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Reference guide for mastitis-causing bacteria

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(Information obtained from NMC Laboratory Handbook on Bovine Mastitis and veterinary consultation for treatment recommendations)

Classification	Bacteria	Contagious or Environmental	Source	Spread	Control	Treatment*
Staphylococcus spp.	Staph. aureus	Contagious	Infected udders, hands of milkers	Milking time	Post dip, DCT ¹ , segregation and cull if necessary	Early lactation – 8 days pirlimycin, do not treat chronic infections
	Coagulase (-) staph. & S. hyicus	Neither	Skin flora & occasionally environment	Infect teat canal from skin sources	Post dip, DCT	Treat clinical cases (broad spectrum), DCT
Streptococcus spp. and Enterococcus spp.	Strep. agalactiae	Contagious	Infected udders	Milking time	Milking time hygiene, post dip, DCT	Label recommendations for beta lactam antibiotics
	Strep. dysgalactiae	Contagious and Environmental	Infected udders and environment	Milking time & environmental contact	Milking time hygiene, pre & post dip, DCT, teat seal	Label recommendations for broad spectrum antibiotics
	Strep. uberis	Environmental	Environment – early dry period	New IMI ² during early dry period	Milking time hygiene, pre & post dip, DCT, teat seal	IMM ³ Therapy or 4-5d penicillin systemically (5cc/100lbs body weight)** or 5-8 days pirlimycin
	Environmental strep & Enterococcus spp.	Environmental	Environment	Environmental contact	Milking time hygiene, pre & post dip, DCT, teat seal	
Coliform	Escherichia coli	Environmental	Bedding, manure, soil	Environmental contact	Cows clean & dry, use of sand bedding, pre dip, a J5 vaccine	Do not treat local/mild cases. Systemic cases – 2-3L hypertonic saline IV, followed by oral fluid therapy, NSAID ^{***} , injectable antibiotics and IMM ceftiofur
	Klebsiella spp.	Environmental	Organic bedding	Environmental contact	Avoid sawdust & recycled manure, pre dip, J5 vaccine	
	Enterobacter spp.	Environmental	Bedding, manure, soil	Environmental contact	Cows clean & dry, use of sand bedding, pre dip, a J5 vaccine	
	Serratia spp.	Environmental	Soil and plants	Environmental contact	Cows clean & dry, pre dip (no chlorhexidine products)	Do not respond to IMM treatment
	Pseudomonas spp.	Environmental	Water & wet bedding	Environmental contact	No water use in parlor, no cooling ponds, sand bedding, a J5 vaccine	
	Proteus spp.	Environmental	Bedding, feed & water	Environmental contact	Not much known, use of sand bedding, a J5 vaccine	
	Pasteurella spp.	Probably contagious	Upper respiratory tract of mammals and birds	Unknown – likely cow to cow	Prevent teat injuries, remove affected cows from herd	
Other	Yeast & mold	Environmental	Soil, plants, water	Dirty infusions	Aseptic infusions	No treatment
	Corynebacterium bovis & other coryneforms	Contagious	Infected udders	Cow to cow	Post dip	Treat clinical cases and DCT
	Prototheca	Environmental	Soil, plants, water	Dirty infusions, infected udders	Aseptic infusions, eliminate infected cow	No treatment – cull cow
	Bacillus spp.	Environmental	Soil, water, air	Dirty infusions	Aseptic infusions	Broad spectrum antibiotic
	Trueperella pyogenes	Environmental	Teat injuries	Flies	Fly control	Kill affected quarter or remove from herd
	Mycoplasma spp.	Contagious	Infected udders	Milking time	Milking time hygiene, segregation and culling	Remove from the herd

*These are general treatment recommendations – actual recommendations may vary from herd to herd. Please consult your veterinarian.

**Extra label usage; Please consult your veterinarian before starting this protocol and for appropriate milk and meat withdrawal times

***Nonsteroidal anti-inflammatory drugs

¹ – DCT, dry cow therapy; ² – IMI, intramammary infection; ³ – IMM, intramammary