

Supplementary Table 1. Detailed search strategy for PubMed database

Step	Search query
#1	Population (UTI & related conditions) ("Urinary Tract Infections"[Mesh] OR "Cystitis"[Mesh] OR "Pyelonephritis"[Mesh] OR "urinary tract infection*"[Title/Abstract] OR "UTI"[Title/Abstract] OR "cystitis"[Title/Abstract] OR "bacteriuria"[Title/Abstract] OR "dysuria"[Title/Abstract])
#2	Intervention (D-mannose) ("Mannose"[Mesh] OR "D-mannose"[Title/Abstract] OR "mannose"[Title/Abstract] OR "carbohydrates"[Title/Abstract] OR "monosaccharides"[Title/Abstract])
#3	Study design (RCT filter - cochrane highly sensitive strategy) (randomized controlled trial[pt] OR controlled clinical trial[pt] OR randomized[Title/Abstract] OR placebo[Title/Abstract] OR "drug therapy"[sh] OR randomly[Title/Abstract] OR trial[Title/Abstract] OR groups[Title/Abstract]) NOT (animals[mh] NOT humans[mh])
#4	Final combination #1 AND #2 AND #3

The search strategy above was specific to PubMed. Similar search strategies, adapted with appropriate syntax and subject headings (e.g., Emtree terms for Embase), were utilized for Embase, the Cochrane Central Register of Controlled Trials (CENTRAL), and Web of Science. The search was conducted for articles published from inception to February 2026. UTI, urinary tract infection.