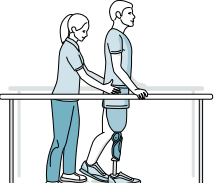
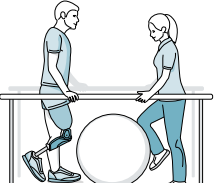
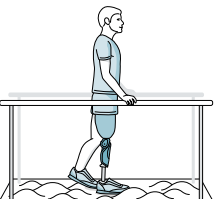
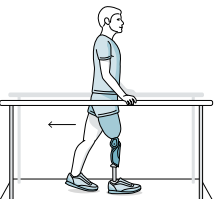
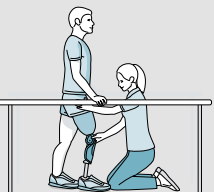


Dynion user training (1/2)

INFORMATION: As a supplement to this „Dynion user training“, the video „Dynion – User training“ is available for under the QR code and link provided.

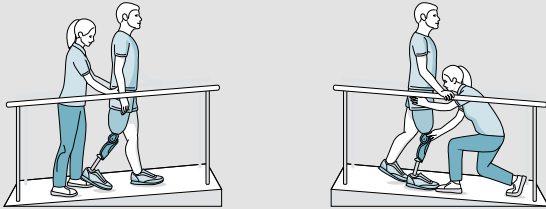


<https://youtu.be/zMZZBA0-h0>

THEME	DESCRIPTION	TECHNICAL HINTS
SITTING DOWN  	- Load both legs equally while sitting down and standing up. - Trunk leans forward, backside moves backwards (“nose towards the toes”) hands go to armrests. Feedback method - Put two pieces of paper under the fore feet. - You should not be able to pull them away during sitting down.	- The user is supported by stance flexion resistance - it simulates the eccentric muscle function of the quad muscle. - Hydraulic stance flexion resistance has to be adjusted by CPO.
FROM STANCE TO SWING PHASE    	Stance release – from stance to swing phase - IC: Prosthesis ahead, heel strike, knee extended - LR-TSt: Load the prosthesis, the pelvis is moving forward over the foot, support forward movement at the pelvis to facilitate weight bearing till end of stance, hip and knee extension on prosthetic side. ▶ The contralateral leg takes a step. ▶ Stance release on prosthetic side Swing initiation – activation of hip flexors - Start with prosthetic side (stance phase). - When going into swing with prosthesis – “kick” the ball. - Keep lateral trunk muscles relaxed and avoid hip hiking, circumduction. - Spend as less effort as possible during “kicking”. Further exercises on level ground - Walking on level ground with/without walking aids - Walking on small/big curves, different walking speed, different step lengths - Walking on different terrain, outside!	Criteria for stance release: - A Knee hyperextension moment (adjusted by the CPO) - Active hip flexion without hesitation Check: - Alternating steps? - Load on prosthesis? ✗ Avoid unloading too early due to hip hiking / circumduction. ✗ Avoid pushing into knee flexion direction. Note: - Stance release is consistently happening, if the technical criteria are fulfilled! - This can also happen (unexpectedly) in daily life situations or exercises where a quick hip flexion movement occurs with an extended knee joint. ▶ Keep that in mind when training with your user and secure and inform the user.
GETTING A FEELING FOR STANCE FLEXION RESISTANCE 	- Place prosthesis in front, hold onto parallel bars, secure user. - Push in knee flexion direction to get a feeling for the stance flexion resistance and the behavior of the knee joint. - Let user flex as far as they can control. Let user push in as far as they are able to control. - Check if the user is able to get back to hip extension independently.	- Secure user at knee / hip joint. - User perceives the adjusted stance flexion resistance. - The user will always feel this resistance when doing activities where usually quad muscles are active.

Dynion user training (2/2)

WALKING ON INCLINES



Uphill: Walk with alternating steps, use stance release and swing the leg forward.

Downhill - Shallow declines

- If user reaches knee extension in Terminal Stance (TSt), stance release is possible, take alternating steps.

Downhill - On middle to steep declines

- Support user at knee joint and pelvis.
- First step with prosthesis
- IC: Load prosthesis and allow knee flexion, roll over the entire foot, step down with the contralateral side.
- Small steps are easier at the beginning.

Test various inclines.

Uphill:

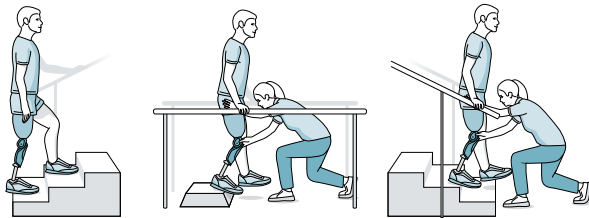
- Alternating steps, avoid hip hiking /circumduction

Downhill:

- If the knee joint is moving in extension direction stance release is possible (like on level ground).
- If the decline gets steeper this is not possible any longer. Use stance flexion resistance.
- Middle to steep declines
- The user has to walk downhill with yielding by using the stance flexion resistance.

✗ **Avoid** residual limb extension!

WALKING ON STAIRS



Walking upstairs

- First step up with the contralateral leg – second step with the prosthesis

Downstairs - Basic exercise

- Parallel bars, stand on a step board
- Prosthesis: Only the posterior third/half of the foot is placed on the stepboard, knee is straight.
- Step down with sound side while allowing knee flexion on prosthetic side.

Downstairs: step by step using stance flexion resistance

- Focus on foot placement, load on the prosthesis, allow sufficient knee flexion during step down

Downstairs: alternating steps swing stance flexion resistance

- Prerequisites: User is able to go step by step.
- Support foot placement at the beginning.

Use stance flexion resistance:

- Secure user at knee/hip joint!
- Focus on correct foot placement.
- Use contralateral handrail first.
- ✗ **Avoid** bending prosthetic knee before stepping down.
- ✗ **Avoid** pushing in extension with the residual limb.
- ✗ **Avoid** "falling" forward in the direction of movement.

KNEELING TIPS

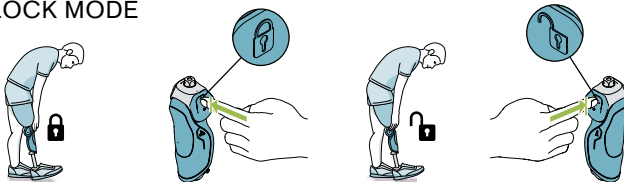


In the beginning take 2 chairs to stabilize.

- Lean on the chairs, step position, contralateral leg in front.
- Kneel down on the prosthetic side, prosthetic knee goes into flexion using stance flexion resistance.

- Use stance flexion resistance to get to the ground.
- Please be aware: The explained method of getting down to the ground is only one of several possible ways.

LOCK MODE



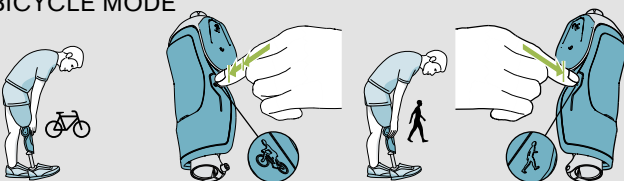
To activate: User loads the heel, performs hip extension to bring the knee joint in full extension - push the lock button, listen for the click.

To deactivate: Push the unlocking button.

✓ **Make sure the knee joint is successfully locked before use!**

- Dynion can be locked in extension - stance release and yielding is not possible.
- Examples: water, extended standing etc.

BICYCLE MODE



To activate: Push the bicycle button against the stop beyond an initial resistance.

To deactivate: Push the walk button.

✓ **Make sure the patient is in a secure standing position while/before changing modes!**

- In Bicycle mode the knee is in free swing - Stance flexion resistance is deactivated.
- Activate only when sitting on a bicycle and deactivate before walking again!
- For use in water activate the lock. Then activate cycling mode walking to avoid product damage.