

# TAPE *tips*

*And Other  
Infusion Site  
Information*



**Medtronic**  
MINIMED

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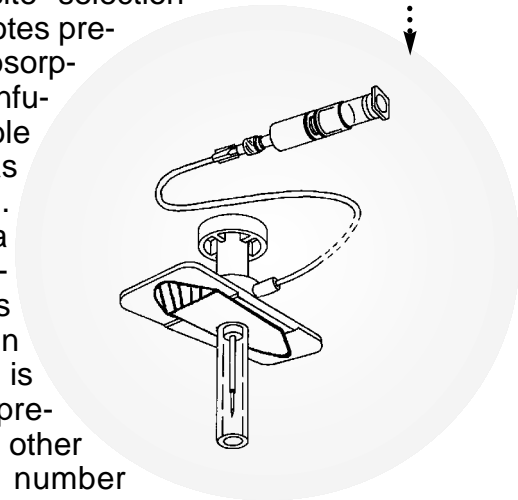
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**S**uccessful pump use depends on proper care and protection of the infusion site. The information in this booklet comes from longtime pump users and experienced healthcare professionals. It should help you successfully prevent or solve the most common problems experienced at the infusion site: skin irritation and poor "sticking" of tape. Information regarding problems related to site infections and insertion problems has been included as well. Even though these problems are far less common than irritation and tape issues, they can be serious for those who do have them.

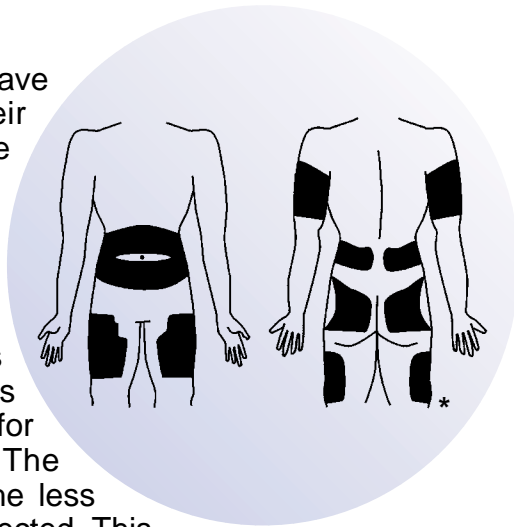
If you need more information about proper use of infusion sets and tapes your healthcare professional is a great source of help. You can also call MiniMed's Clinical Services at 800-826-2099 or 818-678-5555.

## The Basics Site Selection and Rotation

Proper infusion site selection and rotation promotes predictable insulin absorption and protects infusion sites from undesirable tissue changes such as hardening and bumps. The preferred body area for placement of the infusion set for pump users is the abdomen. Insulin absorption from this area is the fastest and most predictable, as compared to other body areas. A small number



of pump users who have used only their abdomen, however, are now reporting significant tissue changes and difficulty finding sites on the abdomen that still absorb well. The upper outer thighs and hips are both areas that also work well for most pump users. The more sites you use, the less often any one site is injected. This is your best assurance for maintaining good tissue absorption over the years for whichever body area you are using.



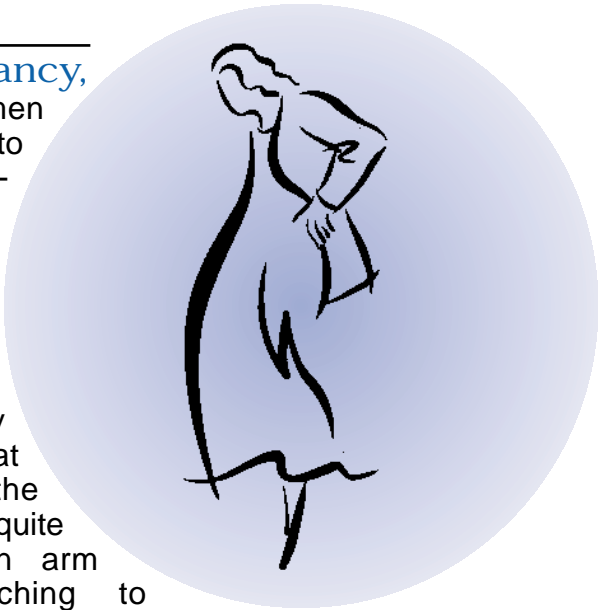
The exact site within the area should be changed each time the infusion set is changed. The new site should be at least 1" away from the previous site. Sites should be changed at least every 48-72 hours, or upon advice of your healthcare provider. Also, avoid sites under constricting garments, such as waistbands.

It is best to use the available sites in a predictable pattern: for example, starting at the upper right-hand corner of the abdominal area and then moving 1" to the left with each change until reaching the left-hand margin of the area. From there move down 1" to start a new row and move to the right in 1" steps, and so on. Following a predictable pattern assures that the longest-possible time will pass between uses of the same site. When selecting an infusion site, avoid the area within 2 fingers of the navel, surgical scars, or other scarring that you may have.

\* Site Chart courtesy of Fletcher Allen Health Care, Burlington, VT

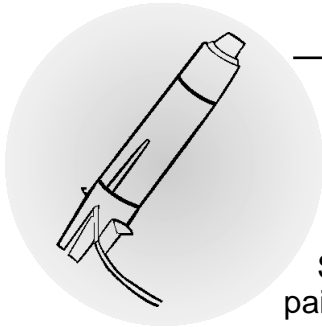
## During Pregnancy,

when the abdomen becomes too firm to pinch up subcutaneous tissue, the upper outer thigh or hip may be used instead. The upper arm is also an option, although many people find that dealing with the catheter tubing is quite awkward with an arm placement. Switching to these alternative sites may result in some changes in blood sugar control due to changes in the speed of insulin absorption. Consult with your doctor or diabetes educator if this happens. Infusion set and site should be changed at least every 48 hours during pregnancy. Your team may even want you to change your set every day as the pregnancy progresses. Be sure you know and follow the advice of your team.



## Tissue Changes May Impede Insertion

If skin or underlying tissue on the abdomen feels hard, solid or tough, you may have an area of "hypertrophy", or tissue buildup caused by injecting insulin over a long period of time into the same site. These sites should be avoided to give the damaged area time to heal. One month is a very conservative estimate of the time required for the tissue to return to normal. If you inject into these sites before the tissue has returned to normal, you may have poor or unpredictable insulin absorption, and you may aggravate the tissue trauma. If you have trouble inserting your infusion set into an area due to hardening of the tissue, use another ( softer ) site.



For some infusion set **Insertion Devices** models there are insertion devices to facilitate the insertion. The Sof-serter™ available from MiniMed, for example, is designed to make the Sof-set® insertion simple and virtually painless.

## Site Preparation

- Wash hands with soap and water.
- Avoid touching tip of the syringe/reservoir, the end of the infusion set or the top of the insulin bottle.
- Clean the infusion site with an antiseptic solution or a skin prep.
- The cleansed area should be the size of a tennis ball. Allow this to dry naturally.
- Insert infusion set according to directions.

## Essentials

.....► The following products are preferred by many pump users and healthcare professionals and are part of the array of tools utilized to ensure a successful infusion site experience. Most of these products are obtained through MiniMed's Sales Department at 800-843-6687, or by visiting our On-line Store at [www.minimed.com](http://www.minimed.com).

Basics  
cont.....

## Antiseptics

A small percentage of pump users are prone to developing infections at the infusion site. If you begin to have problems with site infections, adding an antiseptic to your site preparation routine is advisable.

### I.V. Prep

- Antiseptic wipes individually packaged, in boxes of 50
- Will also make tape "stick better"
- Contains 70% Isopropyl Alcohol
- Contains Triclosan, an antibacterial agent

### Hibiclens®

- Antibacterial wash
- Effective against a wide range of microorganisms

### Betadine®

- Topical antimicrobial agent
- Forms protective film

### BZK Wipes

- Antiseptic towelette
- Contains Benzalkonium Chloride, an antimicrobial agent for persons sensitive to alcohol or iodine



The Sof-set dressing contains a mild antibacterial agent, Chloroxylenol. To get the same protection with a metal needle or other soft cannula infusion sets, you can apply an antibacterial ointment, such as Bactroban® (**available at pharmacies**), around the site of insertion and then tape the infusion set. Also, washing the skin with an antibacterial soap may reduce the risk of infection.

If infusion site infections are still a problem in spite of careful cleansing and use of antiseptics, you may be a carrier of certain bacteria such as "staph" (staphylococcus). If you feel you may be a carrier of "staph" bacteria, consult your doctor who may test you for this and, if necessary, prescribe an oral antibiotic to help prevent or control infections.



## Skin Barriers and Adhesives

The following skin preparations will help prevent tape irritation and sensitivity problems by placing a barrier between your skin and the tape's adhesive. These products are also excellent to help tape "stick" better. After applying the following barriers and adhesives, make sure that the infusion site dries thoroughly before applying a tape or dressing.

### Skin-Prep®

- Minimizes the risk of irritation between the skin and adhesives so as to protect tender skin from injury during removal of tapes and films
- Allows skin to "breathe" so tapes and films adhere better
- Apply to the skin before placement of the adhesive tape or dressing

### Mastisol®

- Non-irritating liquid surgical adhesive
- Best removed with Detachol®

### Bard® Protective Barrier Wipes

- Effective barrier
- Protects from irritation caused by tapes and adhesives

### Making the Tape Stick Better

#### Antiperspirant

- Clear, unscented spray around the site reduces perspiration

#### Tincture of Benzoin

- Helps adhesion by leaving a tacky film at the site
- **Available at pharmacies**



# Tapes and Dressings

## IV3000®

- Sterile dressing which keeps the covered area dry
- Usually effective for sensitive skin
- Comes in boxes of 100 pieces in the size 2 3/8" x 2 3/4"



## Acutek™ Non-Sterile Sof-set Adhesive Patch

- Comes with a precut hole for use with the Sof-set infusion set
- Stronger tape for when adhesion is a problem
- Available in bags of 50

## Polyskin® II

- Transparent dressing which is compatible with most skin types and is reported to "stick" well
- Comes in boxes of 50, size: 2" x 2.75"

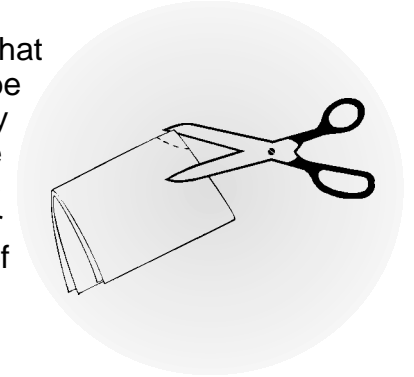
## Tegaderm™ or Tegaderm™ HP

- A clear tape dressing similar to Polyskin
- Intended for people with allergies and sensitivities, it adheres well when exposed to moisture
- Comes in boxes of 50 or 100

## DuoDerm®

- Semipermeable polyurethane adhesive film
- Waterproof dressing which sticks well during bathing
- Provides effective control against microorganisms

**NOTE:** If you use a tape that does not have a precut hole to be used with the Sof-set, it is very simple to cut it yourself. Fold the tape twice, as displayed in the drawing, and cut out the corner with scissors. Try it on a piece of paper first; it is really simple!



## Other Tapes and Roll Tapes

### Hypafix™

- A white tape with very good adhesive. However, it is not transparent
- Can be used to cover the infusion set, to tape down the edges of another dressing, or to secure a safety loop
- Designed for sensitive skin

### Transpore™

- Porous clear tape that sticks well; used by many pump users to secure safety loops
- Stretches and conforms to body contours for greater holding power

### Bioclusive®

- Sterile adhesive dressing
- Effective barrier against microbes

### Silk Tape

- Comes in 1/2" and 1" widths
- Sticks extremely well and comes off fairly easily when pulled
- Not transparent
- **Available at pharmacies**



**Paper Tape** Some people who have extremely sensitive skin prefer paper tape next to the skin. Examples of these kinds of tapes are Micropore® and Durapore™.

However, paper tape does not adhere as well as other products on some people. If this is the case, try securing the edges of paper tape with another product that sticks better.

**Tape Removers**

**Basics**  
cont.....

**Detachol®**

- Non-irritating adhesive remover that is recommended for removal of Mastisol
- Does not sting and does not contain acetone, benzene, chloroform or ether

**Uni-Solve®**

- Reduces skin trauma caused by tape removal
- Dissolves tape and dressing adhesives

# Infusion Set Fundamentals

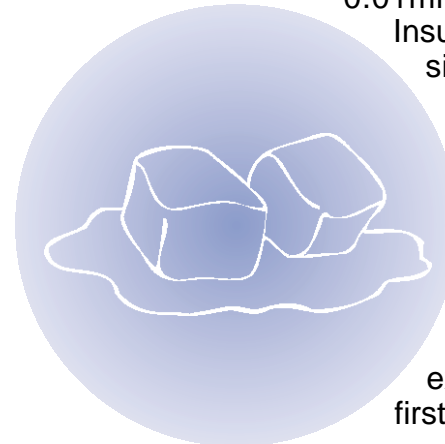
## When to Change the Infusion Set

It is best to change your infusion set before a meal to allow the first bolus through the new set to clear away any tissue from the cannula or needle. Check your blood glucose 1 to 2 hours after you have inserted a new infusion set to make sure the insulin is being properly absorbed. Do not change the infusion set before bed, as you will need to be awake to check your blood glucose.

## Insertion Tips

To optimize the insertion of your Sof-set or the Sof-set Micro QR® (a set similar to the Sof-set, but with a shorter cannula), use the Sof-serter infusion set insertion system. This device is simple to use and will provide safe, secure, and more comfortable Sof-set insertions. Also, hard-to-reach infusion sites are easier to access using the Sof-serter. Ask your diabetes educator how to use the Sof-serter.

It is generally advisable to administer a bolus of 0.005ml (0.5 units of U-100 Insulin) for the Sof-set and 0.005-0.01ml (0.5-1.0 unit of U-100 Insulin) for the Silhouette® infusion sets to fill the empty space in the cannula after the introducer needle is withdrawn. Check with your healthcare professional regarding use of this procedure.



A small number of people experience discomfort when first inserting the infusion set.

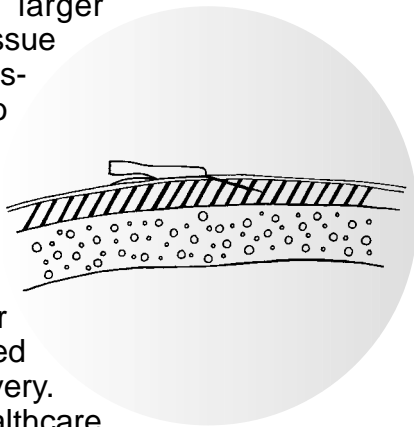
Although rare, this problem is important to address, since it could be a problem with conventional injections as well. You may put ice on the site to numb it slightly before inserting the needle. If you experience pain upon insertion of the infusion set, discuss the use of Emla® Cream (by prescription only) or other possible solutions with your physician or nurse.

Emla Cream is a topical analgesic agent (pain killer). The cream is applied one hour before the infusion set is inserted and washed off just before insertion. The site should be cleaned and dried before insertion as previously described. Complete instructions for use come in the package insert for Emla Cream.

If you experience pain for a period of time after the infusion set has been in place, this may indicate that you are in or near muscle tissue, and the set should be changed.

### Silhouette Insertion Angle

People with smaller or larger amounts of subcutaneous tissue should be careful when choosing the insertion angle to insert the Silhouette infusion set. The reason being that the cannula could otherwise be placed in the underlying muscle layer or in the upper dermal layer and therefore cause reduced or blocked medication delivery. Please check with your healthcare professional regarding this point.



## Filling and Priming Tips

### Avoiding Bubbles

It is important that insulin be at room temperature before filling the reservoir. When cold insulin warms up, air comes out of the solution, creating bubbles in the reservoir.

When filling the reservoir with insulin, pull back the plunger slowly. If you pull back too fast, the plunger will create a vacuum, generating additional air bubbles.

Prime your infusion set slowly, so you are able to watch the insulin go through the tubing. Priming it too fast may also leave behind unwanted air bubbles.



# Summary of Products

## MiniMed Reorder Numbers

### Antiseptics:

Betadine: . . . . .	HMS-213580
BZK Wipes: . . . . .	HMS-094181
Hibiclens: . . . . .	HMS-057504
I.V. Prep: . . . . .	MMT-173

### Skin Barriers and Adhesives:

Bard Protective Barrier Wipes: . . . . .	HMS-740013
Mastisol: . . . . .	HMS-052304
Skin-Prep: . . . . .	HMS-420400

### Tapes, Roll Tapes and Dressings:

Acutek: . . . . .	MMT-172
Bioclusive: . . . . .	HMS-5561
DuoDerm: . . . . .	HMS-187901
Durapore: . . . . .	HMS-15381
Hypafix: . . . . .	HMS-4210
IV 3000: . . . . .	MMT-174
Micropore: . . . . .	HMS-15301
Tegaderm: . . . . .	HMS-1624W
Tegaderm HP: . . . . .	HMS-9545HP
Transpore: . . . . .	HMS-15271
Polyskin II: . . . . .	MMT-134

### Tape Removers:

Detachol: . . . . .	HMS-051304
Uni-Solve: . . . . .	HMS-402300

**NOTE:** For orders outside the US, please contact your local MiniMed representative.

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*For questions and comments please contact the Medtronic MiniMed  
24-hour Product Helpline at 800-MINIMED (800-646-4633).*



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