

Buttonhole Cannulation of AV Fistulas for Self-Cannulation

The full version of this guideline is located on the BC Renal Agency website: bcrenalagency.ca ► Health Professionals ► Clinical Resources ► Vascular Access. “Guideline at a Glance” summarizes the highlights.

RECOMMENDATION	HA/HD CENTRE
1. A Nephrologist’s order and confirmation from a Vascular Access or Home Hemodialysis Nurse is required prior to establishing a buttonhole (BH) track.	<input type="checkbox"/>
2. BH technique is appropriate for patients who are capable of self-cannulation and, upon assessment by the nephrologist, VA Nurse and/or Home Hemodialysis Educator, are deemed competent to manage the responsibility of BH cannulation (e.g., home HD candidate, good hand dexterity, good eyesight, good personal hygiene). If these criteria cannot be met, rope ladder technique is recommended.	<input type="checkbox"/>
3. BH tracks may be <u>established</u> on new or mature, well functioning fistulas; however, mature fistulas are preferred. <ul style="list-style-type: none"> • Choose sites easy for the patient to cannulate (if plans to self-cannulate). • Choose straight, relatively unused sections of the access. Try to allow at least 2 inches between the tips of the needles. • Create BH sites at the centre of the vessel, not on the sides. • If available, use bedside ultrasound to map BH sites. 	<input type="checkbox"/>
4. BH tracks may be <u>established</u> by select patients/caregivers and/or a designated nurse who is an advanced cannulator (advanced cannulators are designated by the vascular access nurse). <ul style="list-style-type: none"> • Encourage patients to establish their own BH track. • Use same cannulator to cannulate the access until the track is established (usually 8 – 18 cannulations). • If the designated cannulator is not available on a specific day, cannulate the track using conventional sharp needles placed antegrade a minimum of 1 in (2.5 cm) away from the BH and in the same direction as the BH track. 	<input type="checkbox"/>
5. Once a BH track is established, the track may be cannulated by the patient/caregiver using a blunt needle. Sharp needle may only be used after consultation with nephrologist. Nurse cannulation of established BH tracks is not recommended.	<input type="checkbox"/>
6. Reduce the risk of infection by teaching patients/families rigorous cleansing of the arm/site prior to needling, appropriate needling techniques and application of an antimicrobial gauze or antibiotic cream after withdrawal of the needles. <ul style="list-style-type: none"> • Antimicrobial gauze; or • Mupirocin antibiotic cream (apply with a sterile cotton swab or gauze). 	<input type="checkbox"/>

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<p>7. In the event of a BH site is <u>infected</u>:</p> <ul style="list-style-type: none"> • If the BH infection is localized to the puncture site and there are no signs of systemic infection/deep infection, DO NOT use the BH sites and follow the protocol for VA Related local Infections in the BCPRA guideline Prevention, Treatment and Monitoring of VA Related Infection in HD Patients (includes a culture of the local site and 2 – 3 week course of topical and/or oral antibiotics). An attempt could be made at needling the original BH site once the course of antibiotics is complete. • If an abscess has developed, the entire AVF has become infected and/or the patient demonstrates clinical signs of bacteremia, DO NOT use the BH sites and follow the protocol for VA Related Bacteremia in the BCPRA guideline for Prevention, Treatment and Monitoring of VA Related Infection in HD Patients (includes a culture of the local site, 2 sets of blood cultures drawn 5 minutes apart and a 6 week course of IV antibiotics). Establish a new BH site once the course of antibiotics is complete. • Document the infection in PROMIS. 	<input type="checkbox"/>
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See the full guideline at : bcrenalagency.ca ► Health Professionals ► Clinical Resources ► Vascular Access for a step-by-step procedure for the following:

- a. Establishing a BH track using the sharps method
- b. Cannulating an established BH track
- c. Trouble-shooting BH tracks