

FACTSHEET

Administration of drugs to animals – necessity of group treatments

Veterinary medicine has to deal with many different species. Furthermore, in case of food producing animals the group / herd / whole flock conditions has to be taken into consideration. The appropriate administration route for treatment depends on the specific case and can vary by illness, severity of illness, selected drug, age or condition of the animals, species of the animal, type of housing and other factors. Especially in poultry, swine and aquaculture group treatment via oral routes including antibiotics are indispensable in situations of an outbreak of diseases.

Oral drugs can be given by mixing with feed or drinking water. For animals that are not regularly fed a concentrated feed or which can be handled repeatedly, a parenteral injection might be the most appropriate. Some drugs are not available or appropriate in this form and have to be delivered orally. For animals that are fed regularly (rather than grazing freely) or that cannot be easily handled, the most appropriate means of administering the drug may be to include the drug in feed or water. This eliminates the stress of daily (or more frequent) handling of animals, which can make the animals more ill.

Poultry

For the treatment of food producing animals such as poultry several factors are to consider when selecting an administration route including the severity of the disease. It would be desirable to treat critically ill birds with parenteral medications. However, there are considerable limitations on the feasibility in the poultry production systems: 1) The availability of appropriate drug formulations; 2) The withdrawal period i.e. the rate of depletion from the injection side limits such use only to very young birds at the beginning of the fattening period; 3) The number of birds to be treated; 4) The frequency of administration, resultant stress to the birds; 5) the labour involved in completing the treatment regimen; and 6) the ability of the owner to complete the treatment regimen. Medication via feed or drinking water may represent the only practical means of administering medicines. For example, there is no meaningful alternative to medication via the drinking water for large groups of poultry.

Also for antibiotics it is commonly agreed that the preferred route of treatment in poultry is via the drinking water. In current broiler production, there are several thousands of birds in one barn in floor-raising husbandry systems. Just imagine how many hours it would take to inject 10,000 birds and how many people you would need to accomplish the job in one day; and to repeat this exercise over several days of the treatment period. Not to speak of the stress and panic caused if one want to catch and restrain all those birds as they are easily stressed to the point of dying. It is simply not possible, also for animal welfare reasons.

Swine

The conditions regarding administration of drugs in swine production are similar as described above for poultry. Especially in case of an outbreak of a highly contagious disease whole flock treatment via medicated feed or drinking water may be the only practical way to administer the drug and stop spreading of the disease. Administering by injection to a large group of swine, in case of most antibiotics to be repeated over several days, would cause tremendous stress and panic to swine to the point of severe suffering or even dying. The withdrawal period of the products and potential to cause irritation at the injection sides need to be considered. In any case multiple injection sides in all swine of a large flock will have a very negative economic effect for the animal owner.

A somewhat comparable situation between animals and humans comes from the military. Treating animals in groups is similar to treating humans on a naval carrier, where the largest ships can have some 5000 crew. Like animals in herds and flocks, naval crews are in close proximity, need to be kept healthy, and get treated when sick. Naval medical protocols are very similar to animal protocols - both get preventative care, like mass vaccination of sailors; and when one sailor gets sick, crew is carefully surveyed and if needed, treated.

Aquaculture

In intensive fish farming, drugs are administered generally by either water-borne e.g. anti-parasitides, or oral means in most cases by medicated premixes e.g. antibiotics, or else through injection. As a matter of fact the latter is only possible in very few species and special husbandry systems. In the majority of cases of a disease outbreak group treatment is indispensable. However, all treatments should only be done by mitigating the environmental impact. Especially the use of antibiotics should be limited to closed systems, preferably with also a waste water management system attached.

To avoid any misunderstanding it is explicitly pointed out here that the examples given for aquaculture should demonstrate the general need for group treatments. In no way HealthforAnimals intends to justify the use of critically important antibiotics (3.-4. gen. cephalosporines, fluoroquinolones, colistin) in fish and/or shrimp farming settings.

HealthforAnimals considers veterinary oversight on drug use in food producing animals very important. We strongly support veterinary involvement where available, and when available prescription in single animals as well as for group treatments.

This factsheet was produced by experts working together in HealthforAnimals, the global animal medicines association. www.healthforanimals.org