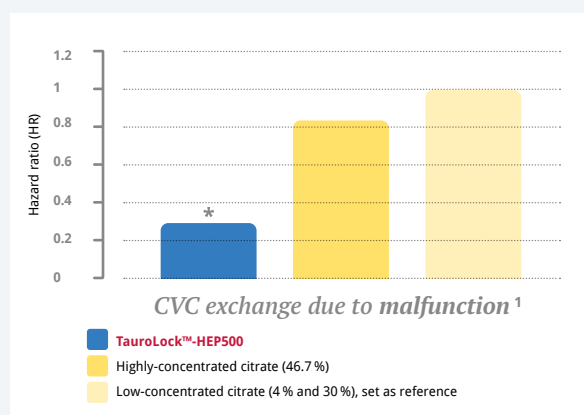




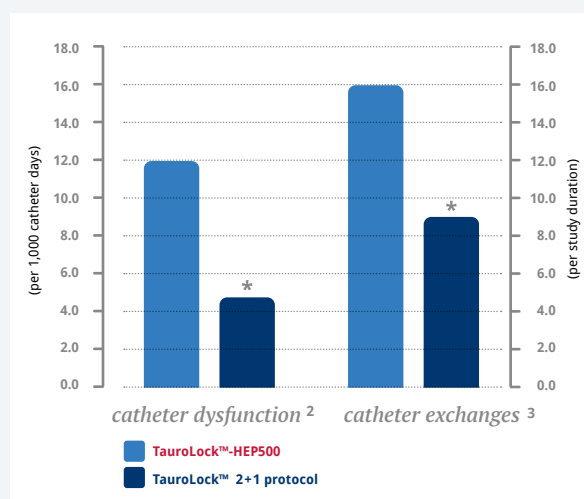
## How to prevent catheter-related complications with the **TauroLock™ 2+1 protocol**

*The solution for haemodialysis catheters  
Significantly lower hazard for CVC malfunction and removal*

### 1. Protection against catheter malfunction with **TauroLock™-HEP500**



### 2. Maximum efficacy with the **TauroLock™ 2+1 protocol**



*The formula for effective protection: **TauroLock™ 2+1 protocol**  
2x weekly **TauroLock™-HEP500**, 1x weekly **TauroLock™-U25.000***

\* Significant in respective test

<sup>1</sup> Van Roeden et al. 2021 BMC Nephrology volume 22:308

<sup>2</sup> Bonkain et al. 2021 PLoS ONE 16(5): e0251793

<sup>3</sup> Fontseré et al. 2021 Nefrologia. <https://doi.org/10.1016/j.nefro.2021.02.004>



# Guidelines

- **Position statement of the European Renal Best Practice (ERBP) 2010**  
"Recommendation B.3.1: The preventive use of antimicrobial locks is advocated to reduce the rate of CRBSI."  
"(...) no benefit regarding infectious complications was observed for citrate at 4%..."  
"Recommendation B.3.2: In view of the potential risks of spillover of the locking solution (...) the 4% solution seems to offer at present the best benefit/risk ratio."
- **Prevention of infections related to implantable ports for venous access 2012, French Society of Hospital Hygiene (SF2H)**  
"...taurolidine or any other compound with proven efficacy in preventing catheter-infections should be preferentially used..."
- **Guideline of the German Society for Applied Hygiene in Dialysis (4th revised edition 2022)**  
"With regard to maintenance of patency, current research has shown a superiority of fibrinolytics (rt-PA, urokinase) over the ingredients heparin and citrate when used once a week. Malfunction rates are reduced significantly in comparison to heparin (5,000 IU/ml) and citrate (4 %)."
- **Vascular access for dialysis, Dutch Federation of Medical Specialists 2022**  
"High concentrations of citrate (30 % or more) may spill into the systemic circulation leading to systemic complications (symptomatic hypocalcaemia, cardiac arrhythmia) and should therefore not be used (KDOQI 2019 Update, recommendation 21.5) ... Consider adding thrombolytics once a week to the catheter lock (1 mg alteplase per lumen or 5000 IU/ml urokinase; KDOQI 2019 Update, recommendation 21.6), because in randomized studies this reduced flow dysfunction and line sepsis."
- **Guideline on haemodialysis catheters 2018, Australian Department of Health**  
"Taurolidine: Very broad-spectrum antimicrobial activity. Decreases development of biofilm. Associated with a reduced CRBSI rate compared to heparin. May be equally effective in preventing catheter occlusion due to thrombosis as heparin."
- **Guideline for infection prevention and hygiene 2019, German Society for Nephrology (DGfN)**  
"Taurolidine and gentamicin exert only antimicrobial effectiveness. Citrate solutions show ... – in higher concentrations – at least partially antimicrobial properties, which is, however, insufficient against Staph. aureus. An additional option is the intermittent (once weekly) use of urokinase in the lock solution (Cat IB)."
- **Standards of practice 2021, Infusion Nurses Society (INS)**  
"Monitor sodium citrate, an anticoagulant with antimicrobial effects, for systemic anticoagulation, hypocalcemia that could produce cardiac arrest, and protein precipitate formation with concentrations greater than 12%. (III)"  
"Monitor trisodium citrate for protein precipitation, which could cause lumen occlusion. (V)"

*Instructions for use*

**TauroLock** UMM 2500



**TauroLock** HEP 500



More information on  
[taurolock.com](http://taurolock.com)

