

ottobock.

C-Brace.

New features.
New possibilities.







Dive into **C-Brace**.

The **C-Brace** is a computer-controlled leg orthosis knee joint that responds to all everyday movements in real time. While that might sound high-tech, it makes an especially big difference in the everyday lives of users. The **C-Brace** empowers people with paralysis in their legs to once again walk on uneven terrain, slopes as well as take stairs step-over-step. With the latest **C-Brace**, even cycling is made possible in the most convenient and intuitive way yet.

C-Brace users don't have to think twice about enjoying activities with their families and can experience both the little things – and big ones too – in a completely new way.

Find out what's behind this incredible technology: a host of new opportunities to enjoy life and everyday routines to the fullest.

Discover the benefits of the *C-Brace*.

Less effort

Walking requires less physical exertion. Compensating movements are reduced, improving body posture and reducing subsequent damage.

Improved safety

C-Brace improves safety compared to conventional leg orthoses and SCOs.

Enhanced control

Stance phase flexion resistance plus offers enhanced control over the early stance phase.

Smooth descending

Intuitive yielding support leads to smooth slope and stairs step-over-step descending.



Controlled sitting

C-Brace enables sitting down in a controlled, steady movement.

Supported standing

Intuitive stance function enables support while standing, triggered by a short pause.

Seamless cycling

Intuitive cycling mode offers smooth and seamless transitions between walking and cycling without having to use any app.



Custom modes

User-defined MyModes can be selected via **connectgo** app.



All-Day Battery

High-performance battery lasts allday when fully charged.







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I ride my bike a lot and really enjoy it. I find the new cycling mode excellent, as it gives me much more flexibility in everyday life. I can now simply walk up to my bike, get on, start riding, and have fun – without needing an app or having to adjust anything. I also really like the new yielding support. You can clearly feel the additional support when walking down stairs or ramps, which gives me more stability and confidence.

Melvin

Indication

In principle, the **C-Brace** is an option for all neurological indications of the lower limbs.

The leading indications are incomplete paraplegia (lesion between L1 and L5) with very minor or no spasticity as well as post-polio syndrome, a condition that can follow poliomyelitis.

For detailed information on indications and contraindications, please refer to your CPO.



Thigh shell
Custom fabricated

Display
View **C-Brace** system
information

Microprocessor
Controls walking
in real time

C-Brace joint unit
With integrated Li-Ion battery,
microprocessor and 3D sensor

Lower leg shell
Custom fabricated

Ankle joint
Can be combined with various
ankle joints

Foot component
Custom fabricated



The connectgo app
Information and
mode setting available via
smartphone

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*My favorite feature of the **C-Brace** is its intuitive stance function. It gives me a sense of safety and stability when standing, for example when I'm working at my desk. With it, I'm literally standing with both feet firmly in life.*

Ricarda





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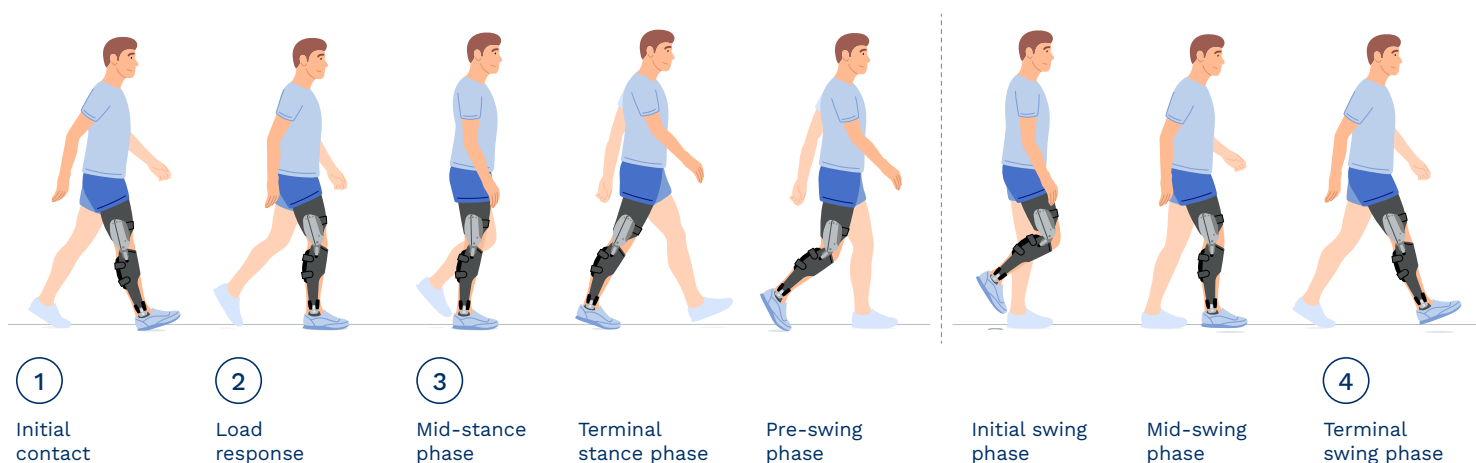
Going downstairs with the C-Brace is absolutely fantastic for me. It's like riding a paternoster elevator – only better. In addition, the orthoses allow me to sit down smoothly and comfortably, which means I can take a short break almost anywhere and, overall, get farther.

Kimi

What the **C-Brace** enables.

C-Brace paved the way for an entire new field and established SSCO – Stance and Swing Phase Control Orthosis – as the most sophisticated KAFO solution. It means that the **C-Brace** controls both the swing and the stance phase during the gait cycle. The sensors in the orthotic knee joint register which movement you are currently performing – 100 times per second. This information is passed on to the microprocessor in the **C-Brace**, which regulates the required support.

The phases of walking



1. Stance phase flexion resistance

Controlled stance phase resistance supports the knee extensors during heel contact.

2. Stance phase flexion resistance plus

Additional resistance option supports the muscles as needed upon increased load transfer; time limitation for additional stance phase resistance.

3. Stance phase extension resistance

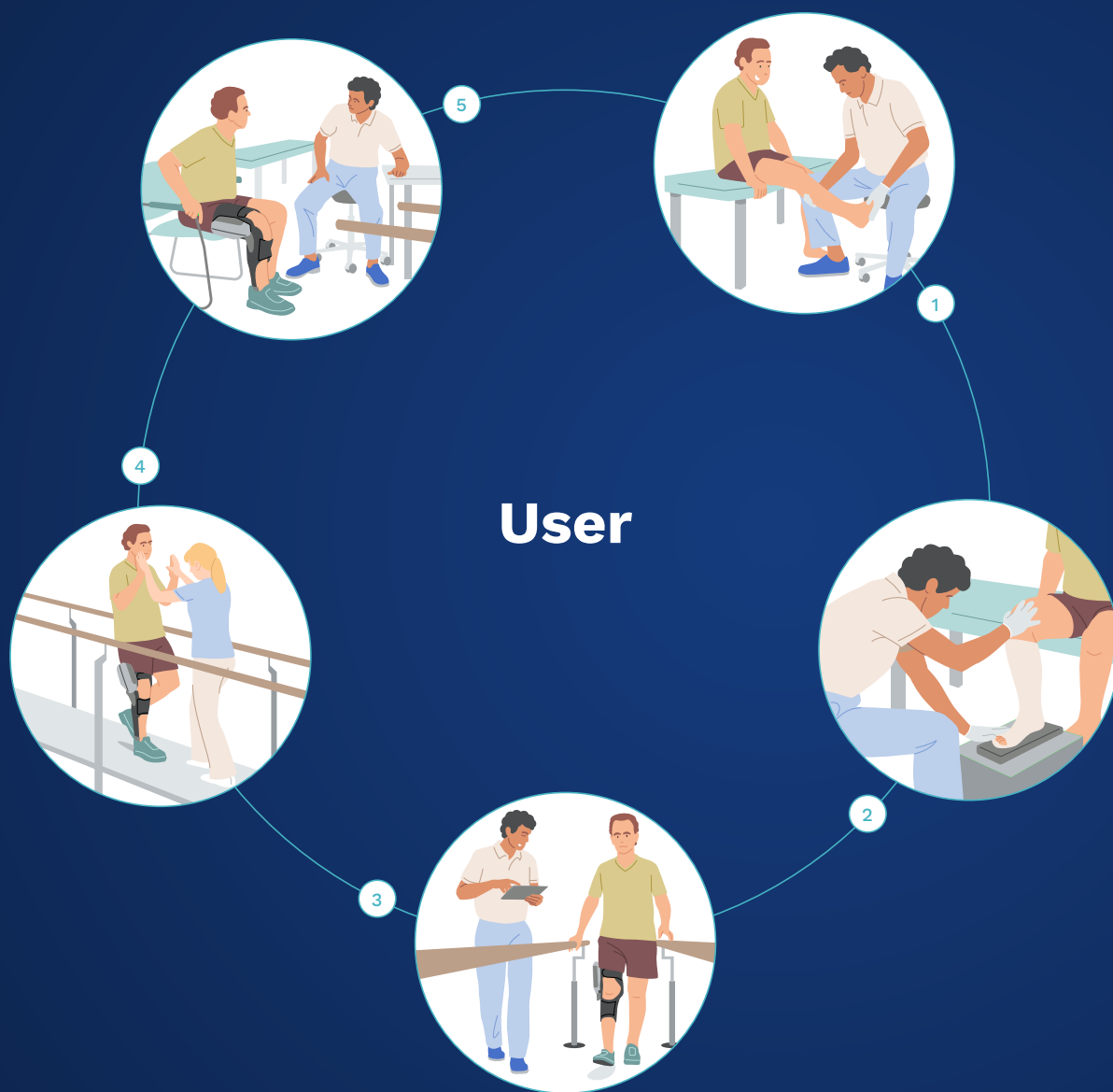
Knee extension resistance in the stance phase for smooth, natural movement of the knee joint.

4. Swing phase flexion angle

Controls the end of swing phase flexion for an optimised gait pattern.

No matter whether you're walking fast or slow, or which position your leg is in at any time: the **C-Brace adapts to changing situations. Always at just the right moment.**

C-Brace. Treatment cycle.



1 Examination and fitting recommendation

Before deciding whether the **C-Brace** is suitable for you, the orthotics and prosthetics professional (O&P professional) performs some tests with you. With the help of the dynamic trial orthosis (DTO), you work together to find out if you can use the **C-Brace**.

2 Trial and fabrication

Now your custom trial orthosis is fabricated to determine a precise fit. The technician takes plaster casts of your leg for this purpose and fabricates an interim orthosis to check the fit. The final **C-Brace** orthosis is then made.

3 Fitting and adjustment

The technician adapts the **C-Brace** to your requirements with the help of a setup app. If desired, the technician configures additional modes for individual activities.

4 Training and rehabilitation

You gradually learn how to use the orthosis by working with trained physiotherapists.

5 Quality and service

Ottobock regularly performs a mandatory service inspection. Your O&P professional checks the fit and settings at the same time.

Your path to the **C-Brace**.

Fitting

Your certified O&P professional is your primary point of contact. He or she will work with you to determine whether you can wear the **C-Brace**. It is essential that you can stand freely and swing your leg forward. The initial test is conducted while you wear the dynamic trial orthosis (DTO). It isn't as comfortable as your final orthosis, but it gives you an initial impression of what it's like to walk with the **C-Brace**. Once you have decided on the **C-Brace**, your custom orthosis is fabricated. You then learn how to use the **C-Brace**.



The dynamic trial orthosis: this lets you get an initial feel for the new movements.



Online tutorials

Scan the QR code for online tutorials showing therapeutic exercises:



Therapy

Therapy begins with a consultation. Your therapist will want to know more about your medical history, your social and work environment and what you want to accomplish with the **C-Brace**. Your therapist will also examine your physical conditions such as muscle functions, balance and mobility. After the technician has fabricated the orthosis in cooperation with Ottobock, they will spend even more time with you. This is when intensive training begins. The therapist helps you become familiar with the functions of the **C-Brace** and use it to the best possible advantage.



A team: working closely with your O&P professional and physiotherapist helps you make the most of your **C-Brace**.

Questions and answers about the **C-Brace**.

1. Are there physical requirements to be able to use the **C-Brace**?

The **C-Brace** is intended for adolescents and adults and is approved for a body weight of up to 125 kg. The patient has to be able to swing the leg freely, either through residual hip muscles or trunk compensation.

2. What does the **C-Brace** offer compared to conventional KAFOs and SCOs?

The **C-Brace** controls both stance and swing phase at any time during the gait cycle. This allows for bending under load, leading to smoother movement patterns for any walking tasks in level ground, stairs and ramps, and offers smooth support while sitting down. The real time control also has meaningful benefits for your safety, for example through stumble recovery.

3. How has the **C-Brace** made walking different compared to conventional KAFOs and SCOs?

C-Brace has made walking smoother and more natural, safer and more reliable. Different walking speeds and step sizes are possible to you, even if you change your pace while walking. Less compensational movements are required, reducing the strain on your body and its long term health impact.

4. What makes **C-Brace** special?

C-Brace aims to make you forget it is there. Transitions between level ground, stairs, slopes, uneven ground and stepping backwards – all of this is handled by **C-Brace** without you noticing it. **C-Brace** also recognizes when you stand for longer periods of times and offers you additional standing support. And when you want to ride your bike, **C-Brace** automatically switches to cycling mode at the beginning and end

of your cycling trip. In short, **C-Brace** acts seamlessly in your everyday life – and if that does not enough, you can even design your own MyModes for other activities with your CPO.

5. Can I wear the orthosis over trousers?

In general, yes. However, the trousers should fit closely to avoid wrinkles, which can lead to pressure sores. We recommend wearing the **C-Brace** directly on your skin.

6. Can I operate a vehicle with the **C-Brace**?

The respective national legal regulations determine whether or not you can operate a vehicle with an orthosis. Always check these regulations in advance. The leg with the orthosis may not be used to control the vehicle (e.g. operate the accelerator and brake pedals). Specialised garages can retrofit the vehicle if required and adapt it to your needs (e.g. manual controls for the brake and accelerator).

7. Do I have to wear special footwear or always use the same shoes?

You can wear any type of shoe in principle. However, the O&P professional adjusts the **C-Brace** for one heel height, and you should then maintain that. You may have to wear shoes that are a size larger in order to leave sufficient room for the foot component. A comfortable, wide, low shoe with laces or hook-and-loop closures makes it easier to use the **C-Brace**.

8. Can I use the orthosis without footwear?

No, because the risk of slipping with the foot component would be too great. This would also change the heel height.

9. Is the C-Brace waterproof?

The **C-Brace** cannot be used in wet areas, such as the shower or bath. It must not be exposed to salt water, either. However, in Germany you are entitled to an additional orthosis for wet areas. Ask your O&P professional about the Aqualine orthotic system from Ottobock.

10. Can I be outside in the rain?

The **C-Brace** is protected against splash water (IP54), so being out in the rain is generally not a problem.

11. What happens when the battery is drained completely? Can I continue walking?

A notification sound warns you promptly when the battery is low. The **C-Brace** then enters a safety mode (empty battery mode). It maintains a certain level of damping, which you and the technician establish in advance. You can therefore continue using the **C-Brace**, but not with the usual dynamics.

12. Does the C-Brace allow any other potential uses?

Your O&P professional can configure two user-defined modes for you. It allows activities such as golfing. The intuitive cycling mode enables you to cycle, without having to select the mode through your app. The **C-Brace** also recognises when you are sitting and reduces the damping so you can sit comfortably.

Note: when the thigh is horizontal, the joint detects the sitting position and switches off the resistance.

13. How can I switch to the user-defined modes?

You can use the smartphone app to do this. The **connectgo** app for users is available free of charge for iOS and Android operating systems in the respective app store.

14. What do I do if there is a defect?

The joint automatically switches to safety mode (see question 11). Please contact the O&P professional who provided the fitting.

15. How does the C-Brace indicate possible errors?

Malfunctions are indicated by an acoustic and visual signal. Please contact your O&P professional in this case.

16. What happens during service appointments?

You will visit your O&P professional regularly for a service appointment. They send the joint and charging cable of the **C-Brace** to Ottobock for inspection.

17. Is there anything I should keep in mind when storing and charging the orthosis?

The orthosis should be kept still and in a secure position during storage and charging. We recommend charging on a daily basis.

18. Does the C-Brace technology work under various climatic conditions as well?

In general, yes. However, the relative humidity must not exceed 93%, and the temperature has to be between -10°C and +40°C.

