

# Xylocaine

## General information

Blocks the fast voltage-gated Na<sup>+</sup> channels in neuronal cell membranes. There may be inhibition of postsynaptic neurons and, consequently, action potentials.

## Indications and case selection

As a local anesthetic prior to the arteriotomy. Preparations with or without epinephrine may be used. Cardiac xylocaine is used to test the axonal function. It may be used alone or in conjunction with amobarbital.

Used for functional testing in case of spinal vascular disorders. Provocative functional testing in cerebral AVMs.

## Dosing

Rx: for local anesthesia: Approximately 5 ml of 2% lidocaine (max. 4 mg/ml to 280 mg; 14 ml) Rx: for neurophysiological testing ([Wada test](#)): 10–40 mg i.a. of cardiac lidocaine.

## Reversal

Lidocaine overdose: intravenous bolus of 20% lipid emulsion 1.5 ml/kg over 1 min and start IV infusion at 15 ml/kg/hr. The bolus may be repeated twice at 5 min intervals if cardiovascular stability is not restored. Additionally, the infusion may be doubled to 30ml/kg/hr if instability persists after 5 minutes. Lipid emulsion is continued until cardiovascular stability is restored or maximum dose administered.<sup>24</sup> Do not exceed the maximum cumulative dose of 12 ml/kg.

Concurrent supportive care includes following ACLS protocols, e.g. securing airway, hemodynamic support, etc.

✘ Propofol is not a substitute for lipid emulsion in such cases. It has only 10% lipids, which is too low to be of benefit, and the cardio-depressant properties of propofol may be counterproductive in such situations.

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### [Wada test](#)

Test injection prior to the embolization of the feeder vessel of AVM. In order to suppress both neuronal and axonal activity, [Amytal](#) injection is followed by [xylocaine](#) injection.

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