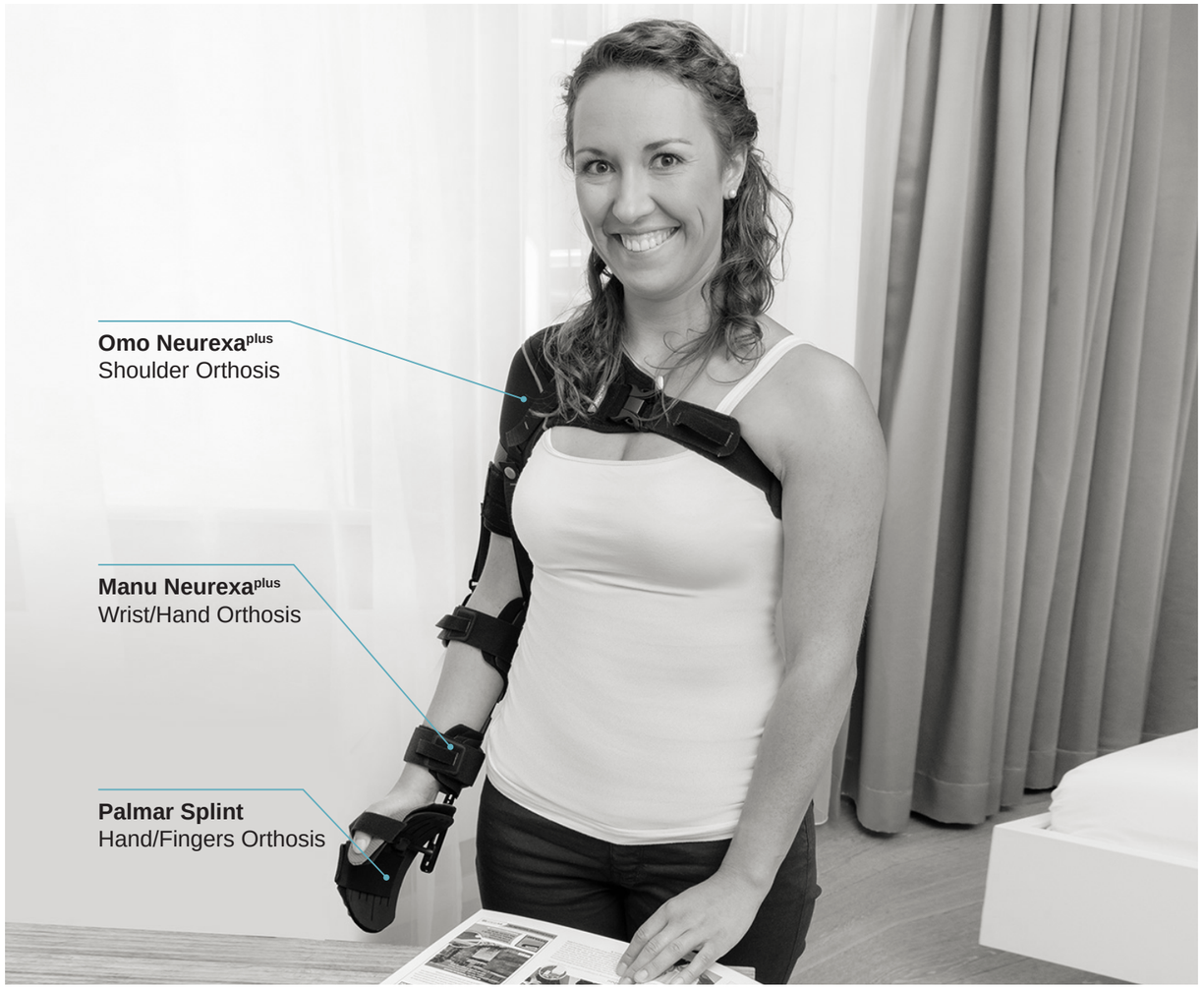
ottobock.

Upper extremities stroke solutions

Omo Neurexa^{plus} | Manu Neurexa^{plus} | Palmar Splint

Information for specialists



Redefining the path to rehabilitation.

5065N Omo Neurexa^{plus} | **28P30** Manu Neurexa^{plus} | **28P31** Palmar Splint

The devices in Ottobock's stroke solutions product line include orthoses for the shoulder, elbow, wrist, hand, and fingers to promote rehabilitation post-stroke or following injuries to the central/peripheral nervous system.

The upper extremity orthoses are designed to work together to achieve better repositioning and stronger external rotation of the shoulder, which prevents spasticities and promotes movement. Together, Ottobock's combined solutions increase functionality for patients, resulting in better care and improved outcomes.

Omo Neurexa^{plus}

Promote movement. Create independence.

The Omo Neurexa^{plus} shoulder orthosis facilitates active rehabilitation for patients with shoulder pain and dislocation after stroke or injury to the central or peripheral nervous system.

Patients with hemiplegia frequently experience shoulder pain and dislocation. In flaccid paralysis, the humeral head is often poorly positioned (subluxation), resulting in pain, reflexive muscle dysfunction, and secondary joint damage. The load-relieving Omo Neurexa^{plus} supports the shoulder joint and arm, improves body posture and gait pattern through enhanced sensomotoric control, and relieves pain.

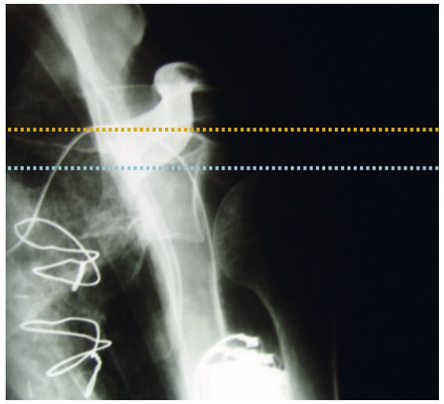
The Omo Neurexa^{plus} consists of two parts – a shoulder cuff and forearm cuff. The cuffs are connected by two straps. The Omo Neurexa^{plus} positions the humeral head precisely inside the socket of the shoulder joint, a prerequisite for the physiological, pain-free interplay of the three true and two false joints of the pectoral girdle during movement.

The Omo Neurexa^{plus} also extends and slightly externally rotates the arm, which counteracts the development of spastic posture pattern consisting of elbow flexion with internal rotation.

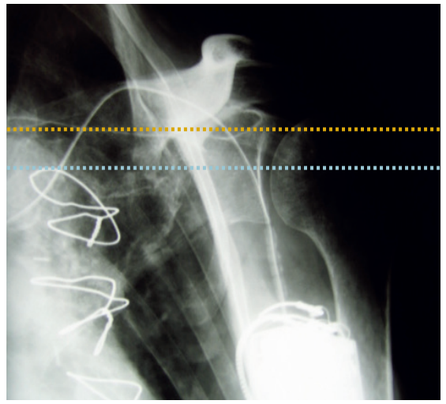
Omo Neurexa^{plus} supports soft tissues
Reestablishing the correct physiological position of the shoulder joint prevents hyperextension of the capsules, ligaments, tendons, and nerves, as well as excessive muscular strain, secondary osteoarthritis, and the resulting pain this causes. Once pain is eliminated, functional motor rehabilitation with the patient's diagnosis can begin.

A repositioning of the humeral head, pain relief, and the positioning of the upper extremity to counteract spasticity facilitates the free functional treatment and activity of the pectoral girdle and arm (see x-ray images). A muscle stimulation pad can easily attach to the inside of the shoulder orthosis by a hook-and-loop strap. This is available for additional stimulation of weakened muscles such as the rhomboids, the lower section of the trapezius, or the upper section of the latissimus dorsi.

Humeral head positioning



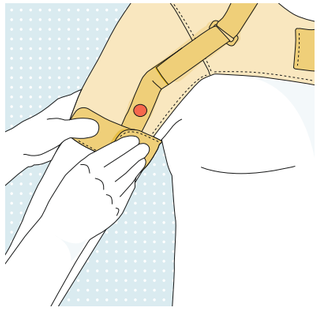
Without Omo Neurexa^{plus}
Humeral head subluxation, see upper edge of blue line

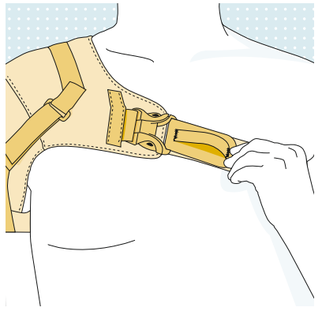


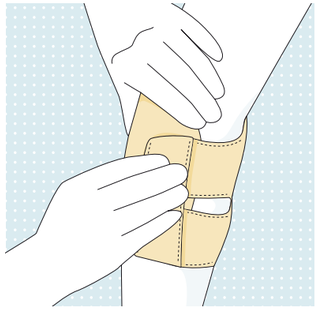
With Omo Neurexa^{plus}
Humeral head repositioned in the joint, see upper edge of yellow line

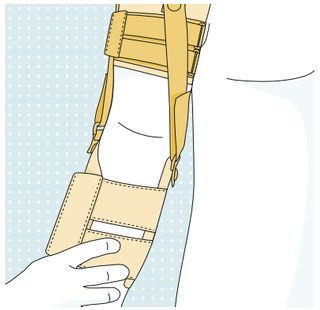
Omo Neurexa^{plus}

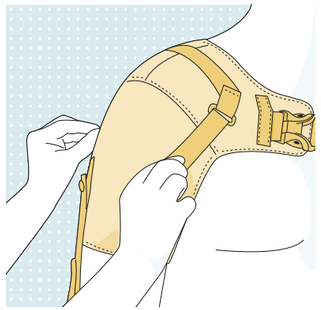
Application and use









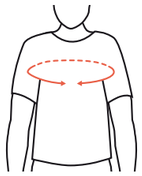


The Omo Neurexa^{plus} can be used throughout rehabilitation. The orthosis, along with muscle training and physiological movement of the arm, are recommended at an early stage of rehabilitation.

The Omo Neurexa^{plus} needs to be fitted to the patient by a therapist or orthotist. The initial donning of the orthosis should be performed by the therapist or orthotist. Depending on the severity of the disability, the patient may be able to apply the orthosis themselves. Prior to doing so, the patient, as well as their carers and relatives, must be provided with detailed instructions regarding the proper use of the orthosis.

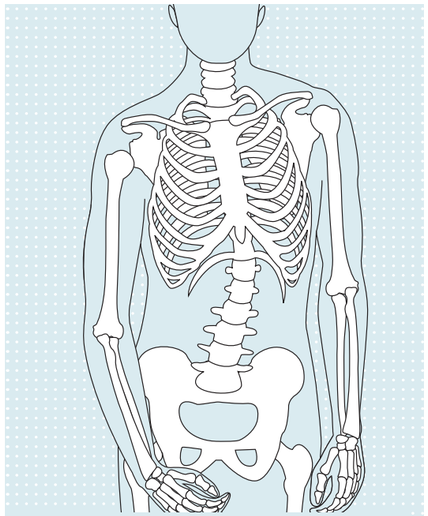
Sizes

Proper sizing and application are key in achieving optimal functionality. The product is available in six sizes (XXS–XL) for the right and left sides.



Article number	Size	Circumference (cm)
5065N	XXS	73–78
	XS	79–86
	S	87–94
	M	95–102
	L	103–110
	XL	111–118

Measure the circumference above the chest, as indicated in the illustration.



Posture without Omo Neurexa^{plus}

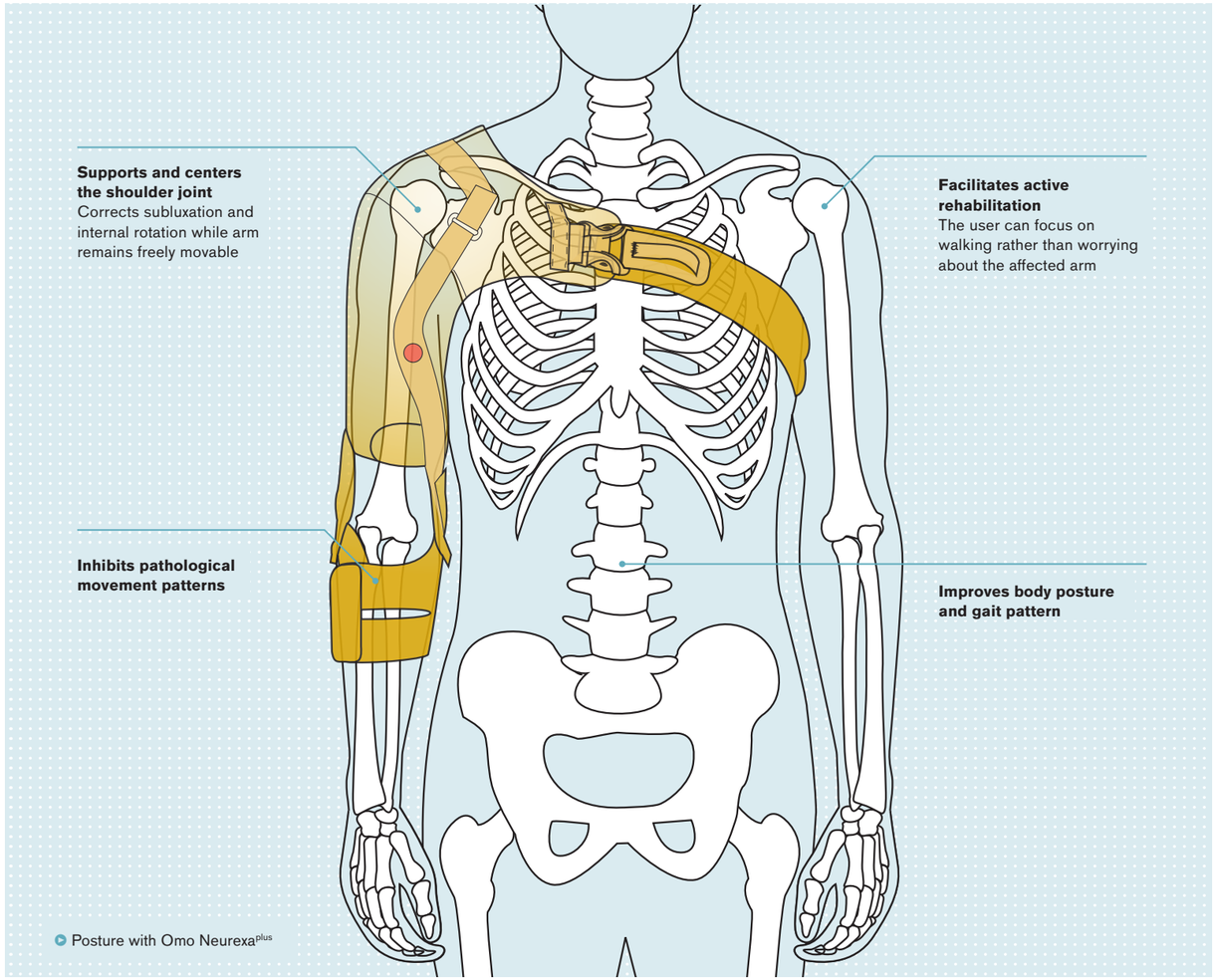
PDAC Verified L3670

Indications

Shoulder pain and dysfunction (including subluxation) after stroke, hemiplegia, spinal disc herniation in the cervical spine, injuries of the brachial plexus, and peripheral nerve damage.

Features and benefits

- Positively influences the proprioceptors, which benefits the sensorimotor system
- The orthosis can be worn during rehabilitation and training
- Silicone band and textile structure support positioning of the orthosis and prevent slipping
- Ease-of-use with colored guide buttons
- Soft TriTech material ensures excellent wearer comfort
- Soft edges prevent chafing and sores
- Silicone muscle stimulation pad
- Machine wash at 104° F



Posture with Omo Neurexa^{plus}

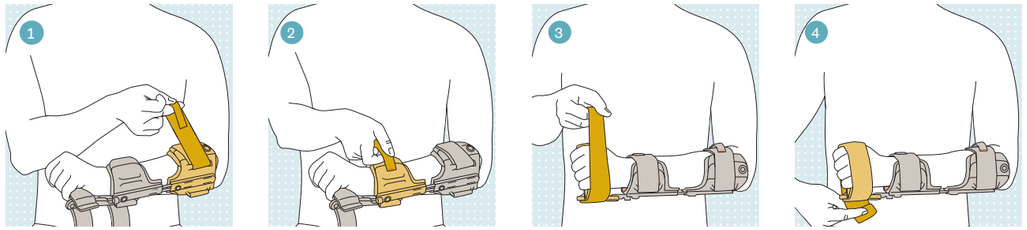
Manu Neurexa^{plus}

Regain stability. Create independence.

The Manu Neurexa^{plus} wrist/hand orthosis sets a new standard for patients who need more support or control for their wrist, hand, and fingers due to a neurological disorder.

By stabilizing and supporting the wrist and hand in a natural, neutral position, the Manu Neurexa^{plus} encourages improved mobility through active rehabilitation.

Combine the Manu Neurexa^{plus} (28P30) with the Omo Neurexa^{plus} (5065N) for shoulder repositioning support, and/or with the Palmar Splint (28P31) for additional support for the fingers and hand, especially during therapy or as a night positioning orthosis.

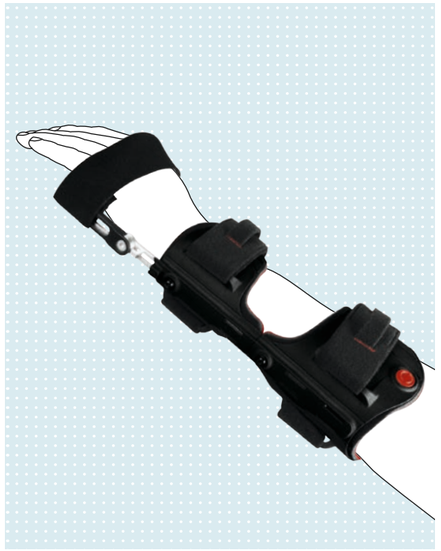


Indications

- Flaccid paralysis of wrist/hand/fingers
- Hemiplegia
- Stroke
- Multiple Sclerosis
- Tetraplegia
- Intervertebral disc prolapse in cervical spine
- Brachial plexus injuries
- Spasticities up to grade 1 on the Ashworth scale

Modified Ashworth Scale (MAS)

Grade	Description
0	No increase in muscle tone
1	Slight increase in muscle tone by catch and release or minimal resistance at the end of range of motion (ROM) when affected parts are moved in flexion or extension
1+	Slight increase in muscle tone by catch, followed by minimal resistance through remainder (<50%) of ROM
2	More marked increase in muscle tone through most (>50%) of ROM, but affected parts are easily moved
3	Considerable increase in muscle tone, passive movement difficult
4	Affected parts rigid in flexion or extension



PDAC Verified L3916

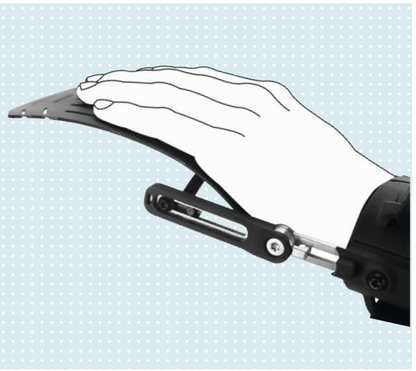
Features and benefits

- Supports the wrist in the appropriate functional position with continuous, flexible adjustment
- Adjustable hand bar stabilizes the hand in the palmar or volar position to prevent malpositioning
- Low-profile, lightweight, and comfortable design for high patient compliance
- Climate-regulating material for wearer comfort
- Machine washable pads at 104° F for easy maintenance
- One universal size and side to reduce inventory and overall costs
- Easy to don and doff with one hand
- Combine with the 5065N Omo Neurexa^{plus} for shoulder repositioning support
- Combine with the 28P31 Palmar Splint for additional support for the hand and fingers

Palmar Splint

Support recovery. Create independence.

The Palmar Splint hand support connects to the 28P30 Manu Neurexa^{plus} wrist/hand orthosis to provide additional stability for the hand and fingers, especially during therapy or as a night positioning orthosis.



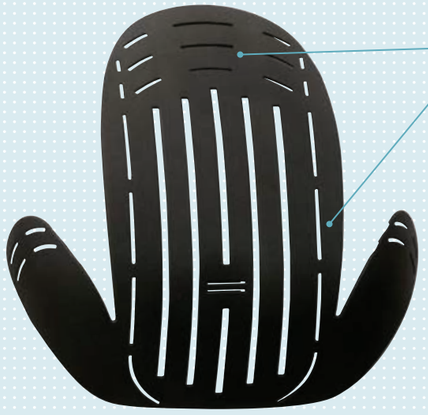
Features and benefits

- Tool-free click system converts the hand orthosis into a positioning orthosis
- Adaptable splint can be applied by patients themselves
- Length-adjustable hand support and adaptable hand bar for finger support
- Hand support rest moves naturally in conjunction with wrist joint
- One universal size and side with trimmable sections for custom sizing to reduce inventory and overall costs
- Includes pads and closures

Product Information

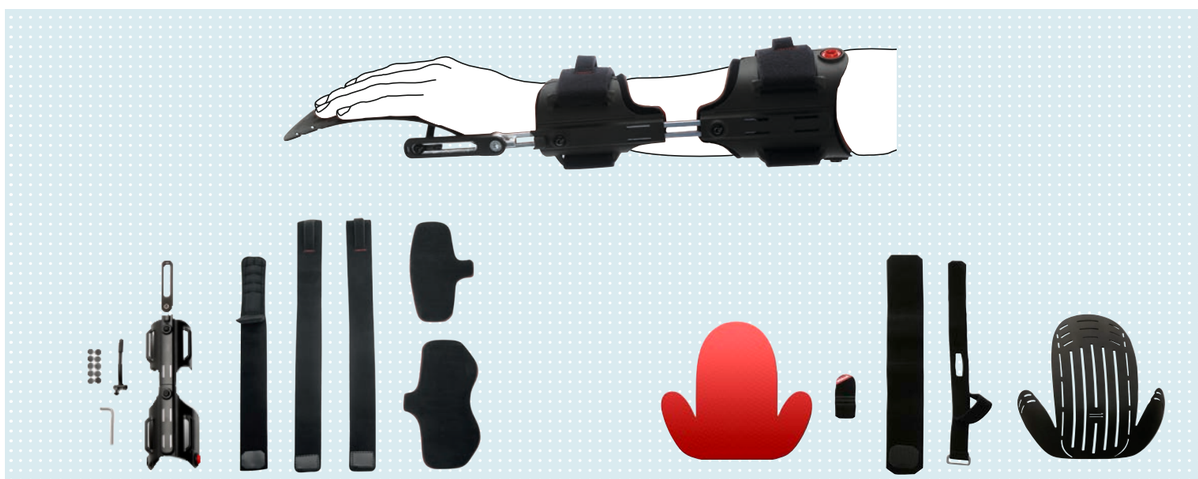
28P31 Palmar Splint

- Hand/fingers resting or night splint
- Universal side and sizing



Combining the Manu Neurexa^{plus} and Palmar Splint

Designed to work together



28P30 Manu Neurexa^{plus}
Wrist/Hand Orthosis

28P31 Palmar Splint
Hand/Fingers Orthosis

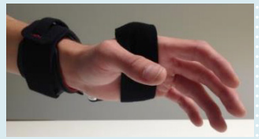
Manu Neurexa^{plus}

Lower and upper supports are length adjustable

Adjustable angles for the wrist

palmar

volar



The **hand bar** can be used in the palmar or volar position

The hand bar is covered with a combined hand pad/strap. A **tube inside the pad** allows for tool-free adjustment.

Remove the hand bar pads to attach the Palmar Splint. The adaptable night splint can be **applied by the patients themselves** using the thin connection in the middle of the hand bar.

Palmar Splint

Length-adjustable hand support

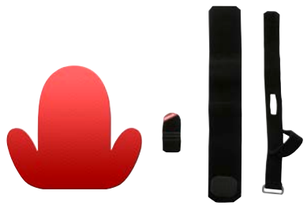
Adaptable hand bar to use as a night splint for the fingers

Tool-free click system connects the Palmar Splint with the Manu Neurexa^{plus}

Adjusts with movement of the wrist joint

Spare Parts

29P32 Manu Neurexa^{plus}
Liner Set (Including Straps)



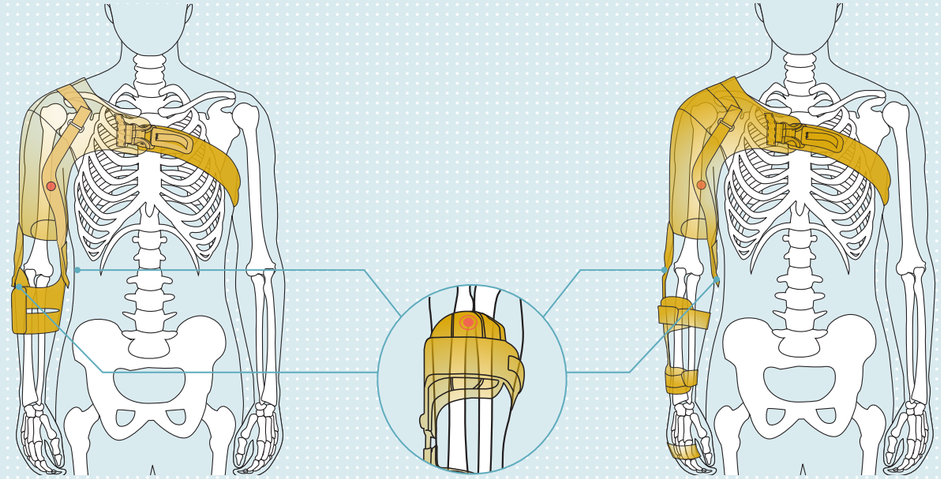
29P31 Palmar Splint
Liner Set (Including Straps)

Upper Extremities Stroke Solutions

Combined effects

The Omo Neurexa^{plus} is the first shoulder/elbow orthosis combinable with a wrist/hand orthosis (Manu Neurexa^{plus}) and a hand/fingers orthosis (Palmar Splint) to offer a full upper extremities solution that increases functionality for patients.

The combined shoulder-elbow-wrist-hand orthosis (SEWHO) achieves better repositioning and stronger external rotation of the shoulder, preventing spasticities and promoting rehabilitation post-stroke or following injuries to the central/peripheral nervous system.



Omo Neurexa^{plus}
The forearm cuff of the Omo Neurexa^{plus} is held around the forearm by soft TriTech material and a silicone strap, preventing the orthosis from shifting or twisting.

Connecting Buttons

Omo Neurexa^{plus} with Manu Neurexa^{plus}
The Manu Neurexa^{plus} attaches to the Omo Neurexa^{plus} by connecting buttons to provide more effective control of rotation and relief. The hand is rotated slightly outwards and the thumb is repositioned so the relieving effect is simultaneously directed up to the shoulder through the hand/thumb structure.

- As a result, the repositioning of the shoulder is more effective, and the outer arm rotation to prevent spasticity is stronger. Combine the Manu Neurexa^{plus} with the Palmar Splint for additional support for the fingers and hand.

Please don't hesitate to contact us if you have any further questions or you would like more information.

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