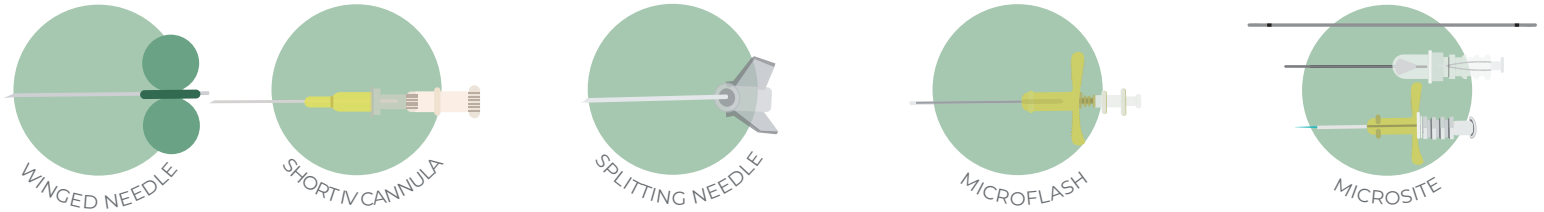
NEONATAL CATHETERIZATION
SPECIFIC INTRODUCERS AND CATHETERS

VYGON
Value Life



						PUNCTURE NEEDLE	PEELABLE SHEATH
GAUGE	19	24	24	20	20	24	20
Ø ext (mm)	1 mm	0.7 mm	0.7 mm	0.95 mm	1.1 mm	**0.55 mm**	1.1 mm
Ø int (mm)	0.86 mm	0.5 mm	0.4 mm	0.66 mm	0.7 mm	0.4 mm	0.7 mm
Compatible catheter size	2 Fr with easy**lock**	1 Fr	1 Fr	2 Fr	1 Fr & 2 Fr	1 Fr & 2 Fr with MST	
Compatible with	epicuta**neo** cava	premi**cath**	premi**cath**	nutri**line** nutri**line** twin**flo** epicuta**neo** cava	premi**cath** nutri**line** nutri**line twinflo** epicuta**neo** cava	premi**cath** nutri**line** nutri**line twinflo** epicuta**neo** cava	

SILICONE CATHETERS

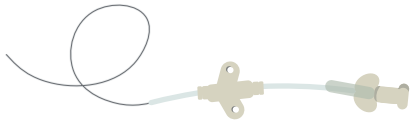
epicuta**neo** cava 2 Fr

1 - 4 kg — 2 mm

Ø 0,6mm

POLYURETHANE CATHETERS

premi**cath** 1 Fr



<1 kg — 1 mm

Ø 0,35mm

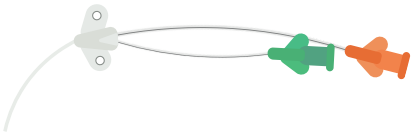
nutri**line** 2 Fr

Available in 3 and 4 Fr

1 - 4 kg — 2 mm

Ø 0,6mm

nutri**line twinflo** 2 Fr *(2 lumens)*



1 - 4 kg — 2 mm

Ø 0,6mm

Newborn weight — Catheter diameter — Recommended vessel diameter

RECOMMENDATIONS FOR CATHETERIZATION

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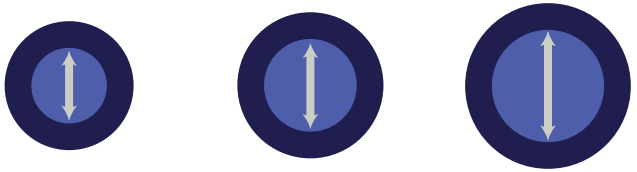
1. Use **sets for neonatal PICC placement**. These sets include specific tools and increase safety. This reduces the risk of infection and ensures the sterility of the process. Sets also save time and are cost-effective.

2. **Polyurethane** is more recommended than silicone due to its strength, which facilitates insertion and reduces the risk of complications.

3. The size of the catheters should not exceed 1/3 of the internal diameter of the vein. If this is not possible, the catheter should never occupy 45% of the vein's lumen.



CEPHALIC VEIN[1,2,3,4]
0,8 - 2 mm diameter

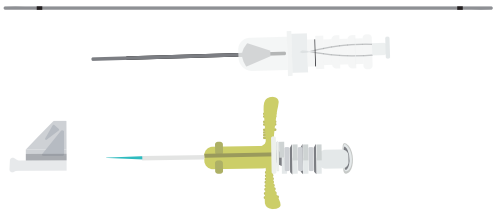
BRACHIAL VEIN[1,2,3,4]
1 - 2,5 mm diameter

BASILIC VEIN[1,2,3,4]
1,2 - 3 mm diameter

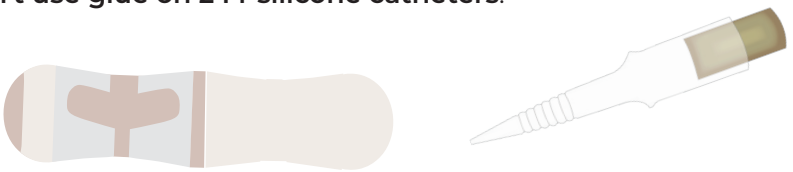
Recommended catheter size	Vein diameter	
1 Fr	0.74 mm	1 mm
2 Fr	1.48 mm	2 mm
3 Fr	2.22 mm	3 mm

45% - maximum vein/catheter ratio not to be exceeded
33% - ideal vein/catheter ratio

4. The use of the **Modified Seldinger Technique** (MST) with specific devices such as micro**site**®, presents clear benefits in the PICCs cannulation in neonates. It is a less invasive technique that provides a higher success rate on the first attempt of cannulation.



5. Use sutureless fixation systems such as grip**lok**®.
It is also recommended to use cyanoacrylate glue such as SecurePortIV®, at the insertion site. It avoids accidental displacement of the catheter.
⚠ **Don't use glue on 2 Fr silicone catheters**.



6. Using ultrasound for vein assessment of the patient will allow to choose the most appropriate vein.

- Allow to assess vein size
- Improve the accurate localization of the vessel
- Avoid arterial and nerve punctures
- Increase the success rate on the first attempt
- Reduce the number of punctures
- Decrease patient discomfort
- Minimize the risks of complications associated with the cannulation process

Selecting the correct device ensures safe and efficient venous access, preserving the neonatal venous capital.

1. Giovanni Barone et al. A Systematic Ultrasound Evaluation of the Diameter of Deep Veins in the Newborn [...]. Neonatology 2019. DOI: 10.1159/000496848
2. Clelia Zanaboni et al. Caliber of the deep veins of the arm in infants and neonates [...]. Journal of Vascular Access 2024. DOI: 10.1177/11297298221150942
3. Hany Aly et al. The accessibility and safety of inserting proximal basilic and axillary veins central lines in neonates. Sage Journals 2023. DOI: 10.1177/20503121231197150
4. Shasha He et al. A Comparison of In Vitro Measurement and Ultrasound for Peripherally Inserted Central Catheter Placement in Premature Infants [...]. Cureus 2024. DOI: 10.7759/cureus.56335