
 - Footrests height cannot go up high enough or down low enough
 - Legs tend to roll inwards or outwards
 - Feet tend to slide off footrests
 - Wheelchair is too wide.

MA.9 3

Problem: seat depth is too short

- Lengthen the wheelchair seat depth by extending the seat rails and replacing upholstery.
- Lengthen the wheelchair seat depth by replacing the upholstery.
- Lengthen the wheelchair seat depth by adding a rigid board with a cushion.



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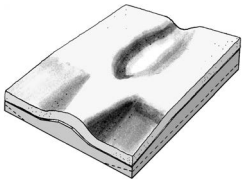
Caution: Replacing a wheelchair seat

- When replacing a wheelchair seat, make sure the new seat is strong enough to carry the weight of the person.
- If it is a rigid seat:
 - Check that the seat does not flex or crack beyond where it extends past the existing wheelchair seat
 - Check during fitting that the backrest and footrests are the correct height. A solid seat and cushion will raise the person in the wheelchair.

MA.9 5

Caution: Replacing a wheelchair seat (continued)

- When cutting a rigid seat – always ensure that all edges are smooth and splinter free.
- When cutting a cushion – always cut from the front so that pressure relief at the back of the cushion stays the same.



MA.9 **Problem: seat depth is too long** 6

- Mark the seat depth that is needed on the existing seat and reduce it.
- If the seat is upholstered – remove the upholstery, shorten it (using an industrial sewing machine) and replace.
- If the seat is rigid – remove the seat, shorten and replace.
- Shorten the cushion to match the new seat depth.

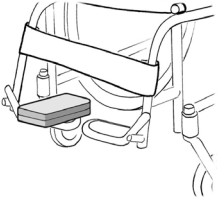
MA.9 **Caution: When cutting** 7

Remember:

- When cutting a rigid seat – always ensure that all edges are smooth and splinter free
- When cutting a cushion – always cut from the front so that pressure relief at the back of the cushion stays the same.

MA.9 **Problem: footrests are too low** 8

- Raise the footrests height by shortening the footrest hangers.
- Raise the footrests height by building up the footrests.



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Caution: When changing footrest hangers

- When changing the footrest hangers – always check that the adjustment mechanism still works.
- If building up footrests – check that the build-up does not stop footrests that move out of the way from working.

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Problem: footrests are too high

- Lower the footrests by lengthening the inner extension tube.
- Increase the height of the cushion.

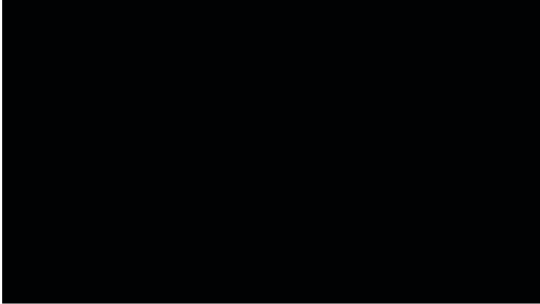


MA.9 11

Caution: When lowering footrests

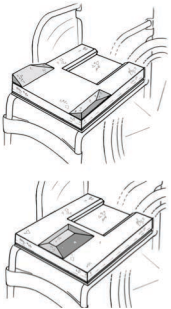
- If lowering the footrests - make sure the footrests do not become so low that they catch on the ground.
- If raising the height of a cushion:
 - Do not use soft foam to increase the height of the cushion
 - Check during fitting that the backrest and armrests are the correct height
 - Check that there are not functional problems with raising the cushion.

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Problem solving fit or adjustment - Gary



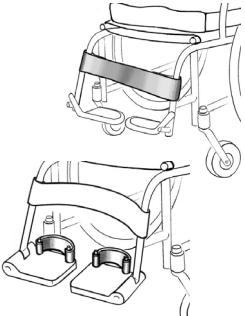
MA.9 13
Legs tend to roll inwards or outwards

- Double check the footrests height
- If the seat is canvas, check that the seat is properly tensioned
- Add wedges to the cushion to support the thighs in neutral, or provide a contoured cushion.



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Problem: feet tend to slide off footrests

- Double check the footrests height
- Adjust the footrests angle
- Add a strap.




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Caution: When altering footrests

- Whenever altering the footrests:
 - Try to ensure there is even pressure under the foot.
- When adding a strap:
 - Make sure the strap is easy to remove so that the person can get in and out of the wheelchair without effort
 - Check that the person can reach the strap without assistance, and can do it up and undo it easily.

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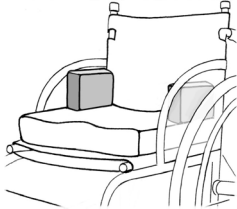
Problem solving fit or adjustment - Arun



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Problem: wheelchair is too wide

To reduce wheelchair width, add foam inserts on each side of the pelvis.





Caution

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- The pads only need to come as far forward as the person's trunk.
- Ensure the cushion matches the wheelchair seat width.
- If the wheelchair is very wide, the person will also have trouble reaching the push rims.
- Over-reaching for the push rims can cause a shoulder injury. Consider carefully whether the wheelchair is safe for the person before prescribing it.



Stump boards

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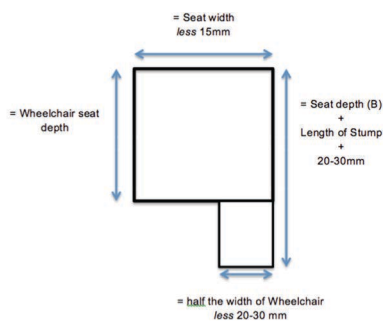
- Useful for clients with a transtibial (below knee amputation) who do not have a prosthesis.
- Benefits:
 - Prevents knee contractures post amputation
 - Protects the residual limb from injury
 - Prevents swelling of the residual limb.





How to make a stump board

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Key point summary

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- Problems with the wheelchair fit may be due to:
 - Limitations in the sizes and range of wheelchairs available
 - The person needing extra support to be able to sit upright comfortably.
- Simple solutions can sometimes solve these problems.
- Before making any modifications, always check you have the best size of the wheelchair available for the person, and it is adjusted as well as it can be.
- Whenever making any modifications:
 - Recheck the wheelchair to make sure it is safe to use
 - Carry out a complete fitting again with the person, as changes to one thing can affect others.



Thank you



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