

Six Steps of SURGICAL ANTIBIOTIC PROPHYLAXIS IN DOGS

Are prophylactic antibiotics indicated for this surgery?

NO

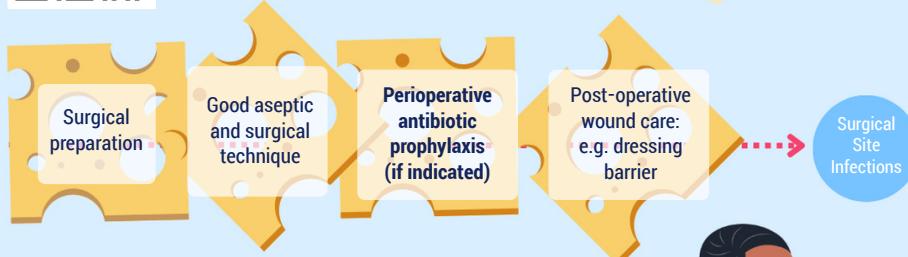
Exclude antibiotics for clean surgical procedures

Check the BSAVA ProtectMe Poster or national guidelines for more information.



Swiss Cheese Model

Multiple preventive measures should be taken to minimize surgical site infections.



NOTE. If you decide to use antibiotics, do it right!

YES

2

What kind of contamination do you expect?

Skin microbiota
(most commonly *S. pseudintermedius*)

Gastro-intestinal microbiota
(most commonly *E. coli*)

3

Choose antibiotic

with an appropriate spectrum of activity*

4

Use appropriate IV dose

identified from the current antimicrobial use guidelines

5

Choose the correct peri-operative timing for IV application

based on time to achieve tissue peak concentration of a specific antibiotic



*susceptibility pattern may vary regionally and might influence the antibiotic choice

Type of Expected Contamination	Antibiotic Choice (IV)	Dose (IV)	Time of peri-operative application before the first incision	Re-administration interval for the duration of surgery
Skin microbiota	Cefazolin	22-25 mg/kg	30 min	2h or earlier (22 mg/kg) or 3h (25 mg/kg)
	Cefuroxime	20 mg/kg		2h or earlier
	Cefalexin	15 mg/kg	30 min	3h or earlier
	Amoxicillin/ clavulanic acid	20 mg/kg as 16.67 mg/kg of amoxicillin	30 min	4h or earlier
	Ampicillin	20 mg/kg	80 min	
Gastro-intestinal microbiota	Cefazolin	22-25 mg/kg	30 min	2h or earlier
	Amoxicillin/ clavulanic acid (only critically ill)	20 mg/kg as 16.67 mg/kg of amoxicillin	30 min	1.5h or earlier
	Ampicillin	20 mg/kg	80 min	
	Cefalexin		ineffective	
	Cefuroxime		ineffective	

i For more information check the study

Population pharmacokinetic meta-analysis of five beta-lactam antibiotics to support dosing regimens in dogs for surgical antimicrobial prophylaxis

Pelligand L, Møller Sørensen T, Cagnardi P, Toutain PL, Allerton F. Vet J. 2024 June



bit.ly/SurgProp

Thanks to F. Landoni and G. Albarellos (Argentina) for the initial inspiration of this study.

Plan post-op administration (rarely needed)

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Plan re-administration intervals during surgery

based on the pharmacokinetic profile of the selected antibiotic and duration of surgery