

NIPRO'S TOTAL SOLUTION:

Nipro is a global market leader with a wide range of products to prevent vascular access complications.

More choices mean more opportunities for success.

Nipro is also the only company to have a unique, patented BioHole™ stick for maturation of the tunnel. BioHole™ is available in standard needle, single needle and catheter needle.

ASEPTIC TECHNIQUES:

- 1. On-Off kit, customized on request
- 2. Prefilled syringes of 0.9% NaCl to minimize potential contamination
- 3. Nipro Safe Derm - Fix IVN
- 4. Pushban™



On-Off kit



Prefilled syringe



Safe Derm



Pushban

CANNULATION TECHNIQUES:

- 5. BioHole needle & single needle
- 6. BioHole catheter needle
- 7. BioHole Buttonhole stick
- 8. AVF catheter needle



BioHole Single Needle



BioHole Catheter Needle



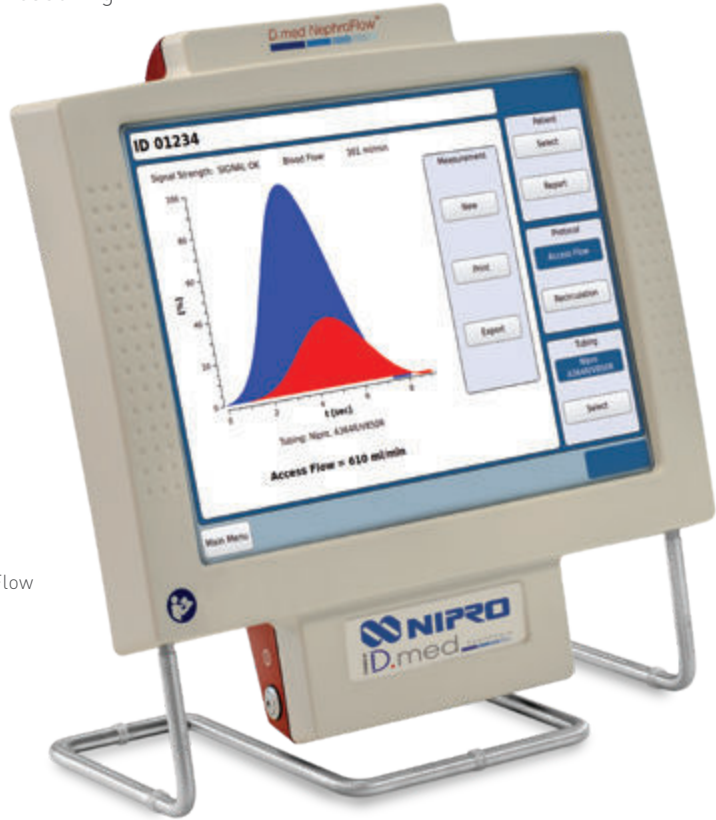
BioHole Buttonhole stick



AVF catheter needle

SURVEILLANCE OF VASCULAR ACCESS:

- 9. D.med NephroFlow™ assures adequate treatment by measuring recirculation and access flow



D.med NephroFlow

BECAUSE EVERY LIFE DESERVES AFFORDABLE CARE

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Nipro Medical Europe : European Headquarters, Blokhuisstraat 42, 2800 Mechelen, Belgium
T: +32 (0)15 263 500 | F: +32 (0)15 263 510 | medical@nipro-group.com | www.nipro-group.com

Please contact your local representative for more information

NIPRO MEDICAL AUSTRIA GMBH :
Divischgasse 4, 1210 Wien, AUSTRIA | T: +43 1 532 23 14 | F: +43 1 532 23 14 89
NIPRO EUROPE - EGYPT :
Nile City Towers, 22nd Floor, North Tower, Nile City, Towers, Cornich El Nile, 11624 Ramelt Beaulac, Cairo, EGYPT
NIPRO FRANCE SA :
Biopôle Clermont-Limagne, 63360 Saint Beauxrie, FRANCE | T: +33 (0)473 33 41 00 | F: +33 (0)473 33 41 09
NIPRO MEDICAL GERMANY GMBH :
Kokkolastrasse 5, 40882 Ratingen, GERMANY | T: +49 (0)2102 564 60 81 | F: +49 (0)2102 564 60 90
NIPRO MEDICAL EUROPE NV - ITALY :
Centro Direzionale Milanofiori, Strada 1 - Palazzo F1, 20090 Assago (Milano), ITALY | T: +39 (0)2 57 50 00 57 | F: +39 (0)2 57 51 81 11
NIPRO D.MED AG KAZAKHSTAN :
Gogol street, 39, office 100B, 050010, Almaty, KAZAKHSTAN | +7 (727) 259-01-24
NIPRO EUROPE - NETHERLANDS :
Regus Business Center, Verlingde Poolseweg 16, 4818 CL Breda, NETHERLANDS | T: +31 (0)76 524 50 99 | F: +31 (0)76 524 46 66
NIPRO MEDICAL NIGERIA LTD. :
9 Adelabu Close, Off Toyin Street, 100271 Ikeja, Lagos State, NIGERIA | T: +234 (0)802 706 7065
NIPRO EUROPE - POLAND :
Ul. Panska 73, 00-834 Warszawa, POLAND | T: +48 (0)22 31 47 155 | F: +48 (0)22 31 47 152
NIPRO EUROPE - PORTUGAL :
Avd. Da Liberdade 249, 1º Andar, 1205-143 Lisboa, PORTUGAL | T: +34 (0)91 878 29 21 | F: +34 (0)91 878 28 40

NIPRO EUROPE - RUSSIA :
12 Krasnopresnenskaya Nab., Office 1407, entrance 6, 123610 Moscow, RUSSIA | T: +7 (0)495 258 1364 | F: +7 (0)495 258 1365
NIPRO SENEGAL S.U.A.R.L. :
27 Avenue Georges Pompidou, Dakar, SENEGAL
NIPRO MEDICAL D.O.O. BEograd :
Bastovanska 68a, 11000 Belgrade, SERBIA | T: +381 (0)11 75 15 578
NIPRO MEDICAL SOUTH AFRICA (PTY) LTD :
48 Dwyka Street, Stikland Industria, Cape Town, 7530, SOUTH AFRICA | T: +27 21 949-2635 | F: +27 21 949-2397
Unit 20821, Falcon Lane, Lanseria Business Park, Ext 805 Lanseria Corporate Estate, Pelindaba Rd.,
Lanseria Ext. 26, Gauteng, SOUTH AFRICA | T: +27 11 431 1114 / 26 | F: +27 11 431 1115
NIPRO EUROPE - SPAIN :
Polígono Los Frailes s/nº 93 y 94, Diagona, 28814 Madrid, SPAIN | T: +34 (0)91 884 5531 | F: +34 (0)91 878 2840
NIPRO D.MED SCHWEIZ GMBH :
Kantonstrasse 77, 8807 Freienbach, SWITZERLAND | T: +41 (0)55 410 40 44 | F: +41 (0)55 410 40 43
NIPRO MEDICAL SAG.HIZ.TIC.LTD.STI. :
Azizye Mah. Pilot Sok.17/4, 6540 Cankaya-Ankara, TURKEY | T: +90 (0)312 442 21 12 | F: +90 (0)312 442 21 92
NIPRO MEDICAL UK LTD. :
25 Barnes Wallis Road, Segensworth East, Fareham Hampshire PO15 5TT, UNITED KINGDOM | T: +44 148 985 48 30

Bro-Fistula_Care - EN - 26-Jul-18



“I love to play with my grandson, but I’m on dialysis with a fistula and he is afraid to touch my arm and potentially hurt me.

Is there a way to prevent complications? ”

GRANDFATHER ROBERT

FISTULA CARE
VASCULAR ACCESS

RENAL CARE



A fully-functioning fistula is the main indicator of a successful hemodialysis, but complications in vascular access are a serious reality. These complications are the first cause of hospital admissions for dialysis patients.

COMPLICATIONS IN VASCULAR ACCESS HAVE A DIRECT IMPACT ON PATIENTS, PROFESSIONALS, AND HOSPITALS AT LARGE.

Vascular access complications have been associated with as much as 10-15% of all inpatient stays among hemodialysis patients.¹

The most predominant complications of arteriovenous fistulas in hemodialysis are:²

- Thrombosis 17-25%
- Stenosis 14-42%
- Aneurysms 5-6%

Patients

- Increased pain the in area of the fistula
- Increased wait time due to bleeding
- Increased return visits for testing and treatment
- Recirculation and loss of vascular access
- Reductions in quality of life and survival rate

Healthcare professionals

- Increased workload because of testing, surveillance, and treatments
- Increased pressure to perform
- Increased stress and the potential for risks such as needlestick injuries

Hospitals

- Increased costs in medical products for interventional treatment
- Increased costs related to time, personnel, and risks associated with increased demands for care

10-15% OF ALL INPATIENT STAYS

WHAT ARE THE CONSEQUENCES & COSTS ASSOCIATED?

The following procedures are accepted as general practice:³

Monitoring vascular access

- Physical examination to detect early dysfunction
 - Character of pulse and sound
 - Presence and location of thrills
- Clinical parameters
 - Swelling of arm
 - Prolonged bleeding time
 - Cannulation problem

Surveillance

- Monitoring vascular access performance indicators
- Periodic measurements are required to make correct assessments
 - Blood flow delivered
 - Dialysis efficacy
 - Recirculation analyses
 - Bleeding time control
 - Venous pressure measurements

Diagnostic testing

- If physical monitoring and surveillance indicators confirmed abnormalities, a Doppler Ultrasound or a Fistulography may be required

COSTS ASSOCIATED

Direct costs related to arteriovenous fistula complications vary from \$ 571 to \$ 12,740, depending on the severity of hospital intervention.^{4, 5}

The goal is to prevent complications, without worrying about the costs.

BECAUSE EVERY LIFE DESERVES AFFORDABLE CARE

\$ 571 TO \$ 12,740 PER EPISODE

IS THERE A WAY TO PREVENT COMPLICATIONS?

Clinical Practice Guidelines recommend different procedures for the prevention of vascular access complications: ⁶⁻⁹

Aseptic techniques:

- For manipulation, connection and disconnection

Cannulation techniques:

- Buttonhole technique
 - Reduces pain
 - Reduces aneurysms
 - Lowers vascular access failure
 - Facilitates access for self-cannulation
 - Improves appearance of the fistula
- Plastic fistula needles
 - Safe cannulation during fistula maturation
 - Decreases risk of perforation
 - Allows higher mobility
 - Better option for patients allergic to metal
- Needle specifications
 - Needle gauge depending on the blood flow rate
 - Needle length adapted to any fistula depth
 - Rotating hub allows rotation without moving the needle wings
 - Back eye

Recommended needle gauge	Blood flow rate	Color
17 gauge	< 300 ml/min	Orange
16 gauge	300-350 ml/min	Green
15 gauge	350-450 ml/min	Yellow
14 gauge	> 450 ml/min	Purple

Surveillance of vascular access:

- KDOQI recommends surveillance, at least once a month, to diagnose and prevent the progression of stenosis or thrombosis
 - Flow measurement
 - Recirculation