

To you who will receive a T-Port®

# PATIENT INFORMATION



# T-Port® Patient information

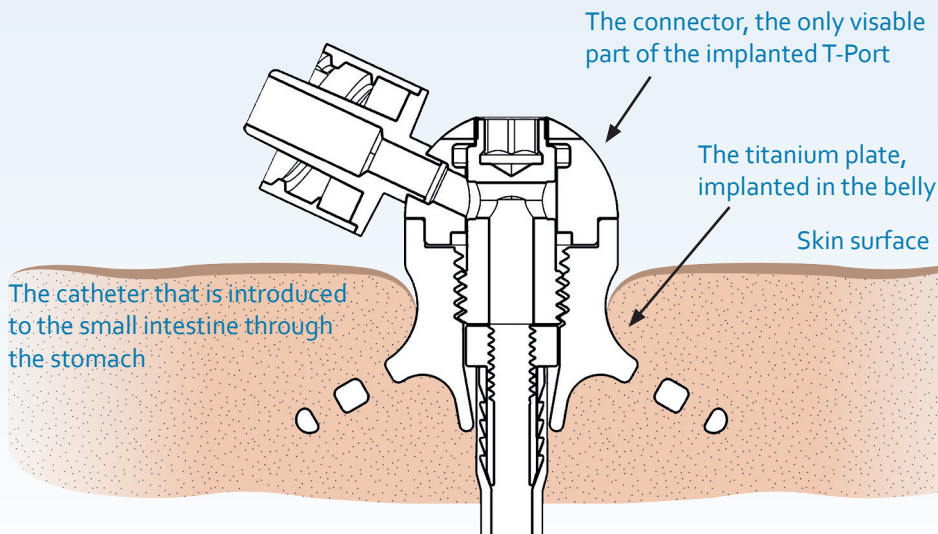
## What is a T-Port?

### Why this booklet

The purpose of this handout is to help you understand how it is to receive and live with the T-Port for delivery of Duodopa. If you have any questions after having read this book-let, please discuss them with your nurse or doctor, who can provide further information.

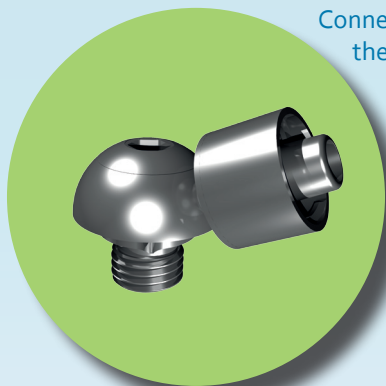
### Description of the T-Port

The T-Port is positioned in the upper belly. A titanium plate is implanted under your skin. It is attached to a connector that protrudes through your skin. Inside the port there is a catheter that leads to the small intestine through the stomach.

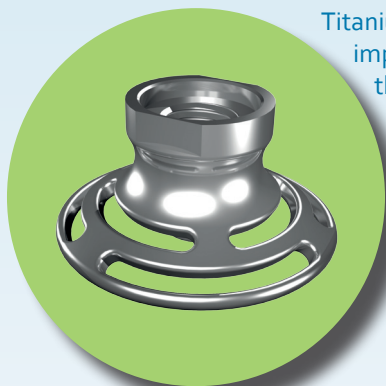


# To begin with

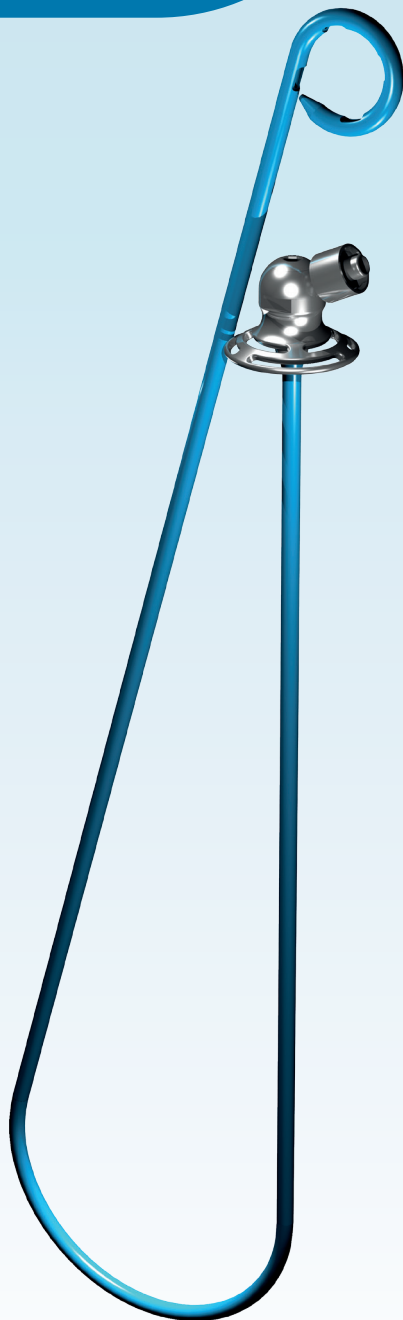
Connector outside  
the skin



Titanium plate  
implanted under  
the skin



Catheter tip po-  
sitioned in the  
small intestine

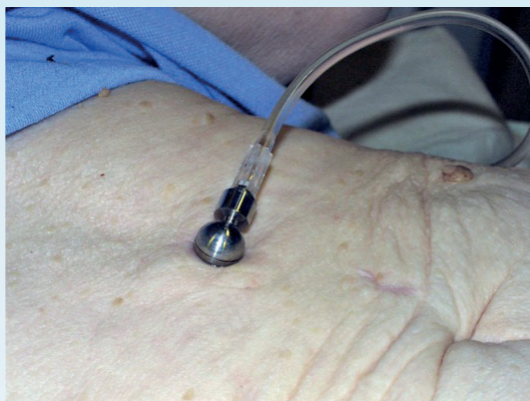


# T-Port® Patient information

## T-Port compared to PEG

### Design principle

The PEG forms a permanent direct channel from the skin into your stomach, through which the tube is passed. Since the T-Port is positioned in a pocket just beneath your skin, you will not have a direct open passage from skin to the stomach.



### Looks

The T-Port is a more aesthetic alternative. The external tube can be removed when Duodopa is not infused leaving only a small connector without any dangling tube on the outside of the skin.



A Parkinson patient with a T-Port and an external tub connected to the Duodopa pump.

# How does it compare

## Implantation

In contrast to the PEG/J-tube system that necessitates gastroscopy during insertion, the T-Port is positioned by means of X-ray guidance. This is more convenient for the recipient.

## Complications and problems

Clinical studies have shown that there are less complications with the T-Port compared to the PEG/J-tube. In particular tube dislodgment and leakage of gastric fluid are more rare.

## Life expectancy of the T-Port

The typical life time of a T-Port is between 3 to 5 years. The longevity of the T-Port is largely dependent on how often and well you clean the system. Other factors beyond your influence, such as the immune system, subcutaneous fat properties, and skin quality around the implant site, will also influence life expectancy. The PEG/J-tube system usually needs more frequent replacements, but has the advantage that it requires just a short period (a few days) of disruption of Duodopa treatment.

## Replacement

The PEG can be replaced with just a short period (a few days) of disruption of the Duodopa treatment. The T-Port has the disadvantage that it requires 4-6 weeks healing and during this period an alternative delivery method is required such as nasoneal delivery of Duodopa. If you find the longer disruption problematic you can switch to PEG at the time of replacement.

## T-Port implantation

### Preparation

You have to fast 12 hours before the implantation and 8 to 12 hours before the procedure you will drink a cup of Barium contrast to make it easier for the doctor to see the colon on x-ray. You can take medications and fluid up to 4 hours before the procedure. Prior to, or at the same day, your blood clotting is checked.

One to 2 hours before the implantation you will receive pain medication and during the implantation you will receive an infusion of antibiotics.

### Implantation

The implantation, which takes 1-2 hours, is performed at the x-ray department. You are awake during the procedure. Local anesthesia is provided so you should not feel any pain. The whole procedure is monitored under x-ray. The x-ray dose is harmless.

The procedure starts with placement of a thin tube through your nose to the stomach. The tube is used during the procedure to bring air into the stomach so that it can be punctured safely. Your skin is disinfected and the local anesthesia given.

The stomach is pulled up towards the belly using 1 or 2 so-called “anchor sutures”. A needle is inserted through the skin into the gas-filled stomach. This needle is used for placement of a guide-wire into the small intestine.



# Implant procedures

A pocket large enough to fit the T-Port will be created under your skin and the T-Port with the catheter is inserted over the guide-wire. The wound around the inserted T -port is finally closed with some stitches and a bandage is applied.

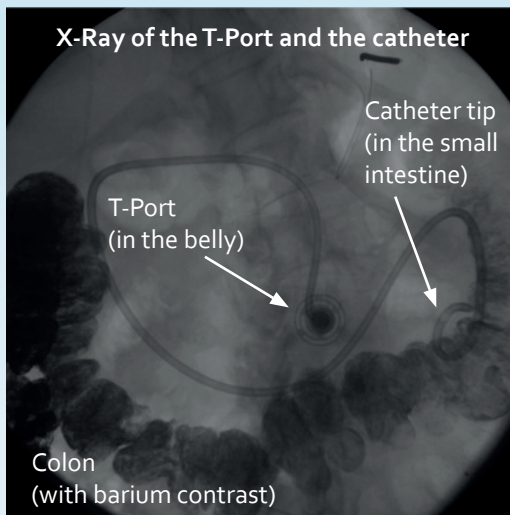
## Post operative care

After the implantation you will return to the ward. During the first 4-6 hours you will be observed for any signs of complications such as pain, bleeding and leakage. In case you experience pain you will be given pain relieving medication. It is usually possible to start drinking (water) 6 hours after the procedure and to start eating on the following morning. Your nurse will instruct you further on food and drink intake.

The Duodopa infusion can start immediately when you come to the ward.

## Leaving the hospital

You can leave the hospital when the Duodopa is trimmed to the correct dosage.



## The first months

### The first 2 weeks at home

During the first healing period, which normally takes 2 weeks, you shall follow the below instructions:

- » The bandage shall not be removed
- » The extension tube shall be fixated with tape and exchange should be avoided
- » Traction and rotation of the T-port should be avoided
- » You may shower but the bandage shall be kept dry. Your nurse will instruct you how this is best accomplished
- » When the Duodopa pump is disconnected the tube shall be plugged

It is normal to experience some pain during the first days. It can be relieved by intake of none prescriptive pain killer such as paracetamol.

If you experience pain that is not relieved with the painkillers, fever, leakage of Duodopa, blood or liquid in your bandage you should contact your nurse or doctor for consultation.

### Wound check

The bandage and skin sutures will be removed after approximately 2 weeks together with the anchor thread, that was used to pull up the stomach towards the belly.



# The healing period

## The 2<sup>nd</sup> to the 4<sup>th</sup> week

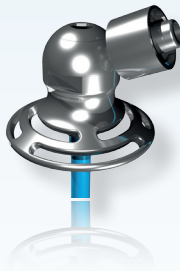
If the wound looks dry and normal there is no restriction on showering and there is no need for bandage. However, the T-Port is not yet fully fixated in the pocket and you should try to avoid traction and rotation. It is therefore important to continue the fixation of the extension tube with tape. If the tube must be changed, try to do it with minimal strain on the T-Port. If Duodopa leaks close to or in the wound, you should wash immediately.

The T-Port shall be carefully washed daily with water using a sponge or shower. Debris can be gently removed with an ear-stick.

## The 1<sup>st</sup> to the 3<sup>rd</sup> month

After 1 month your wound should be healed even if the T-Port is not fully fixated in the pocket. Morning and evening cleaning with water and soap and removal of debris is recommended. It is important that you dry the skin thoroughly after cleaning.

**At 3 months the T-Port should be fully incorporated and fixated**



## Living with the T-Port

### Daily life and activities

After 3 months, when the T-Port has stabilized, it should not hinder you in daily activities. There are no particular restrictions on what you can do. It is, however, important to cap the T-Port with a blind connector between the Duodopa infusions.

With a capped T-Port you will be able to shower or take a bath without covering the T-Port.

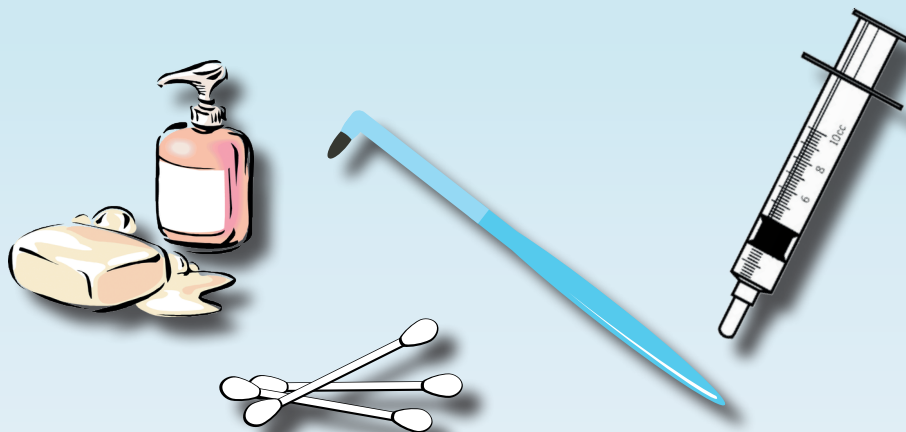
The T-Port is fastened in your belly and a direct strike on the T-Port, or a sudden jerk on the external tube may be painful. Except for the potential pain and discomfort, it is no danger for permanent damage. The T-Port connector and the catheter can be easily exchanged and trauma to the pocket will heal.

### Recommended cleaning procedures

For your comfort and the longevity of the T-Port it is important to clean the surrounding skin daily.

Even after the complete wound healing there will always be a small pocket between the T-Port and the skin (as shown in the Figure on page 12). This pocket can be compared with the natural gingival pocket around your teeth. In order to prevent inflammation it is important to keep this pocket clean from debris and other material as you do when you brush your teeth.

# Daily life and activities



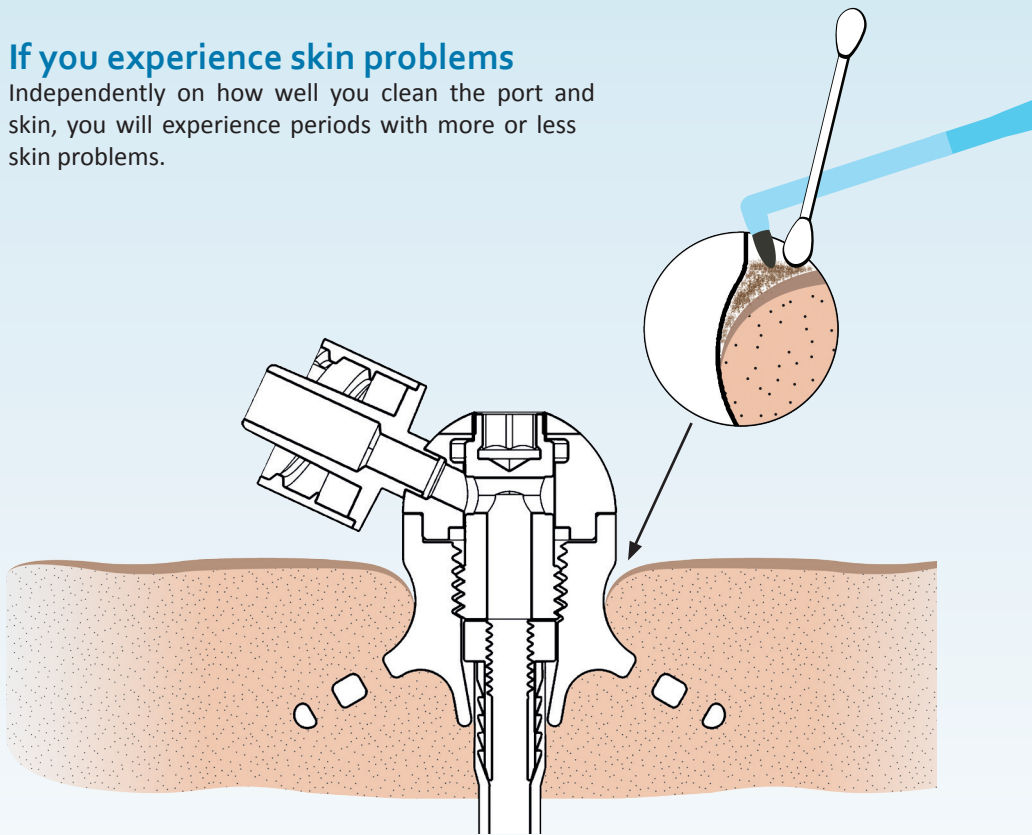
Make it a habit to clean the skin and the pocket around the port every morning and evening.

Cleaning is done with water and soap. It is important not only to wash the skin around the port, but also in the pocket itself. Use suitable tools such as ear stick or a small soft angled brush to make sure that you reach everywhere. When the cleaning is completed use a syringe filled with water to flush the pocket and the area around the port. Your nurse will show you how the cleaning is practically done and which tools that are available to you.

## Living with the T-Port


### If you experience skin problems

Independently on how well you clean the port and skin, you will experience periods with more or less skin problems.



# Daily life and activities

These problems are manageable and usually not disturbing. It should, however, be noted that progressive inflammation around the T-Port is the major reason for removal and exchange of a T-Port. It is therefore important to react quickly when problems arise.



Redness and slight tenderness are signs of an inflammatory reaction around the T-Port. This should be a reminder for you that there might be some remaining debris in the pocket that need intensified cleaning.

As soon as you have an impression that the skin problems takes hold (you are continuously red, irritated and have secretions around the port), you should seek guidance from your local nurse for a more aggressive skin treatment.

The nurse might recommend intensified cleaning with Chlorhexidine for 10-14 days, and sometimes local cortisone ointment. This can help to reduce the local inflammatory reaction, but at this stage you must be prepared that removal of the T-port might be needed in the near future.

If you experience intense redness, swelling, pus, pain, and fever it is most likely an infection and you should immediately contact your local nurse or doctor.

## Removal or exchange

### Removing the T-Port

Removing the T-Port is easy. The wound will heal and there will be no problems inside the stomach. There may be some scar tissue at the implant site.

Removal is done under local anesthesia and the wound is closed with stitches.

You might be given some antibiotics just before and after the removal. After the procedure you will return to the ward and for the first 4 hours you will be observed for any signs of complications such as bleeding or pain. Some medication may be needed to relieve your pain.

You can normally start drinking water after 4 hours and eating after 6 hours. Your nurse will instruct you further on food and drink intake. An alternative delivery of the Duodopa will be prescribed by your neurologists and can be started when you come to the ward.

It is normal to experience some pain during the first days, which can be relieved with regular none prescriptive pain killer such as paracetamol. If you experience pain that is not relived with the painkillers, fever, leakage of blood or liquid in your bandage you should contact your nurse for consultation.

The stitches can be removed after 14 days and the wound can be regarded as fully healed after 4-6 weeks.

# Nothing lasts forever

## Exchanging with a new T-Port

When the T-Port has been removed the pocket needs to heal before a new port can be inserted. The healing will take 4-6 weeks. During this period an alternative delivery method is required such as nasoneal delivery.

Once the pocket is healed a new T-Port can be inserted as described above in this booklet.

## Exchanging with a PEG

If you choose this option you can continue Duodopa treatment through your newly positioned PEG/J-tube.

The placement of the PEG is just like a standard PEG placement.



## Closing Remarks

### Where can I find further information

Please note that this booklet only contains information regarding the T-Port. Your Parkinson's team will provide you with proper information regarding all other aspects of your Duodopa treatment.

If you have any additional questions or concerns regarding the T-Port, you can always contact your ordinary nurse or doctor.



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