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## Renal Services, Dialysis Centre

# Buttonhole Cannulation Technique

### What is buttonhole technique?

Buttonhole is a way of cannulating (putting needles in) your fistula. The needles are inserted in exactly the same spot at every dialysis session, like a button into a buttonhole. This technique can only be used for fistulas and not for grafts.

### Is it harmful for my fistula to have the needle in the same place all the time?

It is harmful to go in the same area using different holes, as this weakens the vein wall, causing aneurysm (bulging). With the buttonhole, the exact same hole is used for every dialysis session and over time a tract or tunnel forms. This prevents aneurysms forming and offers other benefits such as reduced pain when needles go in and reduced bleeding times when the needles are removed.

### Is the buttonhole technique a new procedure?

No, it has been used in Europe for more than 25 years, with great success. It is becoming more popular in the UK since the recent introduction of blunt needles.

### What are blunt needles?

Blunt needles are rounded at the top and do not have sharp edges like traditional dialysis needles. The buttonhole technique develops a tract so you do not need to use sharp needles to enter the vein. Blunt needles also prevent damaging the formed tract.

### What is a tract?

The tract is a tunnel created by the formation of scar tissue – exactly like the hole created for earrings in a pierced ear. This tract goes from the surface of the skin to the vein. Once the tract is well healed there are no nerves or tissues in the path of the needle to cause you any pain when the needles go in.

### How long does it take before I can use blunt needles?

For most people, it takes about two weeks or six dialysis sessions before a tract develops. A normal sharp needle is used for those six sessions and when the nurses are happy that the tract has formed, they will introduce blunt needles.

## How long will the buttonhole last?

The pair buttonholes can be used indefinitely if there are no problems. Over time, the nurses may develop another pair of buttonholes sites on your fistula, for back up.

## What happens if I dialyse at a unit that does not use this technique?

If the unit you are dialysing at does not use this technique, they can needle another part of your fistula using the normal sharp needles. We will inform the staff on the other unit at the earliest opportunity that we use the buttonhole technique with you and we will advise them about needling your fistula.

We will resume the buttonhole technique when you come back to us.

## What are the advantages of using the buttonhole technique?

Research has shown that these are:

- Fewer 'blows' – when blood leaks from the vein into the surrounding skin, causing swelling and pain.
- Fewer problems locating the vein
- Less pain when inserting the needles
- Less chance of aneurysms (bulging) forming. Aneurysms can weaken the vein wall

## When will I start using the buttonhole technique?

Your primary nurse will advise you about using this technique.

## Is there anything special I need to do with my fistula when using the buttonhole technique?

No. You will wash your fistula arm as normal and your nurse will do the rest. The nurse will need to remove the scab from the buttonhole before the needling takes place, if it has not been removed by washing. This will help reduce the risk of infection. Care of your fistula remains the same.

If you require further information please speak to one of our dialysis nurses or contact the details provided.

### Contact:

Clinical Nurse Specialist CNS-Vascular Access  
Tel/Fax: 01223 349290

Addenbrookes HD Unit: 01223 217832  
Kings Lynn HD Unit: 01553613544  
West Suffolk HD Unit: 01284 712921  
Hinchingsbrooke HD Unit: 001480 42185

### References:

*Ball, L. (2006). The buttonhole technique for arteriovenous fistula cannulation. Fistula first: Vascular access update. Nephrology Nursing Journal, 33(3), 299-305.*

*Peterson, P. (2002). Fistula cannulation. The buttonhole technique. Nephrology Nursing Journal, 29, 195.*

*Toma, S., Shinzato, T., Fukui, H., Nakai, S., Miwa, M., Takai, I., et al. (2003). A timesaving method to create a fixed puncture route for the buttonhole technique. Nephrology Dialysis Transplantation, 18, 2118-2121.*

*Twardowski, Z., Lebek, R., & Kubara, H. (1977). Six-year experience with the creation and use of internal arteriovenous fistulae in patients treated with repeated hemodialysis. Polskie Archiwum Medycyny Wewnętrznej (Warszawa) 57, 205-214 (Polish).*

### Privacy & Dignity

We are committed to treating all patients with privacy and dignity in a safe, clean and comfortable environment. This means, with a few exceptions, we will care for you in same sex bays in wards with separate sanitary facilities for men and women.

In some areas, due to the nature of the equipment or specialist care involved, we may not be able to care for you in same sex bays. In these cases staff will always do their best to respect your privacy and dignity, eg with the use of curtains or, where possible, moving you next to a patient of the same sex. If you have any concerns, please speak to the ward sister or charge nurse.



We are currently working towards a smoke free site. Smoking is only permitted in the designated smoking areas.

For advice and support in quitting, contact your GP or the free NHS stop smoking helpline on 0800 169 0 169

### Help with this leaflet:



If you would like this information in another language, large print or audio format, please ask the department to contact Patient Information: 01223 216032 or [patient.information@addenbrookes.nhs.uk](mailto:patient.information@addenbrookes.nhs.uk)

### Polish

Jeżeli chciałbyś uzyskać te informacje w innym języku, w dużej czcionce lub w formacie audio, poproś pracownika oddziału o kontakt z biurem Informacji Pacjenta (Patient Information) pod numerem telefonu: 01223 216032 lub pod adresem [patient.information@addenbrookes.nhs.uk](mailto:patient.information@addenbrookes.nhs.uk)

### Portuguese

Se precisar desta informação noutra língua, em impressão de letras grandes ou formato áudio, por favor peça ao departamento que contacte a secção de Informação aos Doentes (Patient Information) pelo telefone 01223 216032 ou através do e-mail [patient.information@addenbrookes.nhs.uk](mailto:patient.information@addenbrookes.nhs.uk)

### Arabic

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### Cantonese

如您需要以另一語言版本、特大字體或錄音形式索取本資料，請要求部門聯絡病人諮詢服務：電話 01223 216032，電郵地址 [patient.information@addenbrookes.nhs.uk](mailto:patient.information@addenbrookes.nhs.uk)

### Turkish

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### Urdu

اگر آپ کو یہ معلومات کسی دیگر زبان میں، بڑے الفاظ میں یا آڈیو طریقہ سے درکار ہوں تو برائے مہربانی اس شعبہ سے پیشینٹ انفارمیشن سے ذیل کے ذریعہ رابطہ کریں: 01223 216032 یا [patient.information@addenbrookes.nhs.uk](mailto:patient.information@addenbrookes.nhs.uk) کی درخواست کریں:

### Bengali

আপনি যদি এই তথ্য অন্য কোন ভাষায়, বড় অক্ষরে বা অডিও রেকর্ডিং পোতে চান তাহলে 'প্যাশেন্ট ইনফরমেশান' এর সঙ্গে 01223 216032 নম্বরে ফোন করে বা [patient.information@addenbrookes.nhs.uk](mailto:patient.information@addenbrookes.nhs.uk) ঠিকানায় ই-মেইল করে যোগাযোগ করার জন্য ডিপার্টমেন্টটিতে অনুরোধ জানান।

## Document history

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