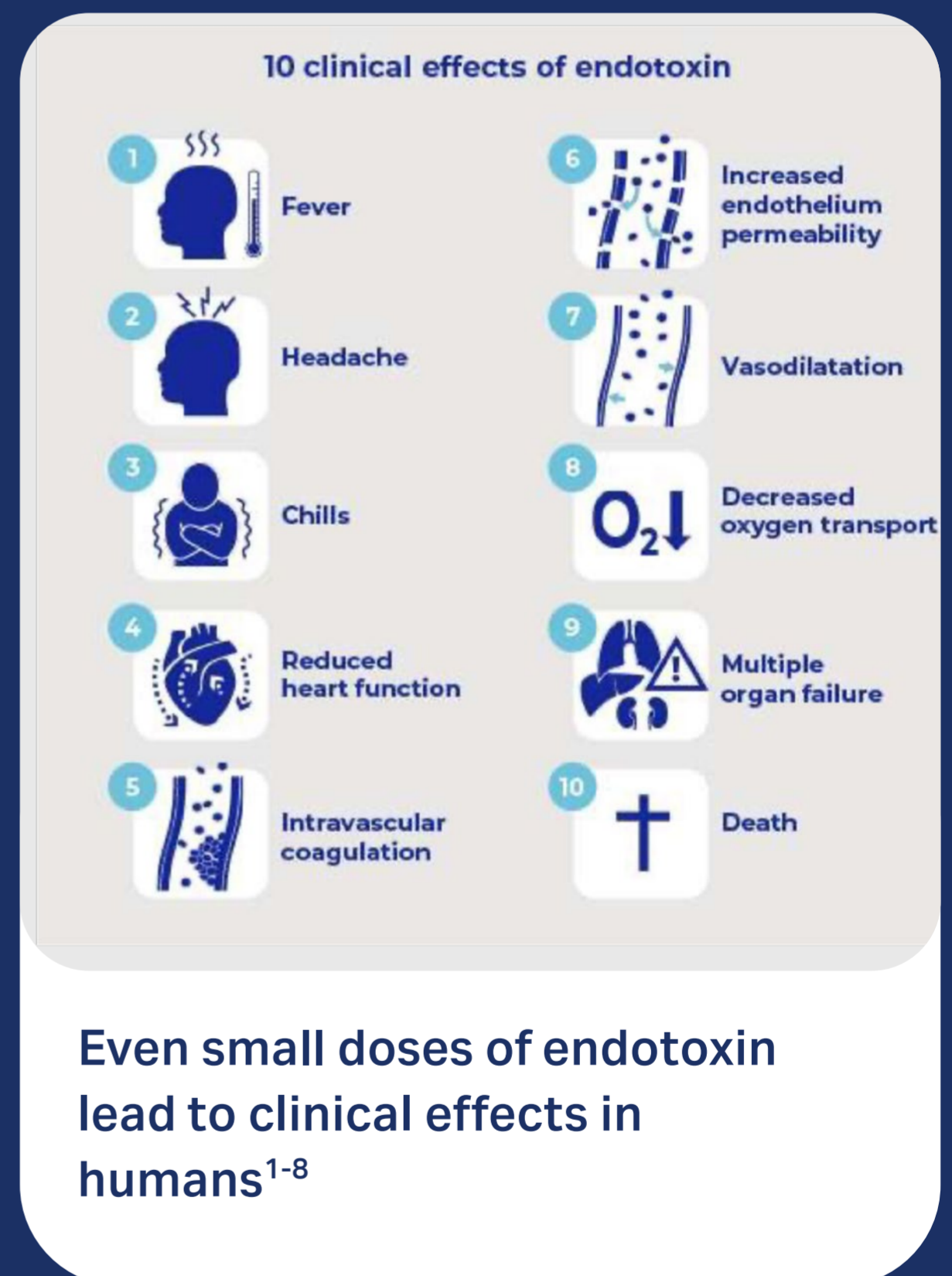
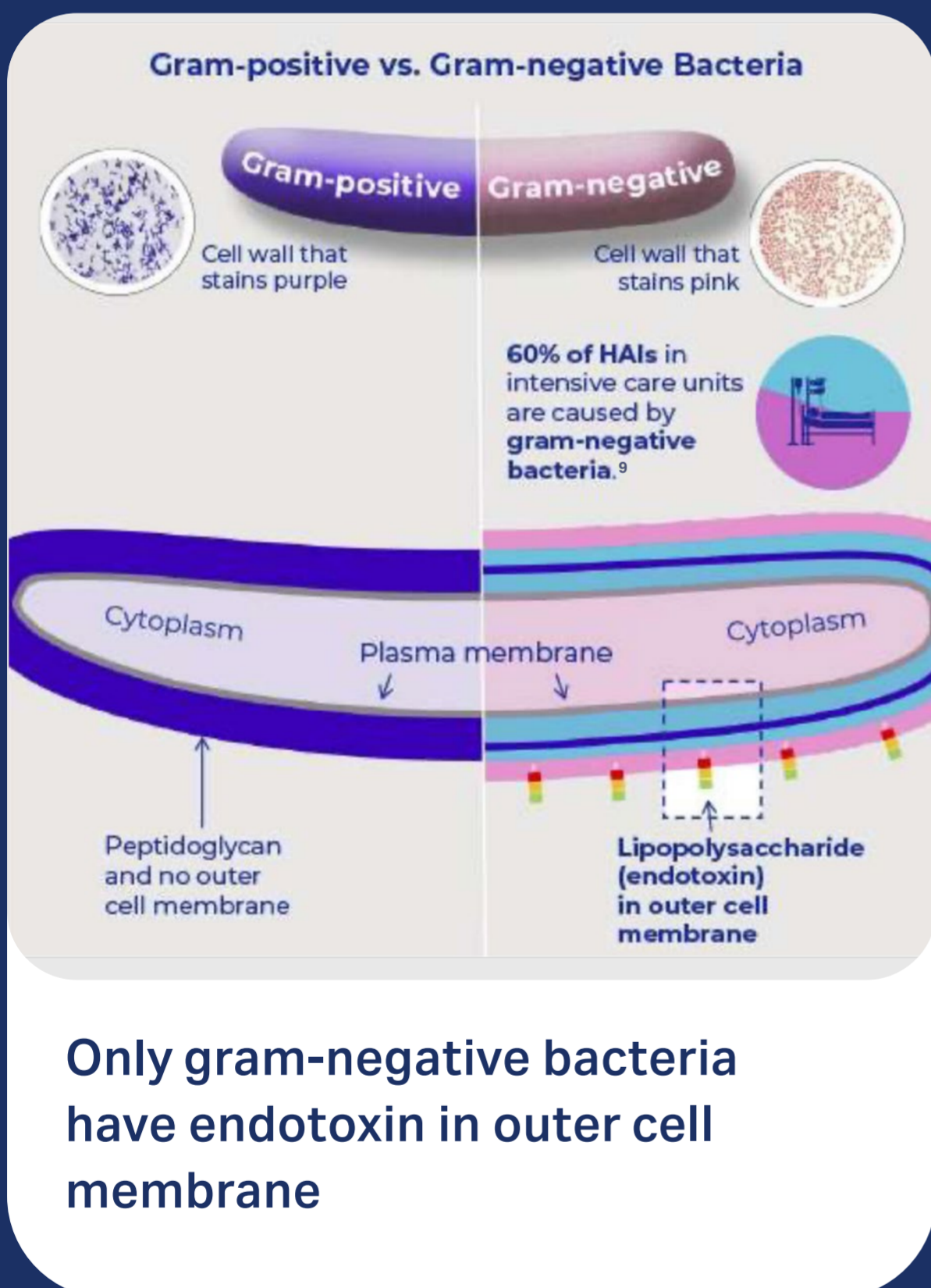
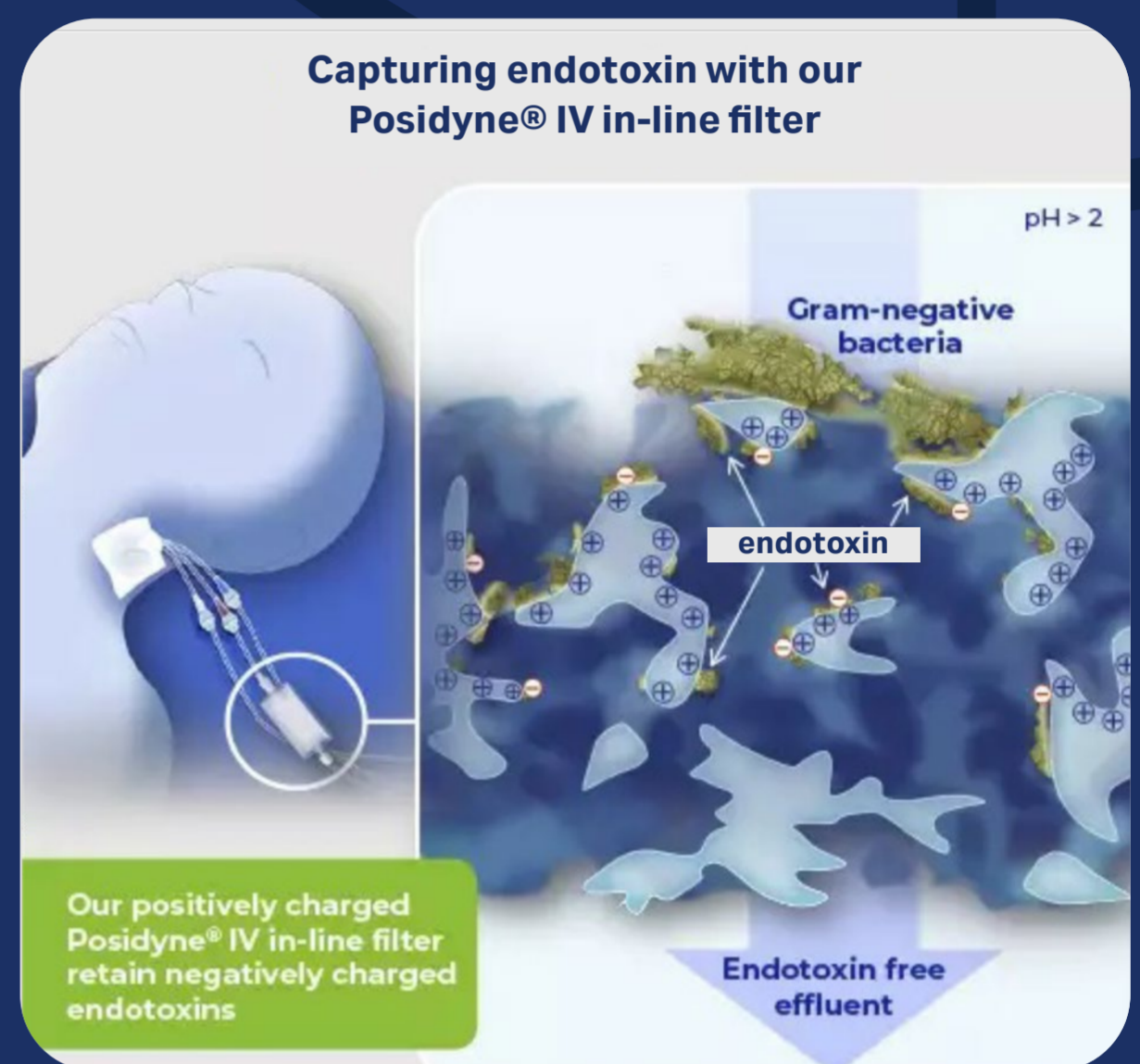


The Risk

Gram-negative bacteria can multiply and will shed endotoxin in intravenous solutions within 24 hours.



1. Fullerton J.N. et al. (2016). Intravenous Endotoxin Challenge in Healthy Humans: An Experimental Platform to Investigate and Modulate Systemic Inflammation. *J Vis Exp*; (111): 53913
2. Calvano SE, Coyle SM. (2012): Experimental human endotoxemia: a model of the systemic inflammatory response syndrome? *Surgical Infections*;13(5): 293-299
3. Bahador M., Cross A.S. (2007). From therapy to experimental model: a hundred years of endotoxin administration to human subjects. *Journal of Endotoxin Research*; 13 (5): 251-279
4. Suffredini A.F., Hochstein H.D., McMahon F.G. (1999). Dose-related inflammatory effects of intravenous endotoxin in humans: evaluation of a new clinical lot of Escherichia coli O:113 endotoxin. *J Infect Dis*; 179 (5): 1278-82
5. Suffredini A.F. et al. (1989). The Cardiovascular Response of Normal Humans to the Administration of Endotoxin. *N Engl J Med*; 321: 280-287
6. Casale TB et al. (1990). The effects of intravenous endotoxin on various host-effector molecules. *J Allergy Clinical Immunology*; 85: 45-51
7. Suffredini A.F., Harpel P.C., Parrillo J.E. (1989). Promotion and Subsequent Inhibition of Plasminogen Activation after Administration of Intravenous Endotoxin to Normal Subjects. *N Engl J Med*; 320: 1165-1172
8. Galnick H.R. et al. (1989). Von Willebrand factor release induced by endotoxin. *J Laboratory Clinical Medicine*; 113 (1): 118-12
9. Agarwal M. et al. (2018). Repeat gram-negative hospital-acquired infections and antibiotic susceptibility: A systematic review. *Journal of Infection and Public Health*; 11(4): 455-462