Haemodialysis

Fistula Needles

Product Range

FRESENIUS MEDICAL CARE

Benefits of Fresenius Medical Care Fistula Needles

Fistula needles are the crucial link between the patient and the dialysis machine, requiring quality, safety and comfort – for patient and user.

Biocompatibility

- All Fresenius Medical Care needles are dry-siliconised for easier, smoother puncturing and to reduce blood-material interactions.

Optimised geometry and flow

- Vessel-trauma and pain perception during puncture are minimised due to the optimal ratio of cutting and stretching, the needle's sharp tip and rounded and polished trailing edge.
- Ultra-thin walls of the needles and larger inner lumen diameters permit maximum blood flow rates.
- Lesions or limitations in blood flow are reduced as the special slit-formed back-eye of the arterial and single needle reduces suction of the needle towards the inner wall of the vessel.

Ergonomic wing design

- The convenient rotating wings enable user-friendly handling and adaptation to puncture technique. (Figure 2)
- Textured wings provide a secure grip.

Colour-coded application guidance

- Colour-coded clamps, wings and hubs enable easy differentiation of the needles. (Figures 4 & 5)

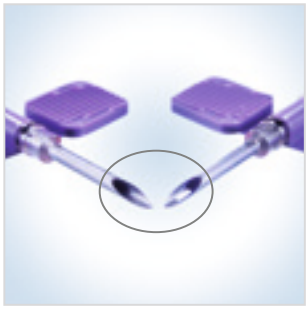

Figure 1: Special slit-formed back-eye of arterial and single needle

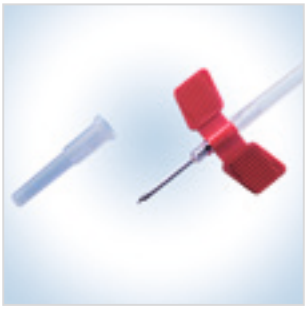

Figure 2: Rotating wing design allows maximum control and easy gripping during cannulation

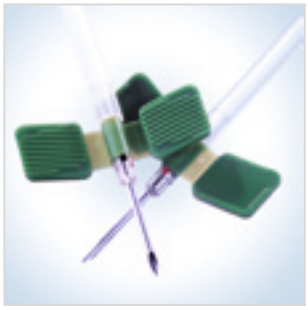

Figure 3: Black and red dots indicate the position of the needle even during the treatment

Figure 4: Colour-coded clamps for arterial and venous needles

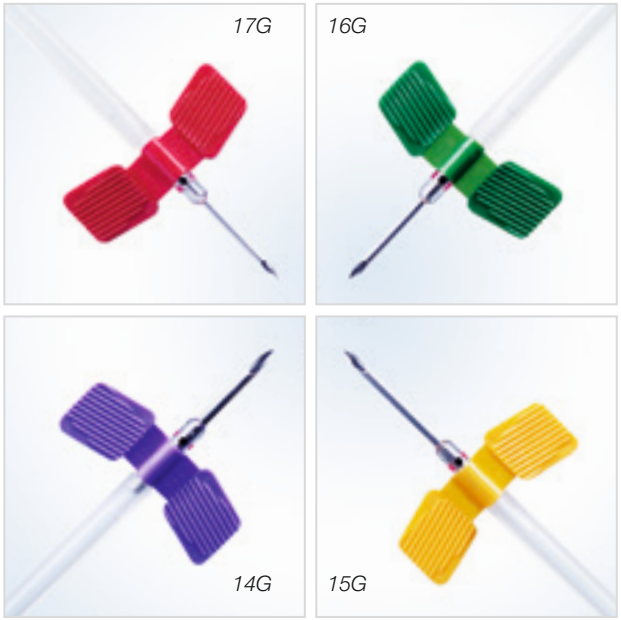

Figure 5: Wing colour indicates needle diameter

Product Range
Gamma-sterilised Fistula Needles

Colour code of wing	Type	Needle (diameter x length)	Tubing length	Art. No.
Standard				
14 G	A401 V401	2.0 x 20 mm	150 mm 150 mm	507 740 1 507 840 1
15 G	A511 V511 A501 V501 A551 V551	1.8 x 15 mm 1.8 x 20 mm 1.8 x 25 mm	150 mm 150 mm 150 mm 150 mm 150 mm 150 mm	507 751 1 507 851 1 507 750 1 507 850 1 507 755 1 507 855 1
16 G	A611 V611 A601 V601 A651 V651	1.6 x 15 mm 1.6 x 20 mm 1.6 x 25 mm	150 mm 150 mm 150 mm 150 mm 150 mm 150 mm	507 761 1 507 861 1 507 760 1 507 860 1 507 765 1 507 865 1
17 G	A711 V711 A701 V701	1.5 x 15 mm 1.5 x 20 mm	150 mm 150 mm 150 mm 150 mm	507 771 1 507 871 1 507 770 1 507 870 1
AV Sets (arterial and venous needle)				
15 G	AV501 AV552	1.8 x 20 mm 1.8 x 25 mm	150 mm 300 mm	507 950 1 507 655 1
16 G	AV601 AV652	1.6 x 20 mm 1.6 x 25 mm	150 mm 300 mm	507 960 1 507 665 1
17 G	AV701 AV752	1.5 x 20 mm 1.5 x 25 mm	150 mm 300 mm	507 970 1 507 676 1
Single needle				
15 G	SN500 SN550	1.8 x 20 mm 1.8 x 25 mm	100 mm 100 mm	508 150 1 508 155 1
16 G	SN600 SN650	1.6 x 20 mm 1.6 x 25 mm	100 mm 100 mm	508 160 1 508 165 1
17 G	SN700	1.5 x 20 mm	100 mm	508 170 1

All needles are dry-siliconised and equipped with a convenient rotating wing.

Product Range
ETO-sterilised Fistula Needles

Colour code of wing	Type	Needle (diameter x length)	Tubing length	Art. No.
Standard				
14 G	A V A V	2.0 x 25 mm	150 mm 150 mm 300 mm 300 mm	508244 1 508257 1 508249 1 508262 1
15 G	A V A V	1.8 x 25 mm	150 mm 150 mm 300 mm 300 mm	508862 1 508863 1 508250 1 508263 1
16 G	A V A V	1.6 x 25 mm	150 mm 150 mm 300 mm 300 mm	508864 1 508865 1 508251 1 508264 1
17 G	A V A V	1.5 x 25 mm	150 mm 150 mm 300 mm 300 mm	508866 1 508867 1 508252 1 508265 1
Single needle				
15 G	SN	1.8 x 20 mm	100 mm	508293 1
16 G	SN	1.6 x 20 mm	100 mm	508294 1

All needles are dry-siliconised and equipped with a convenient rotating wing.

A: arterial needle
V: venous needle
SN: single needle

Importance of optimal needle size

In haemodialysis, solute clearance depends, among other factors, upon the effective blood flow (Q_B) passing through the dialyser. A high extracorporeal Q_B results in high dialysis efficacy Kt/V.

Particularly in HighVolume**HDF**® (postdilution haemodiafiltration) a high blood flow is important to obtain adequate substitution volumes and subsequently a high middle molecule clearance.

Prerequisite for an ideal Q_B is an adequately sized needle. The use of the needle sizes shown opposite is recommended in order to obtain the indicated blood flow rates.

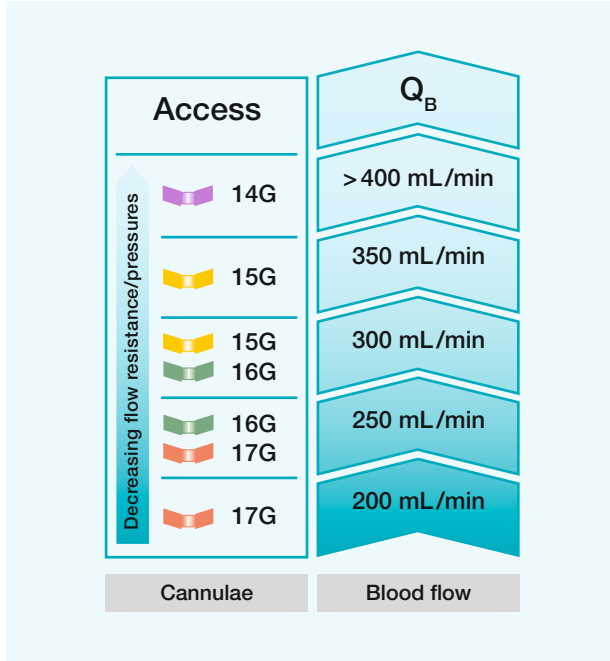

Figure 6: Recommended size of fistula needle in relation to the desired blood flow rate

The larger the inner diameter of the needle, the higher the blood flow is at constant pressure.

For example, with a maximum arterial pressure of –200 mmHg, a bigger needle diameter facilitates a significantly higher Q_B.

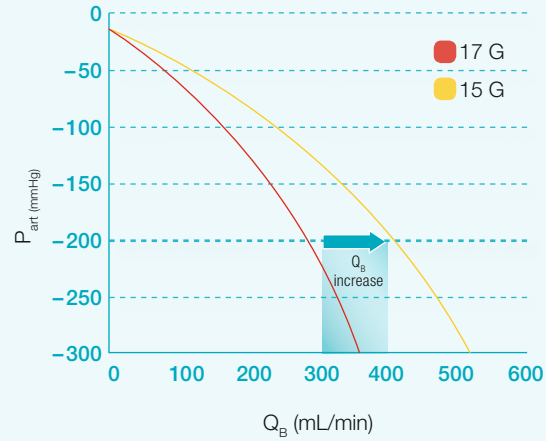

Figure 7: Selection of needle size

Data on file: Fresenius Medical Care

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