

What is a midline?

A midline is a small, flexible tube inserted into a vein in your arm. The midline is approximately 6-8 inches long, but trimmed so the tip of the midline rests inside a vein at or below your armpit.

Why are midlines used?

A midline is used to give medications or fluids through a vein. Midlines can stay in place for several weeks and can meet short term intravenous requirements at home.

How is a midline inserted?

The midline will be inserted at your bedside or in a radiology department and should take about 30-60 minutes. A nurse or other practitioner will insert the midline and thread it into a large vein in your upper arm.

What is a lumen?

The word lumen means the opening or path that is inside the midline. It is through this opening that you give medications through your vein.

Care of the Midline in the Home

How Will I Care for the Catheter?

There are several things you will need to know in order to care for your midline. Below are the steps you must take to prevent infection and ensure it will continue to work well for as long as you need it:

- Properly store, check and handle supplies.
- Select and prepare a work area.
- Clean your hands.
- Flush your catheter with heparin every 12 hours.
- Have your dressing changed regularly.
- Have your cap changed weekly.

This booklet details these skills, then lists ways you can protect your catheter and includes a table for troubleshooting problems that can happen. Your nurse will make sure you understand the procedures and provide time for you and your family to practice.

Storing Your Supplies

- Keep items away from children and pets
- Store supplies in an area that is dry and free from dirt, dust, and clutter.
- Choose a place as close to your work area as possible.

Checking Your Supplies

Check your syringes and do not use if:

- Leaks are present.
- Fluid is cloudy or discolored.
- Particles or specks appear in the fluid.
- It has expired.

Check all packaging and do not use if:

- Seal is broken.
- Package is torn.
- Any part of the package is wet.

Selecting Your Work Area

Work on a table, laminate mat, counter top, or tray that can be cleaned with a household disinfectant or rubbing alcohol in an area:

- Free from drafts, dirt, dust, and clutter.
- With enough space and good lighting.
- Near your supplies.

Do not work in the bathroom since most of the germs in your house are located there. Also, avoid working in your kitchen where you prepare food.

Preparing Your Work Area

1. Place a trash can next to your work area.
2. Clean your work surface or laminate mat with household disinfectant or rubbing alcohol. Let
the area air dry.

Cleaning Your Hands

Although your hands may look and feel clean, it is always important to wash your hands in order to remove germs you can't see. Your hands should always be washed before any midline care. You must wash your hands again if you touch anything that might be considered dirty.

There are two ways to properly clean your hands: Washing with soap or using an instant hand sanitizer (containing 60-90% ethyl alcohol). If your hands are visibly dirty or you have a C. difficile infection, you must wash your hands with soap and water.

Washing Your Hands with Soap

1. Wet your hands and wrists under warm running water.

MIDLINE CATHETER CARE

2. Apply soap and scrub vigorously for 15 seconds.
3. Work lather between fingers, under nails, over the palms and back of your hands.
4. Rinse your hands well. Make sure to keep your hands up so the dirty water runs toward your elbows.
5. Dry your hands with a clean paper or cloth towel.
6. Turn off the faucet with a clean towel.

Using an Instant Hand Sanitizer

1. Place a dime-size amount of instant hand sanitizer in one hand.
2. Gently rub the gel into palms and backside of hands and between fingers.
3. Allow your hands to air dry.

Handling Sterile Supplies

Some of the supplies are sterile. Sterile means that all germs have been removed by a special cleaning process.

How Will I Protect the Catheter?

You may participate in most normal activities including work, school and exercise. The following precautions will help prevent damage and infection:

- Avoid swimming, use of hot tubs or any activities that may get any part of your midline wet.
- Keep the dressing and catheter clean and dry when you shower or bathe.
 - o Cover the dressing and catheter with plastic and tape the edges of the plastic onto your skin.
 - o If the dressing gets wet, change the dressing as soon as possible.
 - o Never let the catheter end get wet.
- Avoid golfing, bowling, weight lifting, archery or activities requiring vigorous or repetitive motion of the arms.
- Avoid any contact sports where the catheter might be pulled or grabbed.
- Limit any activity such as pulling, pushing, or lifting.
- Use caution when walking with crutches.

If you have any questions about activities while your midline is in place, please contact your clinician.

Troubleshooting Midline Problems		
Problem	Possible Cause	What to Do
Infection		
<ul style="list-style-type: none"> • Fever and/or chills. • Redness, swelling, tenderness, and/or drainage at the exit site. 	<ul style="list-style-type: none"> • Infection in or around the midline or in your bloodstream. 	<ul style="list-style-type: none"> • Call your clinician immediately. • If pus or drainage is present, note the color, odor, and amount. Give this information to your clinician.
Midline Damage		
<ul style="list-style-type: none"> • Break • Puncture 	<ul style="list-style-type: none"> • Repeated clamping, excessive pulling the midline, or contact with a sharp object. • Rupture from attempt to flush a blocked midline: higher risk when using small syringes. 	<ul style="list-style-type: none"> • Clamp your midline above the damaged area. This will prevent bleeding and keep air from entering the midline. • Call your clinician immediately.
Blocked Midline		
<ul style="list-style-type: none"> • Cannot flush. • Cannot infuse medication. 	<ul style="list-style-type: none"> • Midline is clamped, kinked, curled, clotted, or positioned against the wall of your vein. 	<ul style="list-style-type: none"> • Visually check the midline for kinks and make sure that the midline is unclamped. • Move your arms, shoulders, and head to see if a change in position helps. • If still unable to flush the midline, call your clinician.
Movement of the Midline		
<ul style="list-style-type: none"> • Length of exposed line is increased. 	<ul style="list-style-type: none"> • Catheter is flexible and in rare cases may move out of position. 	<ul style="list-style-type: none"> • Call your clinician immediately.

Troubleshooting Midline Problems		
Problem	Possible Cause	What to Do
Midline Comes out of body		
<ul style="list-style-type: none"> • Midline comes out of the body. 	<ul style="list-style-type: none"> • Excessive pulling on midline. 	<ul style="list-style-type: none"> • Immediately apply pressure over the midline site to stop any bleeding. • Call your clinician immediately.
Thrombosis		
<ul style="list-style-type: none"> • Arm with midline becomes swollen and cool to the touch. 	<ul style="list-style-type: none"> • Blood clot 	<ul style="list-style-type: none"> • Call your clinician immediately.
Skin Irritation		
<ul style="list-style-type: none"> • Redness • Tenderness • Blistering of the skin. 	<ul style="list-style-type: none"> • Irritation from the dressing or tape. 	<ul style="list-style-type: none"> • Call your clinician <ul style="list-style-type: none"> ◦ You may need to use another type of dressing and try to avoid placing the dressing over irritated skin.
Fluid Leakage or Blood Back-up		
<ul style="list-style-type: none"> • Fluid leakage from: <ul style="list-style-type: none"> ◦ End of the midline ◦ Along the midline • Blood seen in midline. 	<ul style="list-style-type: none"> • Connection between the midline and cap is loose or disconnected. • Midline is damaged from a puncture or rupture. 	<ul style="list-style-type: none"> • Check midline and cap connection. Be sure they are tight. • Flush midline and observe exit site for signs of fluid leakage. Notify your clinician. • Check for midline damage. If found, clamp the midline above the damaged area and call your clinician immediately.