

## DUPUYTREN'S CONTRACTURE





## *World leader in splinting products for the treatment of Dupuytren's contracture*

**Dear customers,**

in your hands you are holding our new catalogue containing our product range for Dupuytren's disease. It has also been designed again this time - and more so than ever - so that it is not only of interest for doctors and suppliers but mainly also for the affected patients.

By now, we have sold approx. 15,000 models worldwide.  
Naturally, we also receive feedback from our customers.

We take critical comments very seriously and examine the possibility to incorporate your wishes and suggestions in our product developments and/or further developments.

The vast majority of feedback received is positive.

This of course pleases us and strengthens our efforts to provide you with high quality products.

We often receive questions from patients which we are very happy to answer. However, some questions, just like some complaints, can also be attributed to incorrect usage.

Of course, we then ask ourselves what WE can do to prevent such incorrect usage and clarify any uncertainties for you in advance.

For this reason, we have compiled and answered the most important or most frequently asked questions and commonly encountered incorrect usage in this edition of our catalogue.

Perhaps you can also find the answer to YOUR question here.

And if not, we are of course always happy to provide further information.

Best regards from Heiligkreuzsteinach

Your FixxGlove® Team

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# DUPUYTREN'S CONTRACTURE

## The disease - definition

(Source: Wikipedia | Link: [http://en.wikipedia.org/wiki/Dupuytren's\\_contracture](http://en.wikipedia.org/wiki/Dupuytren's_contracture))

Dupuytren's contracture (also known as morbus Dupuytren, Dupuytren's disease or palmar fibromatosis) is a fixed flexion contracture of the hand where the fingers bend towards the palm and cannot be fully extended (straightened). It is named after Baron Guillaume Dupuytren, the surgeon who described an operation to correct the affliction in Paris in 1832. The causes of this disease are still unknown. The ring and the little finger are the fingers most commonly affected.

(Source: A. Meinel in Dupuytren's Disease and Related Hyperproliferative Disorders, Springer 2012)

Dupuytren's Disease affects the soft tissue of palm and fingers. In a healthy hand this tissue under the skin is soft. Affected by the disease it hardens and loses its flexibility, which is a prerequisite for the free mobility of the fingers. The connective tissue conglomerate of newly formed and preexisting tissue in palmar fibromatosis can no longer be expanded. As a result, it prevents extension of the affected fingers. Symptoms of Dupuytren's disease usually include lumps and pits within the palm, sometimes reaching far into the fingers. The typical clinical picture with bent fingers is called flexion contracture. Depending on the degree of the flexion the disease can be very disturbing. As long as no additional diseases are involved - e.g. tenosynovitis - there are usually no complaints about pain.

**Important to know:** The Dupuytren finger contracture is not the result of tissue contraction but of a loss of mobility in the compressed and folded soft tissue lying above the flexed fingers.

## Who is affected?

Most commonly affected are men above 40 but according to our experience women are also affected quite frequently. Morbus Dupuytren can also occur in young people; in this case, however, it usually takes a more aggressive course. In Germany, the estimated number of patients is 1.3 to 1.9 million; about 50% of the patients is showing symptoms on both hands.

## Treatment options (A. Meinel)

The oldest treatment is simply cutting away the fascia with a knife (**fasciotomy**). This method was used in England and in France around the turn of the 18th to the 19th century. However, the cutting out of thickened tissue sections was not long in coming - and with the spread of anaesthesia, the surgical procedures were very quickly also extended as a precaution to the healthy connective tissue of the hand (**total fasciotomy**). However, as the hoped for success failed to materialise, smaller interventions limited to the diseased tissue have been considered for more than 50 years (**limited fasciotomy**). The so-called **percutaneous needle fasciotomy (PNF)** was developed in France more than 30 years ago, where the vascular tissue fixing the bent finger is perforated and cut through the skin by using a needle. PNF is today the smallest and most gentle intervention, is performed under local anaesthetic and includes the shortest convalescence. The risk spectrum of PNF is very small and corresponds to the risk spectrum for a first surgical procedure.

The **enzyme injection ("collagenase therapy")** method in its current form was developed in the USA.

With this method, an enzyme (clostridial collagenase) is injected in the advanced stage of Morbus Dupuytren into the Dupuytren cord that then partially dissolves this.

**Radiotherapy** is a non-invasive method that can be used in the early stage.

The above list does not make any claim for completeness. There are definitely **other possible types of therapy**.

However, **conservative measures** such as ointment dressings, medicines, physiotherapy or massages have no prospect of success according to Wikipedia.

# FixxGlove®

## The problem

Regardless of the chosen treatment option, they all have one thing in common: The disease has high recurrence rates and returns in most cases after a couple of months or years. Another surgical procedure may become necessary, a rather unpleasant experience for those affected.

## THE solution

As a measure to postpone the recurrence, hand surgeons generally recommend splinting during the night. Until recently, however, there were no standardized solutions on the market, and splints were made individually, if at all.

**FixxGlove® is worldwide the first standardized night splint - what's more, it is highly accepted by patients.**

Patient compliance is essential for the therapeutical success.

**After all, what's the use of the best splint if it's not worn?**

## Indications

- \* Prevention of recontracture of fingers following treatment (surgery/needle fasciotomy) of metacarpophalangeal and interphalangeal joints
- \* Thickening of the fascial tissue typical for Dupuytren's disease before the cord-like formation of contractile bands

## Therapeutic effect

- \* Comfortable splint fixation of fingers during the night
- \* Skin-compatible finger immobilization

## Further information

A. Meinel originally had **the idea of a three-finger glove-type splint** with a zip on the palm.

We took up the concept of a "second-skin splint" and realized it in this product. Today we are offering 4 varieties of the product.

**For further information** about our product, the disease, treatment options and other information we recommend our homepage [www.fixxglove.com](http://www.fixxglove.com) as well as the following website: [www.dupuytren-online.info](http://www.dupuytren-online.info) - the official website of the International Dupuytren Society

Other websites with information about morbus Dupuytren may be found on the Internet, often published by experts on the subject.

Although we can recommend most of these websites, we have to distance ourselves from these contents for legal purposes. We do not accept any liability for contents on these websites.

# FixxGlove®

## FixxGlove® *super plus* (item no. 374)

Finger orthosis for night splinting in morbus Dupuytren



### Indications

- \* Prevention of recontracture of fingers following treatment (surgery/needle fasciotomy) of metacarpophalangeal and interphalangeal joints
- \* Thickening of the fascial tissue before the cord-like formation of contractile bands

### Therapeutic effect

- \* Comfortable splint fixation of fingers during the night
- \* Skin-compatible finger immobilization

**FixxGlove® *super plus*** is made of washable spandex material. In this model the splint designed for three digits is palmar (on the inside of the hand). It also features an intelligent pull system to take the glove off more easily. Velcro® strip system for easy removal of the supporting splint.

The adjustable aluminium splint can be adjusted to the individual needs.

### Material:



- \* elastic spandex on the back of the glove to ensure optimal fit
- \* fingers are made of hard-wearing Japanese synthetic leather with holes to provide for ventilation
- \* ventilated palm area
- \* washable at 30° (remove splint first)
- \* The splint is made of an adjustable aluminium plate with anti-bacterial plastic coating.

### Measurement



U = circumference metacarpus (without thumb)

### Sizes

Size	XS	S	M	L	XL	XXL
U (in cm)	< 18	18 - 20	20 - 23	23 - 25	25 - 27	> 27

# FixxGlove®

## **FixxGlove® classic plus (item no. 372)**

Finger orthosis for night splinting in morbus Dupuytren



### **Indications**

- \* Prevention of recontracture of fingers following treatment (surgery/needle fasciotomy) of metacarpophalangeal and interphalangeal joints
- \* Thickening of the fascial tissue before the cord-like formation of contractile bands

### **Therapeutic effect**

- \* Comfortable splint fixation of fingers during the night
- \* Skin-compatible finger immobilization

**FixxGlove® classic plus** is made of washable spandex material.

In this model the splint designed for three digits is dorsal (on the outside of the hand).

It also features an intelligent pull system as well as a zip

in the palm of the hand for taking off the glove more easily.

Velcro® strip system for easy removal of the supporting splint.

The adjustable aluminium splint can be adjusted to the individual needs.

### **Material:**



- \* elastic spandex on the back of the glove to ensure optimal fit
- \* fingers are made of hard-wearing Japanese synthetic leather with holes to provide for ventilation
- \* ventilated palm area
- \* washable at 30° (remove splint first)
- \* The splint is made of an adjustable aluminium plate with anti-bacterial plastic coating.

### **Measurement**



U = circumference metacarpus (without thumb)

### **Sizes**

Size	XS	S	M	L	XL	XXL
U (in cm)	< 18	18 - 20	20 - 23	23 - 25	25 - 27	> 27

# FixxGlove®

## **FixxGlove® classic (item no. 371)**

Finger orthosis for night splinting in morbus Dupuytren



### **Indications**

- \* Prevention of recontracture of fingers following treatment (surgery/needle fasciotomy) of metacarpophalangeal and interphalangeal joints
- \* Thickening of the fascial tissue before the cord-like formation of contractile bands

### **Therapeutic effect**

- \* Comfortable splint fixation of fingers during the night
- \* Skin-compatible finger immobilization

The 'old-time classic' of the **FixxGlove®** product family.

The first model of the series is made of a comfortable (non-washable) leather material.

Made for three digits, with a dorsal splint and zip for easier handling.

An- bzw. Ausziehen.

Velcro® strip system for easy removal of the supporting splint.

The adjustable aluminium splint can be adjusted to the individual needs.

### **Material:**



- \* Genuine natural leather
- \* Internal cotton padding on the splint side
- \* Hygienic and stain-resistant
- \* Skin-friendly
- \* Non-washable, leather cleaning at the dry cleaner's (remove splint first)
- \* The splint is made of an adjustable aluminium plate with anti-bacterial plastic coating.

### **Measurement**



U = circumference metacarpus (without thumb)

### **Sizes**

Size	S	M	L	XL
U (in cm)	< 20	20 - 23	23 - 25	> 25

# FixxGlove®

## FixxGlove® V super plus (item no. 378)

Finger and thumb orthosis for night splinting in morbus Dupuytren



### Indications

- \* Prevention of recontracture of fingers following treatment (surgery/needle fasciotomy) of metacarpophalangeal and interphalangeal joints
- \* Thickening of the fascial tissue before the cord-like formation of contractile bands

### Therapeutic effect

- \* Comfortable splint fixation of fingers during the night
- \* Skin-compatible finger immobilization

**FixxGlove® V super plus** is made of washable spandex material. This orthosis has got two separate splints. One three digit splint for the three exterior fingers as well as one **V splint** for thumb and forefinger. It also features an intelligent pull system to take the glove off more easily. Velcro® strip system for easy removal of the supporting splints. The adjustable aluminium splints can be adjusted to the patient's individual needs.

### Material:



- \* elastic spandex on the back of the glove to ensure optimal fit
- \* fingers are made of hard-wearing Japanese synthetic leather with holes to provide for ventilation
- \* ventilated palm area
- \* washable at 30° (remove splint first)
- \* Both splints are made of an adjustable aluminium plate with anti-bacterial plastic coating.

### Measurement



U = circumference metacarpus (without thumb)

### Sizes

Size	S	M	L	XL
U (in cm)	18 - 20	20 - 23	23 - 25	25 - 27

# FixxGlove®

## 4 different *FixxGlove*® models - what exactly are the differences?

With the following tabular overview, we want to show you the differences and common features:



Characteristic / Model	classic	classic plus	super plus	V super plus
Effectiveness and indication	The same for all models			
Material	Leather	Synthetic	Synthetic	Synthetic
washable	X dry cleaner's only	✓	✓	✓
Splints	dorsal	dorsal	palmar	2 palmar splints
fingers:	small finger ring finger middle finger	small finger ring finger middle finger	small finger ring finger middle finger	small finger ring finger middle finger forefinger thumb
Zipper palmar	✓	✓	X	X
intelligent pulling system	X	✓	✓	✓
sizes available	4	6	6	4

# Frequently asked questions

## Can I also wear the *FixxGlove*® during the day to achieve a better / faster result?

No, we strongly advise against this.

The *FixxGlove*® is designed as a night splint. Why?

You can and should do therapeutical exercises during the day. When you are sleeping, you are relaxed and the fingers adopt a bent posture as a result. This can result in problems for stretching the fingers in the morning. The fingers should be splinted during the night to prevent this flexion.

Continuous splinting, i.e. during the night AND during the day can have a detrimental effect as the finger joints may slowly stiffen.

## How long does it take by wearing the *FixxGlove*® until my fingers are completely straight again?

The fingers are also often not 100% straight after any surgery.

Many patients believe that the residual flexion can still be redeemed using the *FixxGlove*®.

Other patients believe that they can straighten the fingers solely by wearing the *FixxGlove*®, without any surgery.

A common misconception. The *FixxGlove*® is not a so-called redressing splint. This means that the purpose of the *FixxGlove*® is not to make bent fingers straight but to maintain the current state without any worsening of the current condition. **The so-called "obstetrician's hand" should be prevented; the splint should not exert any pressure.** The *FixxGlove*® slows the progression of the disease so that the first surgery or any follow-up surgery in the future is postponed.

It has in fact also been reported to us by patients that the disease progression could be stopped completely. However, that is not yet scientifically documented.

## Only one of my fingers is affected; why must I splint three fingers?

### Can I simply cut off the two not needed parts of the splint?

No, we also advise against this. There are two good reasons for a three-part finger splint:

Firstly, the three outer fingers are joined to each other via the same muscle cord.

If any of these three fingers is moved, the other two fingers want to move with it automatically.

All three fingers should be kept stretched to prevent the affected finger moving.

Secondly, we achieve the best stability with the three-part splint. This means that if you get a contracture during the night, the splint should be able to also counteract this contracture.

Because: **if the fingers are bent in the morning despite this, you also don't need to wear any splint.**

A single-part splint would not be strong enough for this. Because the splint at any thickness should also still be flexible enough that it can be individually contoured to the current situation of your fingers.

We have established that the combination of a three-part splint with the splint material used by us is most likely to meet these requirements.

It is flexible enough to be individually adjusted easily and at the same time strong enough to be able to counteract any contracture during the night.

And this also with high wearing comfort that results in very good patient acceptance.

**A splint that is unpleasant to wear and therefore not used cannot achieve any successes.**

## When will I be able to wear the *FixxGlove*® after any surgery?

After any so-called percutaneous needle fasciotomy (see also page 4), the *FixxGlove*® can and should be worn from as early as the following night. Important to know: the glove material is highly breathable, i.e. there is sufficient air at the treated places.

However, after any fasciotomy, the sutures should be removed and the wound healed before you wear the *FixxGlove*®, i.e. after approx. 2-3 weeks.

# Frequently asked questions

## How long should the *FixxGlove*® be worn?

We recommend wearing it for at least 3 months; 6 months is even better. If you experience unexpected problems caused by wearing the *FixxGlove*®, you should end the therapy with the *FixxGlove*® and consult the doctor handling your case.

We know from many discussions with patients that most patients over time develop a feeling what is best for them. It is frequently the case in practice that they no longer wear the *FixxGlove*® at some point. If they then notice that "something is moving again", they wear it again for a few weeks or months. And so on. However, we always recommend consultation with the attending doctor.

## Why is the *classic* model not washable?

The classic model is our first *FixxGlove*® model. We decided on this pleasant leather material based on considerations of comfort. But genuine natural leather cannot simply be washed. Special leather cleaning would be required that would probably not be worthwhile (keyword: costs). Therefore, we have launched the *classic plus* model on the market. It is technically identical to the *classic* model; however, it is made of an also pleasant yet washable synthetic material.

## Which model is actually more suitable - the splint on the back of the hand or in the palm?

Both models have their place. Every person perceives it differently.

Some people are somewhat more sensitive at the knuckles; the splint on the back of the hand ( *classic* and *classic plus* models) could then cause pressure points on the knuckles. In these cases, using the *super plus* model would be the better choice.

Most patients do not have these problems.

For other patients, the fingertips become cold because the splint in the palm restricts the blood circulation in the fingertips.

Or it is sensed as unpleasant because the splint in the palm presses on the scars.

In both these cases, we would advise the *classic plus* model.

Yet both these indicated problems have only become known to us as individual cases.

Each patient should finally decide for himself / herself which model he / she finds more pleasant.

## Would the glove not have to protrude somewhat further over the wrist?

No. The intention is not to immobilize the wrist. It is merely to keep the fingers stretched.

Otherwise the hand should remain as mobile as possible. This is also the reason why we generally do not want to splint all 5 fingers. Insofar as they are not affected, thumb and index finger should remain free so that at least the so-called "pinch grip" is still possible at any time during the night without having to first remove the splint.

## I have Dupuytren's Contracture in the early stage; any surgery is not yet planned.

### Can I also use the *FixxGlove*® as a preventive measure?

Yes, that would be our advice for you. The sooner the *FixxGlove*® is worn, the better it is for the course of the disease. This is a disease that also recurs in most cases after any surgery (so-called "relapse").

However, a surgeon will not operate an indefinite number of times on your fingers. A stiffening of the fingers can be the result. In rare cases and with very aggressive progression, even amputations can be necessary.

So the time factor does not play an insignificant role in this disease. And we gain time by using the *FixxGlove*® as the progression of the disease is slowed down.

**The sooner you use the *FixxGlove*®, the better it is for you.**

# Frequently asked questions

## Which forms of therapy can the *FixxGlove*® be used for?

In general, the *FixxGlove*® can be used for any form of therapy. The use of the *FixxGlove*® is not dependent on your form of therapy.

Irrespective of whether you had a needle fasciotomy, a total or limited fasciectomy, radiotherapy, an enzyme injection ("collagenase therapy") or any other form of therapy. Also as a preventive measure before any therapy. The disease usually returns, regardless of the therapy, and the *FixxGlove*® maintains the status quo; so according to our knowledge, there is no form of therapy where the *FixxGlove*® should not be used.

## The splint must still be bent. Why is it not already pre-bent when shipped from the factory?

Every patient faces a different situation. Different fingers with different degrees of curvature are affected. Therefore, the splint must be individually bent for the respective situation. That is very easy and you do not need any tools. However, as we do not know your situation, we cannot already bend the splint before the delivery. The best way is to put the *FixxGlove*® on and then adjust the splint directly for the situation of your fingers. It would possibly be easier if a second person helps you.

## How do I measure correctly?

We need the circumference of the metacarpus to determine the correct size of the *FixxGlove*®. This means the circumference of your palm, i.e. without the thumb. It is important for the measurement that the hand is not bandaged. Also bear in mind that the hand can be somewhat swollen after surgery.

Therefore, it would be ideal to perform the measurement before surgery.



## My fingers are so bent that I cannot get them into the glove.

### What can I do?

The fingers are often not 100% straight even after surgery. Sometimes, they are even still very bent. This mainly depends on the starting situation of the fingers before the surgery.

It is possible that you simply cannot get the fingers into the glove.

In this case, you can still try to put on the glove without the splint already being applied and not apply the splint until afterwards. Nevertheless, it can be difficult to get into the glove. Particularly for the *super plus* model. We would advise you to first try the *classic plus* model.

If that also does not work, the *FixxGlove*® is actually not the appropriate aid for you. In this case, the only option is a splint individually made by an orthopaedic technician or hand therapist.

## Can I also use the *FixxGlove*® for other diseases?

We are repeatedly asked whether the *FixxGlove*® can also be used, e.g. for spasticity, gout or several other diseases.

However, we do not have a reliable answer to this. The *FixxGlove*® has been specially developed for the particular requirements of Dupuytren's Contracture. It has never been tested for its effectiveness for other diseases. Some have tried their luck but the attempt was hardly ever successful.

## How can I return the *FixxGlove*® ?

There is a return slip included with every delivery. If there is a reason for any return

- such as wrong size, wrong model, wrong order, wrong delivery, technical defect, other complaint - fill in the return slip. The top part relates to your details, the middle part to the product details and the reason for return. Do not fill in the bottom part.

It would be ideal if you include the original or copy of the delivery note and/or the invoice.

Then send everything back together. We will process the return as quickly as possible after receipt in accordance with your requirements and send you the replacement delivery or credit note.

**If you need assistance, we are happy to help you via telephone.**

# Frequently asked questions

## What is the best way to put on the *FixxGlove*® ?

For the *classic*, *classic plus* and *super plus* models, the splint should already be in the glove before putting it on. The splint should already be in the glove when it is delivered. If this is not the case, proceed as follows:

**Classic and classic plus:** Insert splint in the glove on the back of the hand so that the three finger parts of the splint are inserted in the pockets provided for them on the backs of the fingers of the glove. Insert the lower end of the splint into the previously opened pockets on the back of the hand and close the Velcro fastener so that the splint is fixed in the pocket. Open zip in the palm, slide hand into the glove and close the zip. Finished.  
Now do not forget to bend the splint according to the current situation of your fingers.

**Super plus:** Insert splint into the palm of the glove so that the finger parts of the splint are inserted in the pockets provided for them on the bottom sides of the fingers of the glove. Insert the lower end of the splint into the previously opened pocket on the palm and close the Velcro fastener so that the splint is fixed in the pocket. Open Velcro fastener on the back of the hand, slide the hand into the glove and close the Velcro fastener again. Finished.  
Now do not forget to bend the splint according to the current situation of your fingers.

**V Super plus:** This is the only model with 2 splints and therefore requires a somewhat different procedure. There is a three-digit splint like the *super plus* model and in addition a V-splint for the thumb and the index finger. If only your thumb and/or your index finger is/are affected, you can use the V-splint only and leave out the three-digit splint. You only need both splints if, as well as thumb and/or index finger, at least one of the other three fingers is affected. Insert the three-digit finger splint (if needed) into the glove and slide the hand into the glove as described above for the *super plus* model.

**Do not insert the V-splint as described below until now.** Open the flap on the fingertip of the index finger (Velcro), insert the index finger part of the V-splint into the pocket on the underside of the index finger on the glove so far that you can now also push the thumb part of the V-splint into the pocket on the underside of the thumb on the glove. Now push the lower part of the V-splint into the pocket provided for it on the ball of the thumb of the glove. Now you can close the flap on the fingertip of the index finger (Velcro).

Now adjust the tripartite splint and the V-splint to the current situation of your fingers. Finally, fix the V-splint in place using the two Velcro strips at the lower end of the index finger and on the thumb. Finished.

## Do you still have any other questions that have not been answered here?

Please contact us. We will be happy to answer your questions.





**FixxGlove® Ltd.**

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