

# Cascade use



Guide for veterinarians

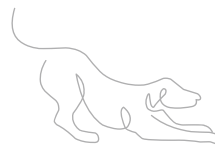
if NO authorised veterinary  
medicine is available



Federation  
of Veterinarians  
of Europe

For any questions or comments,  
please feel free to contact us.

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of Europe

Is there an authorised veterinary medicine for this species and indication?



Under exceptional circumstances and in particular to avoid unacceptable suffering the veterinarian is allowed to use the Cascade. Is this the case?

NO

YES

Is there a veterinary medicine authorised for another species /condition in your or another Member State?

YES

Use authorised veterinary medicine\*

NO

YES

Use this authorised veterinary medicine\*

Is there a medicinal product for human use authorised in your country or another EU Member State?

YES

Use this authorised medicine\*

NO

Is it possible to extemporaneously prepare a product?

YES

Prepare extemporaneously\*

NO

Is there a veterinary medicine product authorised in a third country for the same species and same indication?

YES

Use this authorised veterinary medicine \*\*

NO

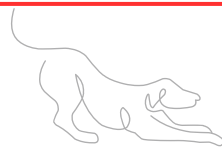
NO

No treatment with a medicinal product possible

For details on specific precautions and veterinarian responsibilities, please refer to pages 10-11



\*Restrictions to the use of antimicrobials may apply



\*\*Does not apply to immunologicals (vaccines)

Is there an authorised veterinary medicine for this species and indication?

NO ↓

YES ↓

Under exceptional circumstances and in particular to avoid unacceptable suffering the veterinarian is allowed to use the Cascade. Is this the case?

YES →

Is there a veterinary medicine for another **food-producing** species /condition in your or in another Member State?

YES →

Use this authorised veterinary medicine\*

NO ↓

Is there a veterinary medicine authorised in the relevant Member State for use in a **non-food-producing** animal species for the same indication?

YES →

Use this authorised veterinary medicine\*

NO ↓

Is there a medicinal product for human use authorised in your country or another EU Member State?

YES →

Use this authorised product\*

NO ↓

Is it possible to extemporaneously prepare a product?

YES →

Prepare extemporaneously\*

YES →

Use this authorised veterinary medicine\*\*

NO ↓

Is there a veterinary medicine product authorised in a third country for the same species and same indication?

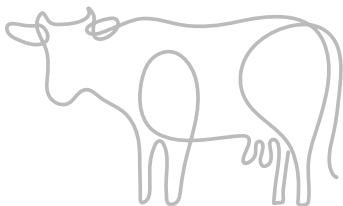
YES →

No treatment with a medicinal product possible

NO ↓

For details on specific precautions, veterinary responsibilities, and withdrawal periods, please refer to pages 10-11.

! \*Restrictions to the use of antimicrobials and concerning maximum residue limit (MRL) status may apply



\*\*Does not apply to immunologicals (vaccines)



Is there an authorised veterinary medicine for this species and indication?



NO ↓

YES ↓

Under exceptional circumstances and in particular to avoid unacceptable suffering the veterinarian is allowed to use the Cascade. Is this the case?

YES →

Use this authorised veterinary medicine\*

Is there a veterinary medicine authorised for same/another aquatic species /condition in your or another Member State?

YES →

Use this authorised veterinary medicine\*

NO ↓

Is there a veterinary medicine product authorised for use in food-producing terrestrial species in your or in another Member State?

YES →

Use this authorised veterinary medicine\*

NO ↓

Is there a medicinal product for human use authorised in your country or another EU Member State?

YES →

Use this authorised product\*

NO ↓

Is it possible to extemporaneously prepare a product?

YES →

Prepare extemporaneously\*

YES →

Use this authorised veterinary medicine\*\*

NO ↓

Is there a veterinary medicine product authorised in a third country for the same species and same indication?

YES →

No treatment with a medicinal product possible

NO ↓

For details on specific precautions, veterinary responsibilities, and withdrawal periods, please refer to pages 10-11.

**!** \*Restrictions to the use of antimicrobials and concerning maximum residue limit (MRL) status may apply

Please note that a list under Article 114(3) ('Aquatic List') is currently being developed. Changes may occur once the list is finalized and becomes available



\*\*Does not apply to immunologicals (vaccines)

Is there an authorised product for this species and indication?



NO

Under exceptional circumstances and in particular to avoid unacceptable suffering the veterinarian is allowed to use the Cascade. Is this the case?

YES

Is the equid's passport declaring the animal as not intended for slaughter for human consumption?

YES

Use authorised veterinary medicine\*

Use the Cascade as for companion animals (page 2-3)

YES

NO

Can you use the Cascade as for **food-producing** terrestrial species?

YES

Use the Cascade for **food-producing** terrestrial species and specify a withdrawal period accordingly (page 4-5)

NO

Can you use a substance from the list of essential substances for equids?

YES

Use a substance from the list and specify a withdrawal period of 6 months (page 12-13)

NO

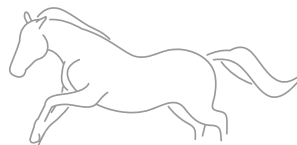
No treatment with a medicinal product possible

**Non-food-producing equids:**

For an equid to be considered as a non-food-producing animal, it must be declared in the horse passport as not intended for slaughter for human consumption, in accordance with Regulation 504/2008 and Article 112 of Regulation (EU) 2019/6.



**\*Restrictions to the use of antimicrobials may apply**



# Responsibilities, Record-Keeping, and Product Use for Food-Producing and Companion Animals

## Record-Keeping Guidelines and responsibility of the veterinarian

**Veterinary responsibility:** The use of the cascade is always the veterinarian's direct responsibility.

**Record keeping:** The veterinarian has to keep records of the VMPs used in the framework of the cascade for minimum 3 years (see national legislation)

- Date of examination
- Details of the owner
- Species
- Number of animals treated
- Diagnosis
- Medicinal product prescribed

### and for food-producing animals:

- Doses administered
- Duration of treatment
- Recommended withdrawal period

## How to Calculate the Withdrawal Period for Food-Producing Animals?

Withdrawal periods, as specified in Regulation (EU) 2019/6, Article 115, must be adhered to.

When determining the withdrawal period, follow these steps:

1. Check Regulation (EU) No 37/2010:

Verify whether the active substance is allowed for use in **food-producing** animals (see Table 1). Ensure the substance is permitted for the specific species and target tissues.

2. If the substance is listed in regulation (EU) N° 37/2010 but not for such species or such target tissues, refer to Regulation (EU) N° 2017/880. Follow the conditions outlined for extrapolation of withdrawal periods.

3. If no withdrawal period is established under the above regulations, apply the following minimum withdrawal periods:

For meat and offal:

- The longest withdrawal period provided in its summary of the product characteristics multiplied by **1.5**, or
- **28 days** for meat and offal if the medicinal product is not authorised for food-producing animals, or
- **1 day** if the medicinal product has a zero withdrawal period and is used in a different taxonomic family.

For milk:

- The longest withdrawal period provided in the summary of the product characteristics multiplied by factor **1.5**, or
- **7 days** if not authorised for animals producing milk for human consumption, or
- **1 day** if the medicinal product has a zero withdrawal period.

For eggs:

- The longest withdrawal period provided in the summary of the product characteristics for any animal species multiplied by factor **1.5**, or
- **10 days** if not authorised for animals producing eggs for human consumption

For fish meat, the withdrawal period must be at least:

- Longest withdrawal period for any aquatic species multiplied by **1.5** and expressed as degree-days, or
- **500 degree-days**, if not authorised for food-producing animal species, or
- **25 degree-days**, if the highest withdrawal period for any species is zero.

## Use of Third-Country Veterinary Products

Veterinarians may use non-immunological products authorised in a third country for the same species and indication only when all previous options have been exhausted.

A competent authority may permit the use of non-EU-authorized immunological veterinary products:

- During an outbreak of a listed disease (Article 5, Regulation 2016/429) or an emerging disease (Art 6, Regulation 2019/6).
- When the authorised product for an existing, non-listed disease in the Union is no longer available, to protect animal health, welfare, and public health.

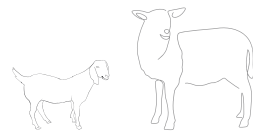
## Member State Availability or Shortage:

The Cascade can also be used if no product is temporarily available e.g. a shortage due to a supply issue in the veterinarian's Member State.

## Use of antimicrobial medicinal products Art 107(6)

- Antimicrobials must **not be used routinely** or to compensate for poor hygiene, care, or farm management.
- Antimicrobials **cannot be used to promote growth or increase yield** in animals.
- **Prophylaxis restrictions:** Allowed only in exceptional cases for individual animals or small groups at high risk of severe infection.
- **Metaphylaxis conditions:** Permitted only when the risk of infection spread within a group is high, and no alternatives are available. Member States should provide guidance and promote criteria for its use.
- **Human-reserved antimicrobials:** Substances designated under Article 37(5) are not allowed to be used as per Articles 112, 113, and 114.

\* For the purposes of the Cascade, Iceland, Liechtenstein, and Norway are not considered third countries.



## List of substances which are essential for the treatment of equine species

### Anaesthesia, analgesics and substances used in association with anaesthesia

#### • Sedation and premedication:

- Acepromazine
- Atipamezole
- Diazepam
- Flumazenil
- Midazolam
- Naloxone
- Propofol
- Sarmazenil
- Tiletamine
- Zolazepam

#### • Hypotension or respiratory stimulation during anaesthesia:

- Dobutamine
- Dopamine
- Ephedrine
- Glycopyrrolate
- Noradrenaline (norepinephrine)

#### • Analgesia:

- Buprenorphine
- Fentanyl
- Morphine
- Pethidine

#### • Muscle relaxants and associated substances:

- Atracurium
- Edrophonium
- Guaifenesin

#### • Inhalation anaesthetics:

- Sevoflurane

#### • Local anaesthetics

- Bupivacaine
- Oxybuprocaine
- Prilocaine

### Anti-inflammatory substances

#### • Corticosteroids

- Triamcinolone acetonide
- Flumethasone

#### • Anti-endotoxins

- Pentoxifylline
- Polymyxin B

### Cardiovascular medicines

- Amiodarone
- Allopurinol
- Vasopressin
- Digoxin
- Quinidine sulfate and quinidine gluconate
- Procainamide
- Propranolol

### Convulsions

- Phenytoin
- Primidone

### Gastrointestinal agents

- Bethanechol
- Codeine
- Loperamide
- Metoclopramide
- Phenoxy-benzamine
- Propantheline bromide
- Ranitidine
- Sucralfate

### Rhabdomyolysis

- Dantrolene sodium

### Antimicrobials

#### • Klebsiella spp. Infections:

- Ticarcillin

#### • Rhodococcus equi infections:

- Azithromycin
- Rifampicin

#### • Septic arthritis

- Amikacin

### Respiratory medicines

- Ambroxol
- Budesonide
- Fluticasone
- Ipratropium bromide
- Oxymetazolin

### Antiprotozoal agents

- Isometamidium
- Ponazuril
- Pyrimethamine

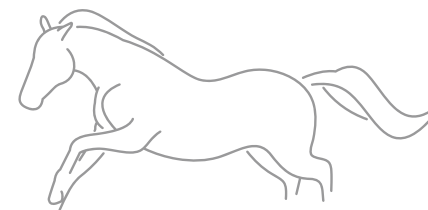
### Ophthalmic medicines

#### • Ocular ulcers

- Acyclovir
- Idoxuridine

#### • Glaucoma

- Phenylephrine
- Tropicamide
- Dorzolamide
- Latanoprost
- Timolol maleate
- Cyclosporin A
- Ketorolac
- Ofloxacin
- Fluoresceine
- Rose Bengal



### Hyperlipaemia

- Insulin

### Fungal infections

- Griseofulvin
- Ketoconazole
- Miconazole
- Nystatin

### Diagnostic imaging

- Radiopharma-ceutical Tc99m

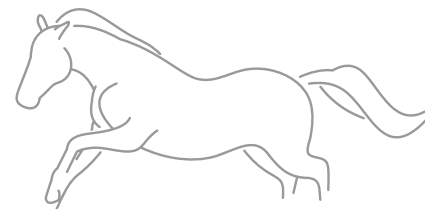
### Miscellaneous

- Carbamazepine
- Cyproheptadine
- Domperidone
- Gabapentin
- Hydroxyethyl-starch
- Imipramine
- Thyrotropin releasing hormone
- Barium sulphate
- Iohexol
- Iopamidol

Commission Regulation (EU) No 122/2013



Please note that this list is currently being revised. Once the new list is adopted and becomes available this page will be updated.



## List of substances essential for the treatment of equine species

### Anaesthesia, analgesics and substances used in association with anaesthesia

#### • Sedation and premedication:

- Acepromazine
- Atipamezole
- Diazepam
- Flumazenil
- Naloxone
- Propofol
- Dexmedetomidine

#### • Hypotension or respiratory stimulation during anaesthesia/ systemic disorders:

- Dobutamine
- Dopamine
- Ephedrine
- Glycopyrrolate
- Noradrenaline (norepinephrine)
- Vasopressin
- Allopurinol
- Dalteparin
- Gelatinpolysuccinate

#### • Analgesia:

- Fentanyl
- Morphine
- Ketorolac
- Triamcinolone
- Bromfenac
- Methocarbamol

#### • Muscle relaxants and associated substances/ musculoskeletal disorders

- Atracurium
- Edrophonium
- Guaifenesin
- Dantrolene sodium
- Cisatracurium

#### • Local anaesthetics

- Oxybuprocaine
- Prilocaine

### Anti-inflammatory substances

#### • Corticosteroids

- Triamcinolone acetonide

#### • Anti-endotoxins

- Polymyxin B Cardiovascular medicines
- Amiodarone
- Allopurinol
- Vasopressin
- Quinidine sulfate and quinidine gluconate
- Propafenone
- Quinapril
- Sotalol
- Verapamil

### Nervous system disorders

- Diazepam

### Gastrointestinal disorders

- Metoclopramide
- Phenylephrine
- Ranitidine
- Sucralfat
- Misoprostol

### Rhabdomyolysis

- Dantrolene sodium

### Antimicrobials

#### • Rhodococcus equi infections

- Azithromycin

### Respiratory medicines

- Ambroxol
- Fluticasone
- Ipratropium bromide
- Oxymetazolin Antiprotozoal agents
- Phenylephrine

### Ophthalmic medicines

#### • Ocular ulcers

- Acyclovir

#### • Glaucoma

- Phenylephrine
- Tropicamide
- Timolol maleate
- Cyclosporin A - Ketorolac
- Ofloxacin
- Fluorescein
- Rose Bengal

#### • Ophthalmology

- Triamcinolone acetonide
- Acetazolamide
- Cyclopentolate
- Synephrine
- Tetryzoline

### Hyperlipaemia

- Insulin

### Metabolic disorders

- Pergolide

### Substances for tumours

- Imiquimod

### Fungal infections

- Miconazole
- Nystatin

### Diagnostic imaging/ diagnostic procedures

- Barium sulfate
- Fluorescein
- Iohexol
- Phenylephrine
- Rose Bengal
- Thyrotropin releasing hormone

### Miscellaneous

- Domperidone
- Thyrotropin releasing hormone
- Barium sulphate
- Iohexol

Commission Regulation (EU) No /



## Antimicrobials or groups of antimicrobials reserved for treatment of certain infections in humans

### Antibiotics

- Carboxypenicillins
- Ureidopenicillins
- Ceftobiprole
- Ceftaroline
- Combinations of cephalosporins with beta-lactamase inhibitors
- Siderophore cephalosporins
- Carbapenems
- Penems
- Monobactams
- Phosphonic acid derivatives
- Glycopeptides
- Lipopeptides
- Oxazolidinones
- Fidaxomicin
- Plazomicin
- Glycylcyclines
- Eravacycline
- Omadacycline

### Antiprotozoals

- Nitazoxanide



### Antivirals

- Amantadine
- Baloxavir marboxil
- Celgosivir
- Favipiravir
- Galidesivir
- Lactimidomycin
- Laninamivir
- Methisazone/metisazone
- Molnupiravir
- Nitazoxanide
- Oseltamivir
- Peramivir
- Ribavirin
- Rimantadine
- Tizoxanide
- Triazavirin
- Umifenovir
- Zanamivir



Commission Implementing Regulation (EU) 2022/1255

## List of antimicrobials which shall only be used under restrictions in cascade

Conditions on the use of antimicrobials	Target pathogen identification and AST	Restricted around certain indications	Restricted to use for certain indications only	Restricted from use in certain species	Use in individual animals only	Restriction on route of administration	HMPs only for use in individual animals
Aminopenicillin- BLI combinations	✓						
3rd & 4th gen. cephalosporins	✓	Salmonella			✓		
Polymyxins	✓	Salmonella				✓	✓
Amphenicols	✓						
(Fluoro)quinolones	✓	Salmonella				✓	✓
Rifamycins (excl. EU-VMPs)	✓	Prophylaxis R. equi	Mycobacteria MDR Staph		✓		
TB drugs	✓				✓		
Riminofenazines	✓				✓		
Pseudemonic acids	✓	Not for decolonisation	MRSA/P		✓	Topical only	
Remdesivir			FIP only				
Echinocandins	✓	Last resort			✓		
Amphotericin B		Last resort					