mediroyal

Orthoses are our passion

NRX®, ARX® and SRX® Straps by Mediroyal

– Providing unlimited options!

NRX® BY MEDIROYAL STRAP

The NRX® Strap was developed by Mediroyal to provide new options for orthotic treatments. We saw a need for a flexible system that can be used as a diagnostic tool as well as a corrective and supportive device during rehabilitation. But not limited to that, the NRX® Strap can also be used a definite application on the patient. The controlled elasticity in the strap provides the opportunity to apply compression differently depending on the application.

If more support is needed but not necessarily compression, another layer can be fixed on top of the first one. The NRX® material can be cut with a pair of scissors and the textile surface has a rip stop function which even makes it possible to cut small holes in the material as use it as a dynamic extender.

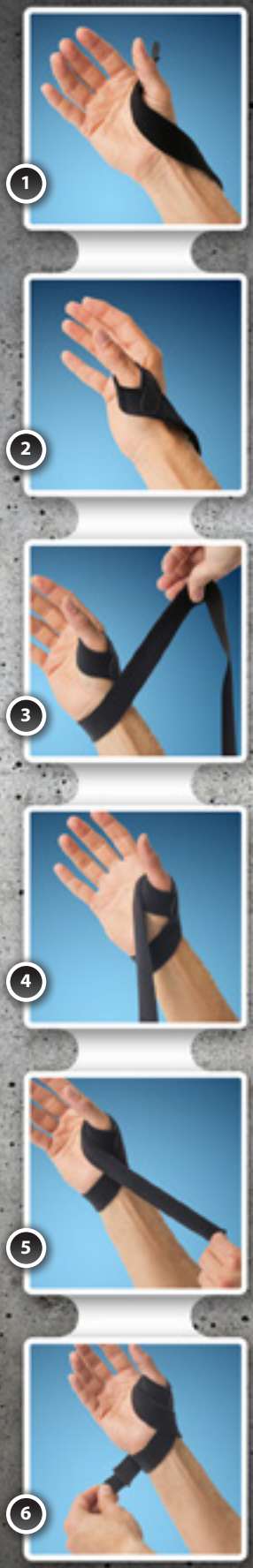
– There are simply no limitations with the NRX® Strap.

– Providing unlimited options!

The NRX® Strap is made from a closed micro cell CR foam material that is mineral based, completely free from latex and ETU. The surface is micro perforated for ventilation and has a friction effect on the skin which can enhance proprioception, muscle memory and joint position sense.

The NRX® Strap comes in rolls that can be cut to individual length. The material can easily be adjusted individually to the patient and then secured with the special micro hook. The advantage is that the same construction is reusable on the same patient first fitted on which also makes it easier for the patient to re-apply compared to tape.

The NRX® Strap can be machine washed in 60 degrees C to maintain a hygienic safety on the patient.



NRX® Strap advantages

Proprioception, joint position sense and muscle memory

The NRX® Strap has several interesting effects that can be used in rehabilitation. The friction effect on the surface activates the mechanoreceptors in the skin and provides an increased proprioception and joint position sense for the patient. This can be used to train the muscle memory of the patient in order to correct or support.

Local compression

The elasticity of the material provides a good compression which supports the local joint and can prevent edema. Edema is a common reason to range of motion limitations in the joint.

Support

The compression and different stability of the various NRX® Strap can be used to provide more specific support. It can be used to restrict the specific movement without over-stabilizing the complete joint. This allows more natural joint function and range of motion.

Heating effect

The closed micro cells in the NRX® material promotes heat retention which increases the temperature locally. An increased temperature locally will make the muscles, ligaments and collagen structures more elastic and flexible which can reduce pain and inflammation.

Ventilation

The NRX® surface is micro perforated for optimal moisture transportation.

Different stability

NRX® Strap, NRX® PLUS Strap and NRX® Double offers different grades of stability depending on the application and all materials can be combined together.

Skin friendly

The NRX® material has been tested for skin irritation by SGS and is completely free from ETU and latex rubber.

Reusable and machine washable

The NRX® Strap is reusable on the patient first fitted on and can easily be washed in 60 degrees machine wash to maintain hygienic safety of the material.

Used in water rehab

The closed cell structure doesn't absorb any water which means that the NRX® Strap can be used actively during hydrotherapy. The skin friction is not lost in water.

NRX® BY MEDIROYAL STRAP

The NRX® Strap is the most versatile version of the straps with a medium stability and a high stretch. The inside of the material is micro perforated and provides skin friction which increase the proprioception from the mechanoreceptors in the skin. The surface is made from a loop fabric where the low profile hook can be applied to secure the application.

The NRX® Strap can be used for most basic applications and can be combined with NRX® Strap Neptune™, NRX® Strap Double or NRX® Strap PLUS for more mechanical stability or correction.

- **Medium Stability**
- **High Stretch**
- **Friction surface on the inside**

NRX® COLORS BY MEDIROYAL STRAP

NRX® Strap is available in the following widths and colors.
The 30 mm and 50 mm roll comes with 10 pre-cut micro hook pieces.
The 110 mm roll comes with 5 pre-cut micro hook pieces.

NRX® Strap – 30 mm

■	EU446030	NRX® Strap · 30 mm x 3,1 m · Black
■	EU446230	NRX® Strap Colors · 30 mm x 3,1 m · Royal Blue
■	EU446330	NRX® Strap Colors · 30 mm x 3,1 m · Burgundy Red

NRX® Strap – 50 mm

■	EU446050	NRX® Strap · 50 mm x 3,1 m · Black
■	EU446250	NRX® Strap Colors · 50 mm x 3,1 m · Royal Blue
■	EU446350	NRX® Strap Colors · 50 mm x 31, m · Burgundy Red

NRX® Strap – 110 mm

■	EU446110	NRX® Strap · 110 mm x 3,1 m · Black
■	EU446210	NRX® Strap Colors · 110 mm x 3,1 m · Royal Blue
■	EU446310	NRX® Strap Colors · 110 mm x 3,1 m · Burgundy Red

NRX® NEPTUNE BY MEDIROYAL STRAP

– NRX® Strap lined with Neptune™ with higher compression and controlled stretch.

The NRX® Strap Neptune™ is a further development of the NRX® Strap. It has a loop surface with lower profile than the regular NRX® Strap. The micro-cell core is thinner and is micro-perforated for optimal ventilation. The inside is lined with the Neptune™material, which is hydrodynamic, absorbs moisture and dries quickly.

- **Medium/High Stability**
- **Medium/High restricted stretch**
- **Lined with Neptune™ on the inside**

NRX® Strap Neptune™ is available in the widths 30, 60 and 120 mm.

NRX® Strap Neptune™

■	EU452030	NRX® Strap Neptune™ · 30 mm x 3,1 m · Black
■	EU452060	NRX® Strap Neptune™ · 60 mm x 3,1 m · Black
■	EU452120	NRX® Strap Neptune™ · 120 mm x 3,1 m · Black

NRX® pre-cut hook parts are included in each package.

NRX® Hook

■	EU446001	NRX® Hook · 10-pack for 30 mm
■	EU446002	NRX® Hook · 10-pack for 60 mm
■	EU446003	NRX® Hook · 5-pack for 120 mm
■	EU445060	NRX® Hook · Self-adhesive · 50 mm x 25 m · Transparent
■	EU445061	NRX® Hook · With loop top · 50 mm x 25 m · Black
■	EU445161	NRX® Strong Hook · With loop top · 50 mm x 25 m · Black

NRX® DOUBLE BY MEDIROYAL STRAP

The NRX® Double is used mostly as pelvic or trunk anchors or when the skin grip is not needed. The stability in the material is medium-high and with a more controlled stretch than the NRX® Strap. The inside of the strap is the same as the outside, the loop fabric.

The NRX® Double can be used as rotation reinforcement when skin grip is not needed. The more controlled stretch makes the rotation strap even more effective.

- **Medium-high stability**
- **Medium-restricted stretch**
- **Double sided loop surface**

NRX® Double is available in the following widths. The 30 mm and 50 mm roll comes with 10 pre-cut micro hook pieces. The 110 mm roll comes with 5 pre-cut micro hook pieces.

NRX® Double – 30 mm

■ EU447030 NRX® Double · 30 mm x 3,1 m · Black

NRX® Double – 50 mm

■ EU447050 NRX® Strap Double · 50 mm x 3,1 m · Black

NRX® Double – 110 mm

■ EU447110 NRX® Strap Double · 110 mm x 3,1 m · Black

NRX® Double – 300 mm

– Note that the 300 mm doesn't include any hook pieces!

■ EU447300 NRX® Strap Double · 300 mm x 3,1 m · Black

NRX® PLUS BY MEDIROYAL STRAP

The NRX® Strap PLUS offers a high degree of mechanical stability with almost no stretch. It has a skin friction surface on the inside but rarely used directly on the skin. It's instead used as a reinforcement element on the NRX® Strap or the NRX® Double in order to increase stability or correction.

The NRX® Strap PLUS can also be used a secure anchors over limbs when it needs to be completely secured or if the attachment needs to have a firm fixation point.

- **High stability**
- **No stretch**
- **Skin friction surface**

NRX® Strap PLUS is available in the following widths.
The 30 mm, 50 mm and 80 mm roll comes with 10 pre-cut micro hook pieces. The 110 mm roll comes with 5 pre-cut micro hook pieces.

NRX® Strap PLUS – 30 mm

- EU449030 NRX® Strap PLUS · 30 mm x 3,1 m · Black

NRX® Strap PLUS – 50 mm

- EU449050 NRX® Strap PLUS · 50 mm x 3,1 m · Black

NRX® Strap PLUS – 80 mm

- EU449080 NRX® Strap PLUS · 80 mm x 3,1 m · Black

NRX® Strap PLUS –110 mm

- EU449110 NRX® Strap PLUS · 110 mm x 3,1 m · Black

NRX® Strap and combination with orthoses

The NRX® Strap can be combined with regular orthoses for additional functionality. The DEX® Wrists, Mediroyal ErixThree Neuro shoulder, Manex Radial 2.0 and the Mediroyal TONUS® Anti-Spasticity splints are excellent for these combinations.

MR2270 DEX® Mid with NRX® Strap for finger extension

MR2274 DEX® Short with NRX® Strap for finger flexion

MR2274 DEX® Wrist Short with NRX® Strap for Thumb Abduction

DEX® BY MEDIROYAL

NRX940 · ErixThree Neuro

MR2285
Manex Radial 2.0

TON405 Tonus Fixed RG

TONUS

ARX SOFT® BY MEDIROYAL STRAP

–The future already today!

The ARX® Strap is a self attaching strap without having to use hook parts for securing it. The ARX® material is made from a patented technology using two fabrics that self attach to each other. The smaller the radius of the application is, the better is the attachment.

Ideally used for fingers, thumbs and hand based applications but also works well on elbow. The material has been laser cut into the different widths to secure the edge. There is no skin friction on the inside of the material. The ARX® material is highly breathable and can be machine washed at 40 degrees C. Don't use fabric softener as it will ruin the function of the material.

- **Medium stability**
- **Limited stretch**
- **Breathable**

The ARX® Strap is available in the following widths:

ARX® Strap – 30 mm	
EU448030	ARX® Strap · 30 mm x 3,1 m · Black
ARX® Strap – 50 mm	
EU448050	ARX® Strap · 50 mm x 3,1 m · Black
ARX® Strap – 110 mm	
EU448110	ARX® Strap · 110 mm x 3,1 m · Black

– The hookless, elastic compression strap

The SRX® Strap is based on the ARX® Strap, but modified with lower profile textiles and elastic yarn. This makes the material self-attaching with a slight compression effect. It can be cut without fraying, machine washed in 40 degrees C, and re-used repeatedly. Do not use fabric softener when washing as it will ruin the self-attaching effect. The SRX® Strap can be used for all extremity joints and is supplied in 5 meter rolls.

- **Medium stability**
- **Elastic with compression**
- **Ventilated**

The SRX® Strap is available in the following widths:

SRX® Strap – 30 mm	
EU456030	SRX® Strap · 30 mm x 5 m · Camo
SRX® Strap – 80 mm	
EU456080	SRX® Strap · 80 mm x 5 m · Camo
SRX® Strap – 100 mm	
EU456100	SRX® Strap · 100 mm x 5 m · Camo

NRX® Strap Kits

NRX® Strap Kit for Hammertoes

A pre-cut kit for hammertoe applications. Consists of a double loop and a single loop depending on the need along with an anchor strap that goes over the foot. The loop parts will help to flex the metatarsal joint and is then secured directly on the anchor strap that goes over the foot. Hook parts for secure application are included.

Indications: Hammertoe problems

■ NRX1001 Black · Universal size

NRX® Strap Kit for Supination

The pre-cut kit can be used to supinate the forearm on neurological patients. It is attached over the thumb and then the spiral goes up over the elbow joint in order to control and assist radius/ulna rotation. Can be used on the opposite way to promote pronation. Hook parts for secure application is included.

Indications: Assisted supination or pronation on neurological patients or for post-fracture treatments.

■ NRX1002 Black · Universal size

NRX® Strap Kit for Hallux Valgus

This pre-cut kit is used to control abduction of the toe in Hallux Valgus patients. Realigning the joint will not only lead to better neurological muscle function, it can also assist in reactivation the muscular stability of the joint as well as offering off-loading of pain in the joint. The strap is attached over the big toe and individual tension is applied over the strap that is secured over the ankle. A transversal arch band is the applied to secure the application. A sock can be worn over the application, making it possible to wear actively in shoes with enough space. Hook parts for secure application are included.

Indications: Hallux Valgus

■ NRX1003 Black · Universal size

NRX® Strap Kit for Thumb Abduction

This kit can be used to support and stabilize the thumb in abduction. Can be used for neurological patients to prevent or treat light adduction contractures or be used as a functional CMC-1 support. The application enables the patient to get a functional position and it's even possible to walk with a crutch wearing it. Hook parts for secure application are included.

Indications: CMC-1 joint problems in the thumb, light adduction contractures.

■ NRX1004 Black · Universal size

NRX® Strap Kit for Hip Rotation

This kit is designed to be used for patients with internal or external rotation of the hip. The pelvic strap and the thigh cuff provides attachment points for the rotation part that is then attach onto the cuff and strap. Patients with hip problems usually have a shortening of the hip adductor which requires several physical therapy sessions. The kit can be used both as a diagnostic tool to evaluate the effect on the patient as well as after the manual therapy treatment to maintain a constant dynamic stretch over the hip adductor. The external rotation strap will also provide individual pressure over the gluteus muscles which help to extend the hip joint. The hook parts on the pelvic belt and the thigh cuff are sewn on to the applications. One of the hook parts on the rotation strap is fixed in place and the other one is adjustable.

Indications: Short adductor muscles in the hip especially adductor longus and brevis, hip extension problems.

■ NRX1005 Black · Universal size

NRX® Strap Kit Epicondylitis

This kit is made from a combination of the NRX® Strap and NRX® Strap PLUS qualities for optimal function. The main body is made from NRX® Strap to conform easily and to create an anchor for the application. It has two straps to make application easy. The reinforcement part is made from NRX® Strap PLUS and can be used to provide more counterforce and support to the extensor and flexor tendons. A pad is also included that can be positioned on the NRX® Strap body, under the NRX® Strap PLUS reinforcement for more support. Both the body and the reinforcement can be customized by cutting the length of the straps.

Indications: Lateral or medial epicondylitis.

■	NRX1006	Royal Blue / Black · Universal size

NRX® Strap Kit – Twin Bandages for fingers and Toes

Twin bandages can be useful for starting mobilization after an injury by using the adjacent finger for support and assistance. They can also be used for immobilization of fingers and toes after sprains. The NRX® Strap has a skin friction surface on the inside to prevent slipping.

The NRX® Strap Kit Twin Bandages are available in two qualities: NRX® Strap with more flexibility, and NRX® Strap PLUS with more stability. This allows you to increase functional stability by using the NRX® Strap PLUS quality proximal for more stability and support over the MCP and the NRX® Strap quality distally of the PIP-joint. The twin straps have a welded hook over one of the ends and can easily be cut in the other end for a custom fit.

Indications: After fractures, sprains or contusion injuries to finger or toes, hyper mobility or as prevention during sports activities.

15 mm width · NRX® Strap quality · Universal size

■	NRX1007-06	NRX® Strap 15 mm width · Black · 6-pack
■	NRX1007-30	NRX® Strap 15 mm width · Black · 30-pack

15 mm width · NRX® Strap +PLUS quality · Universal size

■	NRX1008-06	NRX® Strap PLUS 15 mm width · Black · 6-pack
■	NRX1008-30	NRX® Strap PLUS 15 mm width · Black · 30-pack

30 mm width · NRX® Strap quality · Universal size

■	NRX1009-06	NRX® Strap 30 mm width · Black · 6-pack
■	NRX1009-30	NRX® Strap 30 mm width · Black · 30-pack

30 mm width · NRX® Strap +PLUS quality · Universal size

■	NRX1010-06	NRX® Strap PLUS 30 mm width · Black · 6-pack
■	NRX1010-30	NRX® Strap PLUS 30 mm width · Black · 30-pack
■	NRX1010-60	NRX® Strap PLUS 30 mm width · Black · 60-pack

ARX® Twin-Finger Bandages

The ARX® material has been specially cut in 13 mm strips with a sewn loop on one side which is excellent to use on finger instabilities, fractures or neurological disorders when one finger has been injuried and it needs to be assisted by the other one. It can also be used on toes.

ARX® Twin Bandages for fingers and toes – 13 mm

■	EU448013	ARX® Twin Bandages · 13 mm width · 5-pack
■	EU448014	ARX® Twin Bandages · 13 mm width · 25-pack
■	EU448015	ARX® Twin Bandages · 13 mm width · 50-pack

NRX® HEAT TAPE & LOOP HEAT TAPE

Heat Tape for materials

The NRX® heat tapes are two heat-activated tapes that can be used to bond two materials together without stitching, but can also be used on the NRX® Strap for reinforcements to stabilize or restrict elasticity. They are easily applied by using a regular iron and a baking paper covering the tape. The recommended temperature for activation of the adhesive is 120–140 degrees Celsius and the setting time about 10 seconds. That might have to be adjusted depending on the surface of the material and the composition.

There are two qualities available – NRX® Heat Tape and NRX® Loop Heat Tape

NRX® Heat Tape

A thin nylon strap with heat activated glue that can be used for bonding materials together or to restrict elasticity on NRX® Strap. Available in 22 mm and 35 mm widths as well as a 30 cm width.

- EU490001 NRX® Heat Tape · 22 mm width x 10 m roll · Black
- EU490002 NRX® Heat Tape · 35 mm width x 10 m roll · Black
- EU490004 NRX® Heat Tape · 30 cm width x 1 m roll · Black

NRX® Loop Heat Tape

This quality has loop function on the top surface with the heat activated glue on the backside. It can be used to extend loop function to areas that difficult to stitch or to laminate with thermoplastic under on the NRX Strap for additional reinforcement and stability. Available in 50 mm and 30 cm widths.

- EU490090 NRX® Loop Heat Tape · 50 mm x 5 m · Black
- EU490091 NRX® Loop Heat Tape · 30 cm x 1 m · Black

NRX® Strap Accessories

The accessories of NRX® Strap are different micro hooks that have been specially developed for the use on the NRX® Strap. They are available in either pre-cut packs or complete rolls for larger clinic use.

NRX® Pre-cut Hook

The pre-cut hook packs are the same that are included into the NRX® Strap package and can be ordered separately. They are conveniently packed in a bag for immediate fitting.

EU446001	NRX® Hook · Black pre-cut 10 pcs/pack – fits 30 mm width
EU446002	NRX® Hook · Black pre-cut 10 pcs/pack – fits 50 mm and 80 mm width
EU446003	NRX® Hook · Black pre-cut 5 pcs/pack – fits 110 and 300 mm width

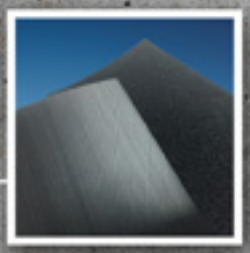
NRX® Low Profile Hook

The NRX® hook is also available in larger clinic dispenser pack that makes it easy to cut the desired length.

EU445060 NRX® Self Adhesive Hook · 50 mm x 25 m roll · Transparent

EU445061 NRX® Hook · 50 mm x 25 m roll · Black

EU445161 NRX® Hook Strong · 50 mm x 25 m roll · Black



NRX® Elastic Tension Hook

The NRX® Elastic Tension hook provides a high degree of stability and compression. Can be used for trunk and pelvic to compensate and stabilize the hip or lower part of the back. It's also excellent to use as compression reinforcement over any NRX® Strap application.

EU445070 NRX® Elastic Tension Hook · 50 mm x 25 m roll · Black

Cross-reference chart for material characteristics

NRX® Strap NRX Strap Colors

- Medium stability
- High stretch
- Skin friction surface

Used for all main applications where skin friction is needed.

30 mm x 3,1 m

- **EU446030** Black
- **EU446230** Royal Blue
- **EU446330** Burgundy Red

50 mm x 3,1 m

- **EU446050** Black
- **EU446250** Royal Blue
- **EU446350** Burgundy Red

110 mm x 3,1 m

- **EU446110** Black
- **EU446210** Royal Blue
- **EU446310** Burgundy Red

Se details of NRX® Strap on pages 4–5

NRX® Strap Neptune

- Medium-High Stability
- Medium-High restricted stretch
- Lined with Neptune™ on the inside

Can be used for applications that include dynamic extension/flexion of joints. Has a lower skin friction effect than NRX® Strap.

30 mm x 3,1 m

- **EU452030** Black

60 mm x 3,1 m

- **EU452060** Black

120 mm x 3,1 m

- **EU452120** Black

Se details of NRX® Strap Neptune on page 6

NRX® Strap Double

- Medium-High stability
- Medium-restricted stretch
- Double sided loop

Used as anchor over the pelvic or rotator strap. Can also be used on the trunk if no skin friction is needed.

30 mm x 3,1 m

- **EU447030** Black

50 mm x 3,1 m

- **EU447050** Black

110 mm x 3,1 m

- **EU447110** Black

300 mm x 3,1 m

- **EU447300** Black

Se details of NRX® Strap Double on page 7

NRX® Strap PLUS

- Firm stability
- No stretch
- Skin friction surface

Used as reinforcement on the regular NRX® Strap to enhance stability.

30 mm x 3,1 m

- **EU449030** Black

50 mm x 3,1 m

- **EU449050** Black

80 mm x 3,1 m

- **EU449080** Black

110 mm x 3,1 m

- **EU449110** Black

Se details of NRX® Strap PLUS on page 8

ARX® Strap

- Medium stability
- Low stretch
- Microfiber inside
- Self attaching

Can be used for any extremity joints as a light support and protection.

30 mm x 3,1 m

EU448030
Black

50 mm x 3,1 m

EU448050
Black

110 mm x 3,1 m

EU448110
Black

Se details of ARX® Strap on page 10

SRX® Strap

- Medium stability
- Elastic and compressive
- Ventilating
- Self attaching

Can be used for compression and support for all extremities.

30 mm x 5 m

EU456030
Camo

80 mm x 5 m

EU456080
Camo

100 mm x 5 m

EU456100
Camo

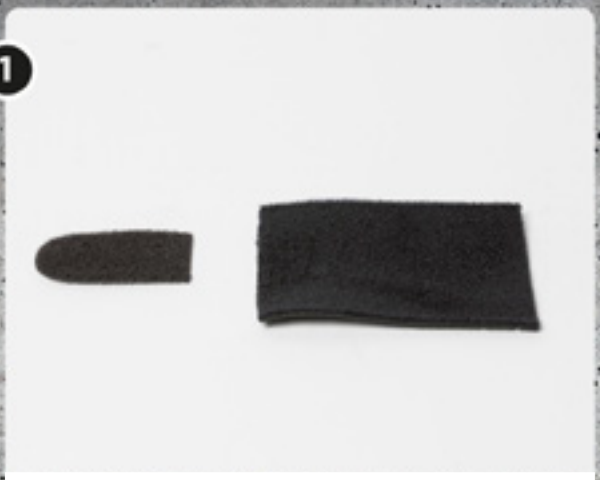
Se details of SRX® Strap on page 11

NRX® STRAP
– One strap, unlimited options!

NRX® Finger Extension Support

Material	NRX® Strap 50 mm + 2 hook tabs

1



Cut a the NRX® 50 mm strap in the circumference length of the finger plus 2 cm.

2

Apply the NRX® 50 mm strap around the finger with the fold on the dorsal side and attach with the hook part. For additional flexion support you can add another hook part on the palmar side of the strap. That will provide more flexion control.

3

If you want the PIP joint to be free, simply make a cut out for the joint in the NRX® strap. Trim the width of the hook so they fit the strips on the NRX® part.

4

Fold the NRX® material around the joint and secure it with the hook parts.

5

The hook part can be attached on the volar side for flexion support.

Care instruction

The NRX® Strap can be machine washed in 60 degrees C. Use a liquid detergent and a laundry bag. Remove the hook parts before washing. If the hook parts will remain in place, do not exceed 40 degrees C.

NRX® STRAP
– One strap, unlimited options!

NRX® Twin-Straps for fingers

Material	30 mm NRX® Strap or NRX® Strap PLUS + 2 hook pieces

1

Cut two strips in the desired width and approx 8 cm long. Adjust the width of the hook parts to the width of the strips.

2

Apply the first strap between MCP- and PIP joints. Use NRX® Strap PLUS if you want to protect against finger separation. Position the strap between the fingers and apply it around the finger.

3

Apply the second strap the same way but between the PIP- and DIP joints, and pull it in the opposite direction. Do not over-tighten.

4

Attach the hook part and test the stability. If needed adjust the strap tension

Care instruction

The NRX® Strap can be machine washed in 60 degrees C. Use a liquid detergent and a laundry bag. Remove the hook parts before washing. If the hook parts will remain in place, do not exceed 40 degrees C.

NRX® STRAP
– One strap, unlimited options!

NRX® Finger Flexion

Material	NRX® Strap 110 mm + 3–4 hook pieces Suitable braces: MR2270 DEX® Wrist Mid, MR2274 DEX® Wrist Short or MR2271 DEX® Wrist Long.

1

The finger part should be at least 6–7 cm wide depending on the circumference of the finger, the length should at least 10 cm long. The lower part should wrap around the finger with a slight overlap. If you need to provide flexion for more fingers, cut more parts according to the pattern.

2

Use the remaining part of the 110 mm material to cut the wrist cuff. Slid the end with two separate parts, this will make the application easier.

3

Apply the strap around the finger. You can either apply it between MCP- and PIP-joints or between PIP- and DIP-joints. Make sure that the application does not limit the flexion pull. Secure the application with two smaller hook strips.

4

Test the skin grip by pulling on the extension tab and make sure that the application does not slip. Pull the strap towards the wrist cuff and attach. A wrist brace with support for volar flexion will provide a higher flexion efficiency. We recommend using the DEX® wrist line as the hook can be directly attached to the surface.

5

If you need to involve more fingers, just continue to build a multiple application for the other fingers. Make sure to check distal circulation and skin condition of the finger during the application to not cause any edema or any skin reaction. After a few days it might be a good idea to clean the inside of the finger part with disinfection alcohol in order to remove residues on the surface.

Care instruction

The NRX® Strap can be machine washed in 60 degrees C. Use a liquid detergent and a laundry bag. Remove the hook parts before washing. If the hook parts will remain in place, do not exceed 40 degrees C.

NRX® Heat Tape and Finger Sleeve Application

Material

NRX® Heat Tape can be used together with our technical textiles to create custom finger sleeves for individual support and compression. We recommend using the following materials:

- EU490403 Neptune™ material with loop surface, 1,6 mm
- EU490404 Neptune™ material with Lycra surface, 1,2 mm
- EU490201 Neoprene 1 mm, Black
- EU490203 Neoprene 3 mm, Black
- EU452120 NRX® Strap Neptune 120 mm width

For the lamination we recommend to use the 22 mm NRX® Heat Tape. If you need to apply a hook over the lamination, we recommend using the NRX® Loop Heat Tape.

1

Take the distal and proximal circumference of the finger and make a symmetrical paper pattern of the finger shape. Make the length of the pattern twice the length of the finger to have enough material to adjust the length of the sleeve afterwards. Choose the appropriate material for your application and cut it to the pattern.

2

Cut 8–10 thin strips of NRX® hook that will be used to hold the construction together during the lamination. Then cut small pieces 8–10 mm in length of NRX® Heat Tape that should fit in between the hook strips.

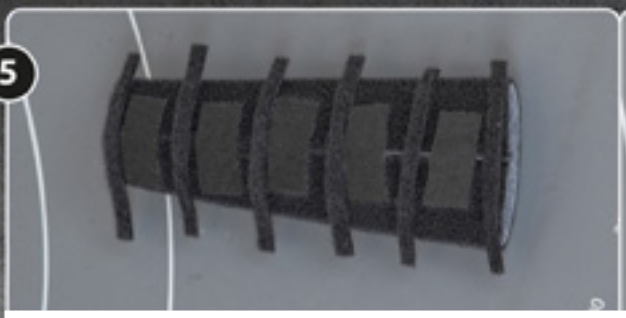
3

Start to create the circular shape by putting the material side-by-side and securing it with the hook strips. Try to keep the same distance between the strips, approx. 10–12 mm. Apply the NRX® Heat Tape pieces in between the strips. Make sure that they are not wider than the distance between the strips as this will make it difficult to remove the strips once laminated.

4

Position the tube on a heat resistant surface. Cover the material with a baking paper or Teflon sheet. Set the iron on medium heat (two dots) and press the NRX® Heat Tape for 10–15 seconds. Check that the edges has bonded. If not, repeat the process. Then let the material cool for 1–2 minutes before the second lamination.

5

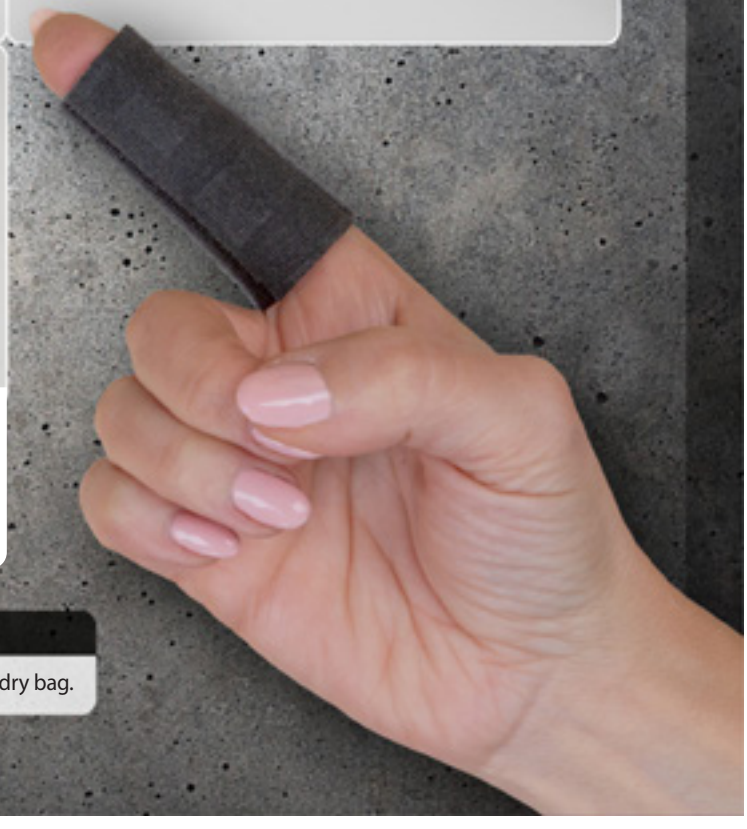


Remove the strips carefully. The heat tape must be completely cool. The tube is now held in place with the heat tape pieces.

6

Cut another piece of NRX® Heat Tape that covers the full length of the sleeve plus 1 cm on each side. Position it so it covers the heat tape pieces. Repeat the lamination with the iron and make sure to cover the tape with a baking paper or Teflon sheet. Press for 10–15 seconds then let cool.

7



Once the tube is laminated and completely cool you can trim the tape pieces sticking out from the edges. Try the sleeve on the finger. Trim the lower part to get a snug fit over the proximal part of the finger. Once you have reached an optimal fit you should trim the fingertip part to keep the tactile surface free.

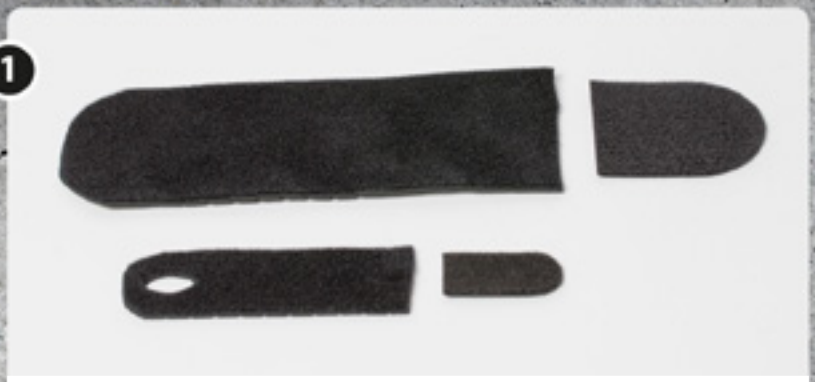
Care instruction

Machine wash in 40 degrees C, use a liquid detergent and a laundry bag.

NRX® STRAP
– One strap, unlimited options!

NRX® MCP Extension Assist

Material	NRX® Strap 30 mm and 50 mm + 2 hook tabs



1 Cut a 50 mm NRX® strap to fit the circumference of the wrist plus 2–3 cm. Then cut a 30 mm NRX® strap, approx 5–6 cm long. Round one of the ends and cut a small hole 3–4 mm from the edge. The hole should fit over the finger without restricting the blood flow.

2 Attach the 50 mm NRX® strap over the wrist and close with the hook tab.

3 Attach the strap onto the Manex Radial platform. Make sure that the MCP joints are neutrally aligned and not over extended.

3 Attach the hook part to the wrist strap. Adjust the length of the finger extension strap if needed. Test the functionality of the patient. If needed adjust the tension.

Care instruction

The NRX® Strap can be machine washed in 60 degrees C. Use a liquid detergent and a laundry bag. Remove the hook parts before washing. If the hook parts will remain in place, do not exceed 40 degrees C.

NRX® STRAP
– One strap, unlimited options!

NRX® Finger Extension Assist, Multiple joints

Material	NRX® Strap 50 mm or NRX Strap Neptune 60 mm, NRX Strap 30 mm + 2–3 hook pieces Suitable braces: MR2270 DEX® Wrist Mid, MR2274 DEX® Wrist Short or MR2285 Manex Radial.

1

This application works best with a stable wrist brace to affix the application on, see the suggestions above. The wider NRX® Strap should be used for the MCP-joints. Cut a 6–7 cm length and round the upper part. Then cut two circular holes approx. 10 mm from the edge. The holes should be large enough, not to disturb circulation. Then cut the finger strap from a 30 mm width, approx. 5 cm long. Round the upper edge and cut an oval hole 5 mm from the edge. Apply the hook parts.

2

Apply the 50 mm strap over the two fingers and make sure that the loops are close to the MCP joint. Pull carefully to align the MCP joints.

3

Apply the hook part onto the brace. Make sure that MCP-joints are neutrally aligned and not hyper-extended.

4

Apply the 30 mm NRX® Strap over the selected finger. It should be positioned just in front of the PIP-joint. Apply a light stretch without over-extending the joint and the fixate the hook slightly behind the MCP. Make sure that the finger hole is not to big as it will slip over the joint.

5

When correctly applied it should align the PIP joint with the MCP joint without over extending. Test the functionality on the patient. The straps should assist extension of the joints without limiting flexion.

Care instruction

The NRX® Strap can be machine washed in 60 degrees C. Use a liquid detergent and a laundry bag. Remove the hook parts before washing. If the hook parts will remain in place, do not exceed 40 degrees C.

NRX® STRAP
– One strap, unlimited options!

NRX® Thumb Abduction Strap

Material	NRX® Strap 30 mm and 50 mm + 3 hook tabs

1 Cut a 50 mm NRX® strap to fit the circumference of the wrist plus 2–3 cm and apply around the wrist and secure with the hook tab. Then cut a 30 mm NRX® strap, approx 8–10 cm long.

2 Apply the strap around the thenar eminence and secure with the hook tab.

3 Attach a hook tab to the other end and pull carefully to provide abduction support to the thumb.

4 Attach the the strap to the ulnar side for a more effective support. If needed adjust the length of the strap. The strap can also be attached on the dorsal part of the wrist strap if less abduction support is needed.

Care instruction

The NRX® Strap can be machine washed in 60 degrees C. Use a liquid detergent and a laundry bag. Remove the hook parts before washing. If the hook parts will remain in place, do not exceed 40 degrees C.

NRX® STRAP
– One strap, unlimited options!

NRX® Thumb Abduction For Activity

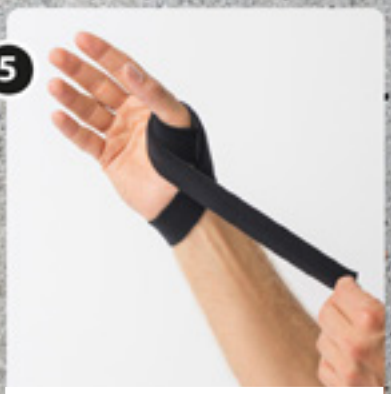
Material	NRX® Strap 30 mm or NRX® Strap Neptune 30 mm + 2 hook pieces

1 Cut a 35–40 cm long strip of the 30 mm NRX® strap. Attach the hook parts on each end of the strap. Apply the strap over the thenar eminence.

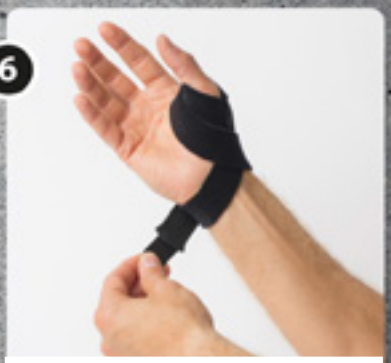
2 Attach the hook part on the dorsal part of the thumb, creating a sling.

3 Apply the strap one turn around the dorsal side of the hand and turn back to the thumb.

4 Take another turn around the thumb to support the base of the thenar eminence.



5 Stretch the NRX® strap slightly and run it over the dorsal side of the hand again.



6 Attach the strap on the volar side of the hand with the hook tab. The strap can also be shortened and attached on the dorsal side if preferred.

Care instruction

The NRX® Strap can be machine washed in 60 degrees C. Use a liquid detergent and a laundry bag. Remove the hook parts before washing. If the hook parts will remain in place, do not exceed 40 degrees C.

7 When correctly applied the patient should feel a slight abduction support from the sling.

NRX® Heat Tape Thermoplastic Thumb Strap

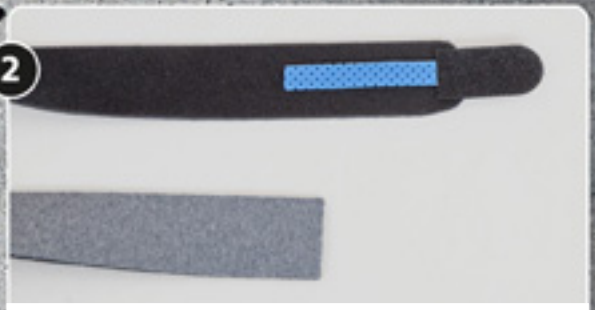
Material	NRX® Heat Tape or NRX® Loop Heat Tape can be used for the thermoplastic lamination. The Loop Heat Tape has a loop surface where the hook can be attached to. In this application we use a combination of: · NRX® Strap Neptune 30 mm · NRX® Heat Tape 22 mm or NRX® Loop Heat Tape · 1,6 mm Immo Plus Classic thermoplastic

T-TAPE COMPANY

1

Cut a 30 mm NRX® Strap Neptune material in the appropriate length. You can find more details in the NRX® Thumb Abduction Support instruction. 35–40 cm is usually enough for most thumbs.

2



Attach one of the hook tabs to the surface. Then cut a 10 mm wide strip of 1,6 mm Immo Plus Classic with a length of 6–7 cm. Try the thumb strap on the thumb and mark where the hook attaches to the strap. That is the maximum length lamination can go. Cut the thermoplastic strip so it ends 10 mm from the hook attachment point. Position it side by side to the hook part.

3

Cover the thermoplastic strip with the heat tape. Make sure that parts of the hook also gets covered. This makes application easier.

4

Position the material on a heat resistant surface. Cover the material with a baking paper or Teflon sheet. Set the iron on medium heat (two dots) and press the NRX® Heat Tape for 15–20 seconds. The thermoplastic will bleed through the material when ready.

5

When the baking paper or Teflon paper is removed the thermoplastic part should be visible through the heat tape.

Apply the thermoplastic around the thumb with a slight stretch, just over the thenar eminence, and close it below the end of the lamination. Wait for 15–20 seconds before continuing the wrapping. This prevents lint from the Neptune-lining to attach to the thermoplastic surface, as it can be sticky when hot.

Continue to the strap the thumb. Make sure to use a bit of stretch in the second layer covering the thermoplastic to get a snug fit. End by attaching the strap on the dorsal side with a hook.

It will take 3–4 minutes for the thermoplastic to set and the strap should be kept on the for complete time for the best result.

Once the thermoplastic has set the strap can be easily removed. There is no need to open the thumb part. Re-application is easily done by sliding the thumb into the loop.

Care instruction

Machine wash in 40 degrees C, use a liquid detergent and a laundry bag.

NRX® STRAP
– One strap, unlimited options!

NRX® Wrist for TFCC

Material	NRX® Strap 110 mm and 50 mm, alternatively NRX® Strap PLUS 50 mm + 5 hook pieces

1 Cut the wrist part from the 110 mm NRX® Strap. Start with an oval hole for the thumb, then trim the volar part. Slid the end into two straps. The reinforcement can be cut in either NRX® Strap 50 mm or NRX® Strap PLUS.

2 Apply the thumb through the hole. Stretch the material slightly and let the upper strap run over the DRU-joint and back over the volar side. Attach the strap on the dorsal side and run the second strap the same way.

3 Apply the reinforcement strap on the volar side so it will cover the DRU-joint. Position the hand in neutral and support it against the body to prevent pronation. Stretch the strap, cover the DRU-joint and attach it on the dorsal side of the hand.

4 The application can also be supplemented with a short supination strap to control deep pronation. Attach one end directly over the volar hook for the reinforcement strap. Run the spiral up over the arm. It can be attached on a separate anchor below the elbow or just attached circular.

Care instruction

The NRX® Strap can be machine washed in 60 degrees C. Use a liquid detergent and a laundry bag. Remove the hook parts before washing. If the hook parts will remain in place, do not exceed 40 degrees C.

NRX® Heat Tape and NRX® TFCC Wrist with DRUJ stability

Material

NRX® Heat Tape or NRX® Loop Heat Tape can be used to provide passive stability, compression and support for the DRU-joint.

- NRX® Strap 110 mm
- NRX® Heat Tape 22 mm or NRX® Loop Heat Tape

1

Cut the pattern according to the NRX® TFCC Wrist application. Apply the construction on the patient and mark the DRU-joint position with a small hook part. Use NRX® Heat Tape 22 mm or cut an NRX® Loop Heat Tape in 22 mm width. Make sure the angle of the two straps covers the DRU-joint marking. Then remove the hook marking before lamination.

2

Position the material on a heat resistant surface. Cover the material with a baking paper or Teflon sheet. Set the iron on medium heat (two dots) and press the NRX® Heat Tape for 10-15 seconds. Check that the edges has bonded. If not, repeat the process. Then let the material cool for 1–2 minutes before application.

3

Apply the construction once the reinforcement is cold. Check that the V-shape supports the TFCC ligament complex and the DRUJ.

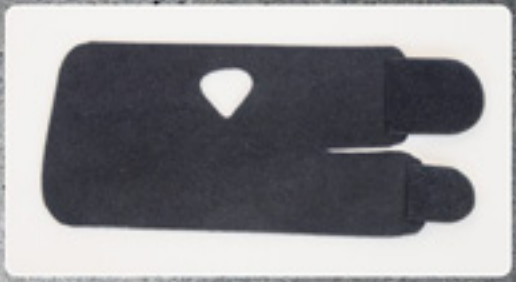
Care instruction

Machine wash in 40 degrees C, use a liquid detergent and a laundry bag.

NRX® Bilateral Wrist

Material	120 mm NRX® Strap Neptune + 2 hook tabs

This wrist model can be used bilateral. Depending on how you cut it, the closure can go either ulnar-dorsal or ulnar-volar. Start by cutting a thumb hole in the center of the material, about 1 cm from the edge. The closure straps can be cut so the distal one is slightly wider than the proximal one. A wider hook can be applied on the distal strap for more wrist stability.



Ulnar-Dorsal Closure

Position the thumb through the hole. Make sure that the hole is large enough not to disturb the movement of the thumb.

Close the distal strap and attach the hook on the dorsal side. You might have to trim the length of the strap to get the specific support that you need.

Last close the distal strap and attach on the dorsal side. This application can be beneficial if you want to provide support in wrist extension.

Ulnar-Volar Closure

Position the thumb through the hole. Make sure that the hole is large enough not to disturb the movement of the thumb.

The closure will be attached onto the volar side. Make sure that you cut the length of the distal strap and hook so the attachment does not interfere or disturb the thumb.

The hook should end 10 mm from the thumb hole to not cause discomfort. Trim the strap if the hook ends up closer. Then close the proximal strap.

Care instruction

The NRX® strap can be washed in 60 degrees machine wash with a liquid detergent. Always use a laundry bag. Remove the hook parts before washing and let air dry.

The closure will be attached onto the volar side. Make sure that you cut the length of the distal strap and hook so the attachment does not interfere or disturb the thumb.

NRX® STRAP
– One strap, unlimited options!

NRX® Supination Assist

Material	NRX® Strap 50 mm or NRX® Strap Neptune 60 mm + 2 hook pieces

1 Start by cutting approx. 100 cm length of the strap.

2 Cut down the sides of one end of the strap so its 25–30 mm wide.

3 Trim the hook part so it fits the width of the end and attach it.

4 Attach it around the thumb with support over the thenar eminence.

5 If possible, position the hand and arm in a neutral position, stretch the NRX® strap slightly and wrap it around the lower arm with 5 cm in between the strap turns. Make sure that the compression is even and not too tight.

Care instruction

The NRX® Strap can be machine washed in 60 degrees C. Use a liquid detergent and a laundry bag. Remove the hook parts before washing. If the hook parts will remain in place, do not exceed 40 degrees C.

6

When reaching the elbow crease, apply the strap from the base of the ulnar side and pass over the crease. Then apply the strap over the biceps. If you are using an ErixThree shoulder brace to control the shoulder, you might attach the strap higher onto the shoulder brace surface.

7

When the strap is applied correctly it should provide a dynamic supination of the wrist and lower arm.

8

If you need a dynamic extension of the wrist, cut a 30 cm long strap of the NRX® 30 mm. Attach a hook part in each end. Apply one end onto the radial side of the surface of the first turn on the lower arm.

9

Let the strap run under the MCP joints and attach it onto ulnar side of the second or third turn. The attachment can also be positioned on the radial side for a higher ulnar extension effect. To prevent the strap from separating, a hook part can be attached to hold them together.

10

When correctly applied the patient will get a dynamic extension effect in combination with supination assist.

NRX® STRAP
– One strap, unlimited options!

NRX® Supination Assist MCP Anchor

This is an alternative application to the NRX® Supination Assist, keeping the thumb completely free.
For details how to cut the strap, refer to the NRX® Supination Assist instruction.

Material	50 mm NRX® Strap or 60 mm NRX® Strap Neptune + 2 hook tabs 30 mm NRX Strap + 1 hook tab

1

Cut the 30 mm NRX strap and apply it circular around the MCP joints. Make sure that the anchor is securely attached and does not disturb circulation.

2

Attach a hook to the narrow cut part of the 50 mm strap. The hook can be positioned either on the dorsal part of the anchor, close to MCP II or III, or on the volar part for more control. You might adjust the position after you have completed the application.

3

Run the strap over the ulnar part of the palm, directing it close to the DRU-joint. Then continue to strap the arm with an even tension, turn by turn. Make sure not to over-stretch the material. You might passively position the arm in supination for more support during the application, rather than stretching the strap.

Continue 2–3 turns around the lower arm. Run the strap over the medial epicondyle and over the elbow crease, then up onto the biceps. A light pressure in the elbow crease can promote passive extension of the elbow.

Attach the hook over the biceps. Evaluate the effect on the patient. If more supination assist is needed, you might adjust the strap position on the MCP anchor.

Caring instructions

The NRX® Strap can be machine washed in 60 degrees C. Use a liquid detergent and a laundry bag. Remove the hook parts before washing. If the hook parts will remain in place, do not exceed 40 degrees C.

NRX® STRAP
– One strap, unlimited options!

NRX® Strap Epicondylitis

Material	NRX® Strap 110 mm, NRX® Strap PLUS 80 mm + 5 hook pieces

1

Cut the 110 mm NRX® Strap into a 80–90 mm wide strap as the anchor. Round one side and slid the other side into two straps. Cut the reinforcement strap from the 80 mm NRX® Strap PLUS. Slid it in the middle but keep it joined on the opposite side. Attach the larger hook over the joined side and two hooks on the straps.

2

Attach the strap around the arm. The strap should be positioned about 4–5 cm below the elbow crease and should cover the largest part of the extensor muscles.

3

Lateral displacement

Medial displacement

For the dynamic displacement reinforcement you can choose either lateral or medial displacement. Generally lateral displacement can be more effective in reducing pain on lateral epicondylitis but the effect is individual. You might try both applications and evaluate them functionally on the patient before choosing either of them. See 4A and 4B on next page.

Also make sure to control wrist extension. The TFCC wrist with a dorsal extension support can be a good alternative.

4A

Lateral displacement

Apply the NRX® Strap PLUS reinforcement over the medial part of the anchor. Apply tension and pull the first tab, then apply the second tab. Re-adjust the tension if you need more support.

4B

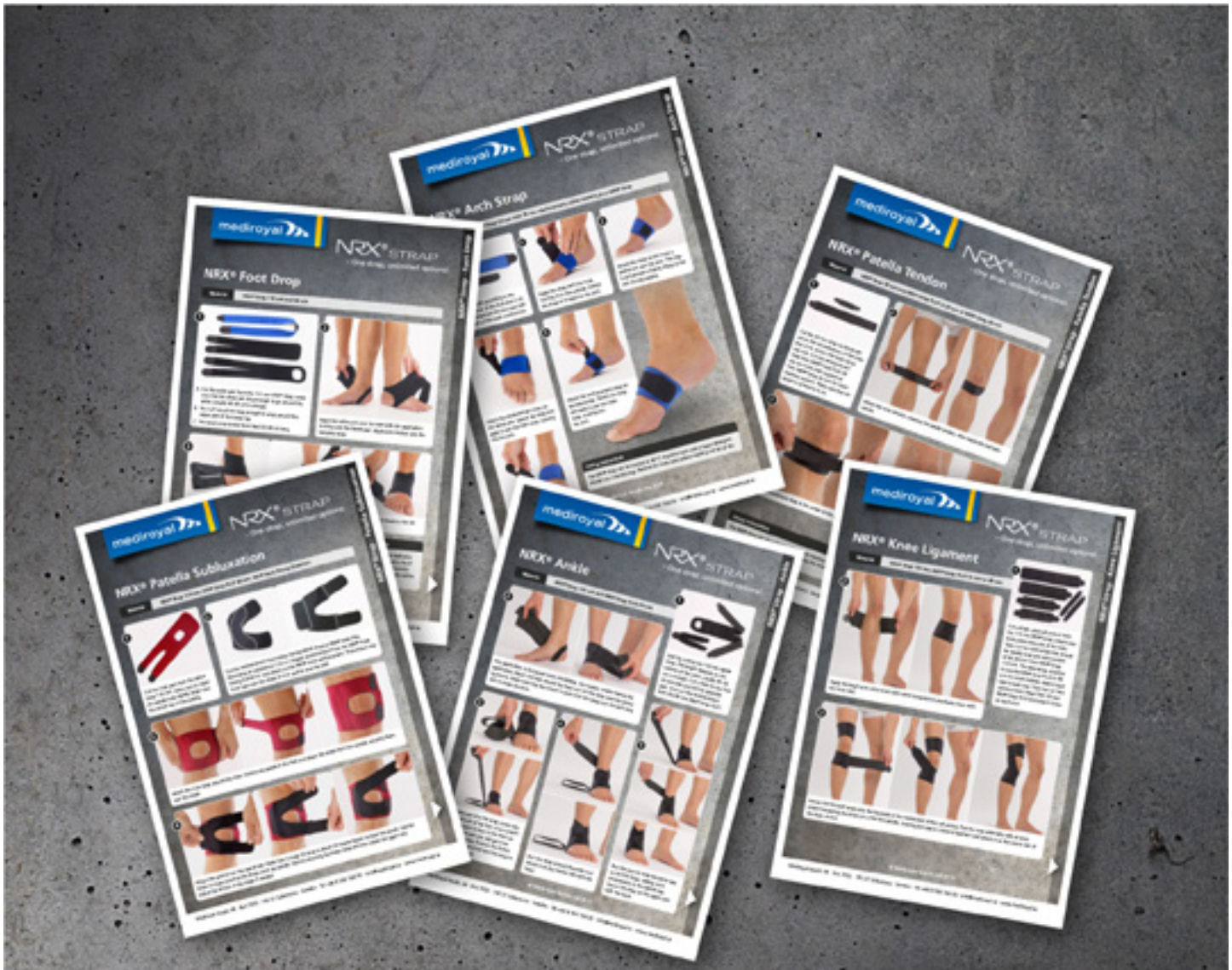
Medial displacement

Apply the NRX® Strap PLUS reinforcement over the lateral part of the anchor. Apply tension and pull the first tab, then apply the second tab. Re-adjust the tension if you need more support.

For further pressure over the extensor muscles you might put 2–3 pcs of the pre-cut hook parts directly under the reinforcement strap in order to receive a more distinct support.

Care instruction

The NRX® Strap can be machine washed in 60 degrees C. Use a liquid detergent and a laundry bag. Remove the hook parts before washing. If the hook parts will remain in place, do not exceed 40 degrees C.



You can find more information and NRX® Strap applications for both upper and lower extremity on our website.

– Scan the QR code to go directly to the archive of NRX® Strap instructions!

Orthoses are our passion

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