

# 12 Top Ways to Keep your Rabbit Healthy, Well & Contented



By  
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## Introduction

Hello, my name is Steve Brittain and I decided to write this book after being asked many times, by rabbit owners and enthusiasts alike, about rabbit care and what the best ways are to make sure their rabbit stays healthy, and lives a happy life.

“Happy”? I hear you ask. Well, yes, rabbits can be happy, and they even have their own way of communicating this to you. Because this, and some other aspects, are not always realised, I decided to sit down and write this book in order to try and clear up some of the misunderstandings about rabbits.

I guess my interest in small mammals started when I was a kid. My grandparents owned a farm with a small holding, and I use to spend most weekends, and large parts of my school holidays with my parents, helping out on the farm.

Stories are plentiful, of some of the antics the animals would get up to; especially the small mammals and I suppose that is where my specific interest in rabbits started.

Watching the local vet arrive, and miraculously understand what was wrong with an animal, and consequently helping that animal to recover was always a sense of fascination to me. And then, seeing the animals running around in a free environment was always rewarding.

Of all those animals, I found rabbits to be the most misunderstood and definitely the most misjudged. I began to realise that rabbits are actually loving, intelligent and compassionate creatures, with, each rabbit, amazingly having its own different personality.

Over the following years I witnessed many pet rabbits suffer, so I decided to write about the top twelve tips, or guidelines, in keeping a rabbit healthy, well and content. I hope this book helps and will be of benefit to rabbit owners, and others, who may have an interest in such matters.

I originally called the book, the top ten tips, but found I did not want to limit the book to simply ten tips; in the end I settled on twelve.

I also hope, that by following some of the advice and tips in this book, you will save yourself some of the vet's costs, involved in keeping a rabbit, which as anyone who owns a pet knows, can be very expensive for some treatments.

Some of you might read this book and say, *"Hey, what about this, that or the other"* and yes I agree. There is always something else, and other topics, you can add, but the twelve articles I have written about here, I consider to be perhaps the twelve most important guidelines, which will give a good base to keeping your rabbit both healthy and content.

The tips are written in an order, but obviously you can go straight to the one you are most concerned with, if you prefer. However, I do ask you to read through the complete 12 chapters, if possible, as there may be some points in this book, you are not aware of. Even now, after all these years, I still learn little gems of information, so hopefully there will be plenty, or at least some, here for you.

Well, I hope this book helps you in the care of your rabbit, or rabbits, and hopefully, over the years you will get plenty of enjoyment from caring for them.

Best of luck

S Brittain, 2014

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# Top Tip 1

## What to Feed your Rabbit, to Keep them Healthy

Okay, so here's the number one question I get asked, by Rabbit owners, when discussing their rabbit.

**'What should I feed my rabbit?'**

When I give the answer, I often get a look of puzzlement or disbelief, as many new rabbit owners, and even some 'more experienced' rabbit enthusiasts, are under the impression rabbits can eat all manner of things, and stay healthy.

**Well, they can't!**

For example, something I often tell people that ask this question is, do **not** give your rabbit lettuce. Some say to me, *'well we had a rabbit for years and always fed them lettuce'*. Well, you know what? With that rabbit, they just got lucky because with a different rabbit, they wouldn't be so lucky, and lettuce can cause the rabbit serious digestive problems.

**Rabbits have a very sensitive digestive system. They cannot expel gas in any way and therefore if fed the wrong foods, the gas builds up, leading to bloating and possible GI Stasis, which is a fatal complaint.**

When asked, by anyone, I always say, *'Think of what a rabbit eats in the wild, in its natural habitat and surroundings'*, and when they do that, it becomes clear that perhaps what they are feeding their rabbit is not such a good idea, after all.

Have you ever seen a rabbit eating that muesli type mix, also known as 'rabbit mix' in the wild? Or noticed a rabbit munching on lettuce, cucumber, radishes, biscuits, bread or even chocolate in its natural surroundings? The simple answer is **NO**.

Sure, you may get a rabbit straying onto a farmers lettuce patch or similar, but how do you know that rabbit doesn't go away and have nasty digestive problems? Answer is, you don't.

In any event, there are different species of wild rabbits, throughout the world, living in different habitats, and many of those species would not even have access to vegetables such as lettuce.

Of course, you might give your rabbit certain vegetables or nibbles of biscuits or chocolate for a while, without any trouble. But if you continually do this, after a while the rabbit can start having problems, and you will be unsure what it is.

Then if you're lucky, and the rabbit survives, you have to change the diet and that can be a big problem for a rabbit.

Okay, so what does a rabbit eat in the wild or in its natural habitat/surroundings?

Well, the answer is they graze on a mixture of grasses and all sorts of plant material (*hay is a mixture of the same*), and undergrowth including wild growing herbs (*some of which we use*) and fallen leaves etc.

And guess what? Even then, wild rabbits probably eat something they shouldn't. Yet, it has to be said, that it's very rare for wild rabbits to get some of the complaints domesticated pet rabbits commonly get.

Time and time again worried rabbit owners take their rabbit to the vets with a problem, where if the rabbit had of been on the correct diet, there would never have been the need for a visit to the vets in the first place, thereby saving the rabbit pain and/or discomfort, and your worry AND money.

So, let's look at what you should actually feed your rabbit.

## **1. Hay!**

Some rabbit owners think hay is just for bedding, and very often substitute it with straw. **Please don't do this!**

**Hay has to be the main part of a rabbit's diet.** Around 75% or 80% of their diet must be hay. Okay, you don't sit there with a set of scales weighing what is 80%, but just make sure the rabbit always has plenty of good quality fresh hay to eat, and graze on.

The hay should be a good quality meadow hay, grass hay or timothy hay. Alfalfa hay is best avoided, since it is high in calories and may make your rabbit fat. Do not feed bedding hay, thinking that it will be good enough.

Hay is similar to what rabbits eat in their natural surroundings, a mixture of grasses and other natural plant material. Good quality hay will help keep a rabbit's teeth in the proper condition, by the continued process of chewing on the hay. Good quality hay will also help to maintain a good digestive system for the rabbit, providing the essential roughage a rabbit must have.

**There really is no substitute to hay for a rabbit!**

## **2. Nutritious rabbit nuggets**

The nutritious nuggets for rabbits are fine, providing they are fed in moderation and the rabbit is not overfed with the nuggets; look for the veterinary recommended types that contain the necessary fibre and other nutrients rabbits need.

*As a note on rabbit nuggets, the correct amount will depend on the size of the rabbit. It is advisable not fill up a rabbit's bowl and then when the bowl is empty assume your rabbit needs more. **Do not overfeed.***

*If you change your rabbit's bedding daily, why not try, after you have put in the fresh hay, scattering some pellets amongst the hay? Obviously, do not scatter the pellets amongst soiled or dirty hay.*

You may find there are different formulas of nuggets for different types of rabbit, such as one sort for 'junior & dwarf' rabbits and another kind for 'adult' rabbits etc. It is not for me to tell you what brand to buy, but if you go to any good rabbit or pet store you will see them on sale.

Please try **not to feed** your rabbit the muesli style foods, also called '**rabbit mix**'. Rabbits have a sweet tooth and this type of feed encourages selective feeding, with the rabbit picking out just the bits they like, leaving the fibre, minerals and vitamins still in the bowl.

Rabbits fed on this type of food can end up with a digestive problem, which in rabbits, is very serious, possibly fatal.

### 3. Herbs and the like

So, what other things can we feed a rabbit? Well you can supplement a mainly hay based diet with fresh herbs such as Basil, Parsley, Watercress & Dill.

These herbs make nice little treats for a rabbit.

### 4. Plants you might find growing naturally

Rabbits love dandelion leaves and dandelion plant, milk thistle, wheat grass and freshly growing grasses, of course.

**Do make sure you wash any of these under clean running water**, as rabbits can pick up internal parasites from any unwashed wild leaves, plants and grasses etc. *I discuss 'Internal parasites' in more depth at a later point in this book.*

### 5. Little treats from the home

Every now and then there should be no problem with giving your rabbit little treats such as a portion of carrot, or a small piece of pear or apple.

**Please note: If feeding apple or pear, please do make sure that you do not feed any apple or pear pips, since they carry minute traces of a compound that while harmless to humans, may be poisonous to rabbits.**

**Further note: Carrot is very high in sugar, so you should only feed a small portion, as a treat.**

### 6. Fresh clean water

Fresh clean water, in a bowl and/or water bottle needs to be made available, at all times.

The bowl and/or bottle that holds the water for your rabbit, should also be cleaned out on a regular basis.

### **And basically, that's it!**

Some rabbit owners can give their rabbit/s the wrong diet, and get away with it for a while.

However, in the end, and probably sooner rather than later, the rabbit will suffer and not only will the rabbit suffer, so will a rabbit owners pocket, with the vets cost likely to be incurred.

You might think this is a boring diet. Well, yes, maybe it is, or maybe it isn't, to a rabbit. It could be worthwhile remembering though, that what a rabbit never has, *like those little pieces of chocolate or bread etc*, a rabbit will never miss.

**The important point to be made here, is that to be given plenty of the correct diet, in the correct amounts, is one of the most important factors and should help to maintain your rabbit's long term health and well being.**

# Top Tip 2

## Your Rabbit's Home

So, once you know your rabbit is on the correct diet, you need to consider the type of housing for your rabbit. Whether it's a hutch, a cage, or a run all depends on whether you have an indoor house rabbit, or a rabbit outdoors.

It has to be said that an increasing amount of rabbit owners these days keep their rabbit, or rabbits, indoors and I find less and less rabbits are being housed in a hutch out in the garden, backyard, or elsewhere.

For this reason, when considering a rabbits housing, I have broken Top Tip 2, into two sections, **the Indoor rabbit** and **the Outdoor rabbit**.

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### The Indoor Rabbit

Wherever a rabbit is kept, the rabbit needs a place it knows to be its home, somewhere that is safe, and can go to, as and when is needed. Even more importantly, somewhere the rabbit can bolt to, if it becomes scared or needs to have time alone.

If your rabbit has free use of a complete room for very long periods, then the size of the cage is not such an important issue, but even then, most rabbits are caged ,when the owner leaves the house, or goes to bed etc.

For this reason, there are three considerations when deciding on the size of the cage, and these are that the cage needs to be large enough for the rabbit to,

- **Stand upright on their back legs**
- **Lie fully outstretched in any direction**
- **Move or turn around fully unobstructed**

Obviously, if the house rabbit is only let out daily, for an hour or two, or for short periods, then the size of the cage takes on much more importance, and the three rules above most definitely apply.

Some people keep a hutch indoors, in preference to a cage. Size wise, there may be little difference.

Rabbits need a place to where they can go, in times of stress or for some peace, and just as importantly, within that cage or hutch there must be a closed off area that is dark, and where the rabbit cannot be seen.

Most modern day hutches have an enclosed box area, built into the hutch, as do most rabbit cages. However, if you have a rabbit cage that does not have an enclosed area, you will need to either put some form of box construction in the cage, or cover part of the cage, with sheet of some sort.

**Closed off areas and cosy corners etc are very important for a stress free rabbit, and a stress free rabbit is a healthy and happier rabbit!**

Many modern day rabbit cages do tend to be on the small side, so you need to weigh up how much exercise you think your rabbit will normally get, and then consider perhaps buying a hutch and, if needed, convert the hutch to how you want it to look and sit in your home.

*I would just like to mention here, that there is no real point in buying a 'starter' home for a rabbit, because rabbits soon outgrow such a home, and you will have wasted your money.*

Many people do both with their rabbit/s, in that they are kept indoors and also let out in a run in the garden, during the daytime. *I discuss 'rabbit runs' in the **outdoor rabbit** section below.*

It should be remembered that even with a house rabbit, they will still need plenty of exercise.

Think of the example I gave in **Top Tip 1**, where I asked you to consider what rabbits eat in the wild, in their natural surroundings. Apply this rule to exercise for rabbits, and you will see what I mean.

Of course, the one big benefit for a house rabbit is that, hopefully, they will have more company. Rabbits are intelligent creatures and can easily become bored.

Rabbits need company, either another rabbit or the human type. At the same time, you should remember that they are very sensitive to lots of noise, so if you want to play your rock music at 200 decibels, or you have Auntie Bessie's seven kids coming round to run riot for the afternoon, you need to have the rabbit moved somewhere else.

Perhaps a final point here is that, with an indoor rabbit, it is best to clean out the cage/hutch on a daily basis. Incidentally, daily changing of an outdoor hutch will do no harm either.

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## The Outdoor Rabbit

If you're keeping your rabbit outdoors, there are some different concerns to that of an indoor rabbit.

A rabbit kept outdoors must be kept in a secure hutch that is away from draughts, damp, and the hutch must be somewhere where the rabbit can keep warm in the winter, and cool in the summer.

While it is obvious that a rabbit can soon die from the cold, it is not so easily recognized that rabbits will also die from hot weather, especially if left in direct sunlight.

A hutch must also be placed away from the **sight and smell** of predators. It is not uncommon for a predator to actually scare a rabbit to death!!

I have seen this happen, and it is also quite common for rabbits to harm themselves when scared, or trying to get away from what they sense to be danger.

Older rabbits when stamping their hind foot can actually break their leg if thumping on a very hard surface, such as concrete or paving.

Many rabbit hutches have pieces of wood or metal, which you turn, as door securers. The problem with these is that it is surprisingly easy for some predators and very small children, to turn these securers.

**Therefore, it is a very good idea to add a bolt or padlock as extra security to any outdoor hutch.**

**Do not** place a hutch directly on the ground since the hutch will become damp and the rabbit will suffer. Make sure the hutch has legs. If not, place something underneath, to separate the hutch from the ground.

**There needs to be air flow between the hutch and the ground.**

Many people these days put their rabbit hutch in the garden shed, which if the rabbit is kept outdoors is a good idea. This helps to keep the rabbit away from the effect of severe cold, draughts, extreme hot weather and predators.

**Keeping a rabbit in a car garage, unless getting lots and lots of company, is isolating a rabbit and therefore, in my opinion, cruel. In addition to this, it is terrible practice if the garage has car fumes being pumped into it.**

**Car fumes will be dangerous and deadly to a rabbit.**

As with an indoor cage/hutch, when considering the size of the outdoor hutch, you need to make sure of the following three rules, and these are that the rabbit should be able to;

- **Stand upright on their back legs**
- **Lie fully outstretched in any direction**
- **Move or turn around fully unobstructed**

I would like to add, that the above requirements are the absolute basic minimum, and it really is kindest to buy a hutch as large as the rabbit's living area permits, and that you can afford.

All hutches need a closed off area where the rabbit can hide or run to, if frightened or scared.

If you want the hutch to last a long time, and save having to go out and buy a second hutch a few years later, then it is best to buy a better built hutch.

As an example, a hutch made of tongue & groove, or other sturdy material will last longer than a hutch made of simple thin plywood.

In addition you may find that the very cheap hutches, on the market, are not really that secure. **Think predators!**

Why not, where possible, house your hutch in a garden shed or similar and give the rabbit the full run of the shed, thereby giving the rabbit plenty of freedom and at the same time having the hutch to return to.

If you do this, you will need to make sure that the shed itself is fully secure from predators, including humans, that the rabbit is safely in the hutch at nights, and that the shed is locked overnight, again from the human form of predator.

One of the drawbacks with keeping a rabbit outdoors is the likely lack of company, and rabbits **love** company and being petted.

One solution is to keep two rabbits together because, once introduced, they will most likely get on together extremely well. The other solution is to spend plenty of time with the rabbit yourself. You need to consider either, if you want the rabbit to be healthy and content.

Once you have settled the question of your rabbit's hutch, you also need to think about exercise for the rabbit, and what type of run. The run needs to be as large as you can possibly allow for.

There are many hutches, now, which come with runs, either underneath or alongside the hutch. Or with a little thought, you can attach a run to the hutch yourself, or even place the hutch inside a separate run.

If housed in a garden shed, you can even attach a run, homemade or otherwise, to the shed with a little 'cat flap' type opening from the shed to the run.

**With any run, make sure there is a secure top, no matter how high the run is.**

A run without a top is simply pointless and needs continuous supervision. A rabbit can jump very high and will jump out of a topless run, or even worse, a cat, fox or other predator will jump in. Small rabbits are also prey to some large birds!!

**Just remember, no top = No rabbit!**

If you decide to use the portable/movable type of run, the advantage is that you can move it to different parts of the garden, to avoid just one area of grass being run down. You can also change the position, of the run, in the garden, during the day to avoid direct sunlight etc.

However, do remember that you will need to peg a portable run down, because of predators and the run must have something inside for the rabbit to run to, or hide in. A simple, large enough, box will do, and will also offer weather protection for your rabbit.

Oh yes! There is one last thing I want to mention about runs.

Rabbits are excellent diggers, as are foxes and other wild, and tame, mammals. If yours is a permanent run, you will have to make sure your rabbit can't dig under and out, and some animal can't dig under and in.

To solve this, you can place paving slabs under the perimeter of the run, or on either side, but periodically check as a rabbit can burrow anywhere from inside the run and burrow under.

Alternatively, you can dig a trench about 10" (25cm) underneath where the perimeter of the run will be, and fill the trench with stone, concrete or strong wire mesh.

Wire mesh used for runs and hutches should be the thicker wire mesh type, **NOT thin chicken wire**, as chicken wire can be chewed and broken by predators.

The wire mesh must be firmly attached to the run frame, and the holes small enough, to prevent predators putting their paws through.

**Remember that a predator will always find a weakness in any hutch, run or enclosure!**

# Top Tip 3

## Make sure your Rabbit has **REGULAR** Protection against Myxomatosis AND VHD

Regular inoculation/injections are essential to protect your rabbit from two very nasty and fatal diseases, Myxomatosis and the lesser known, Viral Haemorrhagic disease (VHD), *(sometimes referred to as Rabbit Haemorrhagic disease (RHD))*.

**Once a rabbit has caught either of these highly infectious diseases, recovery is very, very rare. Not only that, but if you have more than one rabbit, then it is likely the virus has been passed on to the other rabbit/s, before you know it.**

Note the word used above, '**REGULAR**'!! I have lost count of the rabbits that have died of these diseases because the owners were under the impression that because their rabbit had been inoculated a while back, they were safe. This is not the case!

Rabbits can be injected from the age of 6 weeks for myxomatosis, and approx 3 months for VHD/RHD.

Modern day vaccines can now last for a whole year, as opposed to the previously accepted 6 months. You need a booster injection every 12 months.

Any vet experienced with rabbits will know the time periods required. The vaccinations are successful, quick, and easy with the rabbit hardly feeling a thing.

Pregnant rabbits can't be vaccinated for myxomatosis, although they can for VHD/RHD.

With both diseases, rabbits have to be vaccinated **before** they come into contact with the virus.

Nowadays, there is a combined vaccine available that can be used to vaccinate your rabbit against both myxomatosis and VHD/RHD. A single inoculation will provide immunity against both diseases.

*This combined vaccine may not be available in countries where VHD/RHD is not so readily recognised or accepted.*

To have the vaccination/s done once the rabbit is infected is rather pointless. There is no cure for either disease.

The vaccinations stimulate the production of antibodies to destroy the viruses, and bacteria in the rabbit, and builds immunity against the diseases.

Both are manmade diseases.

**Myxomatosis** has been around since the late 19<sup>th</sup> century, but became more well-known in the early 1950s, in mainland Europe, when it spread through several countries with overwhelming effect on the rabbit populations. The disease then continued to spread further afield.

In some countries it is now illegal to introduce an infected rabbit, with either disease, into a colony of rabbits.

The myxomatosis virus spreads by direct contact between rabbits, or is passed on by insects such as mosquitoes, ticks, fleas, mites and lice etc. Because of this, vaccination is essential for **ALL** pet rabbits, including indoor rabbits.

If you keep more than one rabbit, then all the rabbits will need vaccinating.

The myxomatosis virus is passed **VERY** easily, from rabbit to rabbit, by the transfer of fluids from the eye, nose or discharge from a cut or wound.

If one rabbit has it, they probably all do. However, if you do find one rabbit infected, **STILL** separate the others, all from each other, in the hope that not all the rabbits have been in intimate contact with those infected.

The first symptoms of myxomatosis are often a discharge from the eyes and/or a swelling around the head, ears and sometimes genital area.

Within one or two days of these symptoms, the eyes become swollen shut and the swelling makes eating, drinking and breathing extremely difficult for the rabbit. Lumps and/or nodules may also appear.

Death will occur between just a few days up to around a week.

If you keep other pets, dogs, cats etc. then make sure that those pets are treated against fleas and ticks etc.

If there is an outbreak of fleas or ticks, then you will also need to treat all carpets to make sure your rabbit does not come into contact with the fleas etc.

As a footnote on myxomatosis, there is always a very small chance a vaccinated rabbit could still catch the virus, but to be honest this is not a reason **NOT** to have your rabbit inoculated and in any event, an inoculated rabbit would stand a better chance of recovery.

Although extremely rare, rabbits that do recover, can take weeks or possibly months to fully recover.

**Viral Haemorrhagic Disease (VHD)** (also referred to as RHD), originated in China, and spread because of the large quantities of rabbit meat exported around the world.

The disease was first reported in the UK around 1992. The virus is highly infectious, and in the UK alone, the disease has spread rapidly amongst the rabbit population since the early 1990s.

Although more recognized, and widespread, in Europe, the first confirmed outbreak in America was recorded in the year 2000

Again, VHD is a virus that can be passed on by direct contact between rabbits. It can also spread by contact with infected surfaces, such as hutches and a rabbits bedding.

The virus can survive for a long time in its environment, and surviving rabbits will pass on the virus to healthy rabbits.

Symptoms of VHD include fever, loss of appetite, convulsions, and sluggishness, bleeding from the nose and breathing problems. The rabbit may also be bleeding internally.

This is a very rapid disease, with the incubation period being 1 to 3 days. Death usually occurs between 1 to 2 days, from the start of the fever.

Indoor and outdoor rabbits are at risk, and the virus can be passed on by humans, from their clothing and shoes etc, after handling infected rabbits.

**After handling farm or pet shop rabbits, if you cannot defiantly be sure the rabbits have been vaccinated; DO MAKE SURE YOU WASH YOUR HANDS.**

So, you can see that both diseases are as lethal as each other, to rabbits, and any rabbit needs to be vaccinated against **BOTH** diseases, where possible.

**Where the vaccinations are done separately and where both diseases are in existence, it would be unkind, and somewhat pointless, to have a rabbit vaccinated against one disease, only for the rabbit to catch the other.**

# Top Tip 4

## Spaying or Neutering is essential for a Happy, Healthy Rabbit

Okay, so you have your rabbit vaccinated against the two terrible diseases of myxomatosis and VHD, the next thing you need to make sure of, is that your rabbit is spayed (female, does) or neutered (male, bucks).

Having a rabbit spayed/neutered will make them less aggressive, and will prevent certain cancers.

When you bring your cute little baby rabbit home, you might have two or three rabbits together, and aggressiveness is the furthest thing from your mind, but after a month or two or three, you will notice changes in the rabbit's behaviour.

All of a sudden you're thinking, ***'is this the same rabbit I brought home a few months back'?***

Well, **'yes'**, is the answer, but now you have sexual hormones flying all over the place, and with rabbits that is an awful lot of hormones!

When a female doe is spayed, she will likely live longer, as the risk of uterine, mammarian and reproductive ovarian cancers are practically eliminated. Also she will not suffer from infections in the urinary tract.

When a male buck is neutered, he will also likely live longer, because he will have lost a lot of his sexual aggression and won't fight. This is especially important if the male rabbit lives among other rabbits.

In general spaying/neutering makes any rabbit more loving, calmer, with much less sexual tension.

They will also be a lot easier to litter train, or introduce to another rabbit, if not already living with one.

If you do not get your rabbit spayed/neutered, it is highly unlikely that they could live with another rabbit, or be that loving companion you brought him/her to be.

**Spaying** is the process of removing the female's reproductive organs.

**Neutering** is the removal of the testicles.

Both procedures are now relatively safe and successful when performed by a vet who is experienced in working with rabbits.

Female does can be spayed around the 4 month age, although 6 months is preferred and male bucks can be neutered when the testicles have dropped, which is from, say, 3 to 8 months.

Can I just point out here that when you have a male neutered, please remember that for a month or two after the operation a male rabbit can still carry semen in the body.

**For this reason, please do keep any recently neutered male away from un-spayed females during that period.**

It is quite hard to visually tell if a rabbit has been spayed or neutered, there may be a scar or a mark, there may not, therefore when you buy a rabbit, you should ask if the rabbit has been spayed or neutered.

Having said that, some sellers may not be too sure anyway, so if in doubt, it is best to take a trip to the vets.

**If you do not get your rabbit spayed or neutered, then apart from losing the above benefits, you will also likely find that the rabbit starts to spray urine everywhere, grunts, nips, even bites, along with destructive chewing.**

**In addition, previously bonded rabbits will start to fight in a big way!**

Furthermore, if you have an unneutered male and unsprayed female together, you will end up with lots of little bunnies to concern yourself with, and I doubt that would have been your intention.

When you go along to the vets, ask plenty of questions.

The success rate is very high now, and I am sure your vet will want to reassure you, but do try and pick a vet that is experienced with rabbits, one who has done this type of procedure before.

### **What about after care?**

Well, the vet will probably keep the rabbit overnight, so when you collect in the morning, make sure you have asked the vet about pain killers ( you don't want the rabbit in pain) and what else you need to look out for etc.

Make sure when you get your rabbit home, that you keep the rabbit comfortable and warm, in a quiet environment with plenty of company and attention, such as stroking on the head.

No scared or sudden movements for the rabbit, if at all possible. Give the usual diet with plenty of fresh water.

If anything worries you, like the rabbit not moving at all, or the rabbit just seems too quiet, then you should take the rabbit back to the vet.

*It might be worth noting that a female rabbit, due to the nature of the operation, will be less interested in moving, eating and may seem quieter etc, than a male rabbit.*

As far as feed goes, try starting with something from their usual diet or a little treat. Herbs, basil or parsley, if you have any, are a good idea and by the following day the rabbit should be nibbling.

If there is a problem with the stitches, go back to the vets. Ask the vet what is the best way to stop the problem happening again.

One good tip is to loosely wrap a clean towel around the middle of the rabbit and binding it by some means, although this can make the rabbit too hot.

Your vet is the one who has done the operation, so check with him.

**Good Luck!**

# Top Tip 5

## Understand a Rabbit's Behaviour and what the Rabbit is trying to Communicate to you

Ah yes, this is a good one. If only animals could talk, I think that was the name of a book by James Herriot and the words always come to mind when thinking about this subject.

Okay, to start with, some of the actions rabbits do are common to all rabbits, and then there are other behaviour patterns that may be peculiar to only your, or just a few, rabbits.

Having seen so many different rabbits over the years, it is surprising and comical what they sometimes do and get up to.

### **When a rabbit comes up close and nudges you with their nose,**

This is one of the most common actions, and this simply means that they want attention. You will often see this when two or more rabbits live together, and it is frequently the lead up to one rabbit then petting the other.

So, if your rabbit nudges you, they want you to stroke and pay attention to them. But do note that if the rabbit nudges forcefully, it may be he/she wants you to go away, or stop something you are doing to them.

### **Stroked and Petted.**

Rabbits like being stroked and petted on different parts of the body. On top of the head is a favourite for any rabbit, as is stroking from the head all the way along the body, down to the tail. And many rabbits simply love being stroked (petted) underneath the chin!

### **Hop, skips and jumps,**

Now, you must have seen this, when a rabbit does that sort of twisting jump in the air with the head looking to one side as if to say '*hey man, look at me!*'.

Well that's called a '**Binky**' and it is a rabbit's way of expressing that they are happy, in fact very, very happy. I have seen many young rabbits do this, the first time they are let loose on a lawn, or grassed area.

**Stamps their back/hind foot,**

Rabbits are prey animals. In their natural surroundings, in the wild, just about everything will prey on a rabbit, and they know this. So they are finely tuned to be aware at all times, and if a rabbit stamps its back foot, then this is a rabbit's instinctive way of alerting other rabbits in the colony.

I have watched rabbits do this many times, when there seems to be no apparent danger, yet somehow the rabbit senses that there is.

If you have your rabbit outside, or out in a run or the garden, and you see the rabbit stamp its back foot, then go to them immediately because you can bet your bottom dollar, there will be danger close by, be it a cat, dog, a wild predator or whatever.

Male rabbits, that have not been neutered, may thump their hind foot to show that they want to mate. If your rabbit has been neutered or spayed, thumping of the hind foot may be a sign of annoyance.

**Rabbit runs around another rabbit, or around your feet,**

I find this one of the most amusing actions rabbits commonly do and when you see rabbits doing this, it is a sign that they want to mate.

**Licking and grooming,**

Rabbits grooming and licking you, is more a sign of affection for you rather than a call for attention. Likewise, if you view two rabbits together, you will often see one simply licking and petting the other. This is rabbit grooming.

It is also a way among rabbits, to show to each other, which is the dominant one and which is the submissive one.

If you stroke a rabbit's back, whilst he/she is licking you, the rabbit will likely continue the licking, even more passionately.

**High pitched squeaking or squealing sound,**

If your rabbit makes a squeaking or high pitched squealing sound, then I am afraid the rabbit is, almost likely, in a lot of, even unbearable, pain and you need to take the rabbit to the vet immediately, **without delay!**

### **A rabbit's grunting,**

This is more likely a sign that the rabbit is displeased and you should either back away, or if your rabbit is grunting at another rabbit, you should intervene. If the grunting continues, then there is a problem that will need resolving.

### **Growling,**

Growling can sound similar to the grunting, and may mean that you're interfering with the rabbit's space, such as the bedding area, so back off matey!

### **Jumping onto something high,**

My children used to have a rabbit that, of an evening, when he was in the living room would jump on top of my head and just sit there. I believe we have a photo of it somewhere.

You may have noticed that rabbits, if they can, often jump up on top of their hutch, or some high point in their surroundings. This again, is most likely due to the rabbit being a prey animal and where better to be, than on look out, at the highest point, even if it is on top of someone's head!!

### **Chinning,**

Now, what we call chinning is when a rabbit rubs the underneath of its chin against an object or something. This is the way a rabbit will mark its territory and is a very common behaviour pattern.

Another territorial action is to **lunge forward with their two front feet**, but even then, the rabbit rarely bites.

### **Grinding of teeth,**

One thing that I often get asked about is the grinding of teeth.

Now, this is where you have to make a decision, because a light grinding (more like purring), will likely be when a rabbit is happy or content, they sometimes make this light grinding of teeth when you are stroking them, **but** a heavy grinding of teeth may well mean that the rabbit is in pain, or discomfort, so don't delay, start looking into the reason.

The grinding of teeth can also mean that the rabbit actually has a tooth problem, which is covered further on, in this book.

**Let's just run through the rest of the mannerisms, which come to mind**

**Rolling over and lying on side or back,**

This means they are very relaxed and content. Some rabbits are actually asleep when you see them in this position.

**Flicking of the ears,**

This means they are inviting you to play, but again if the rabbit shakes its ears and scratches inside them, there may be an infection, so best to check it.

**Fur pulling**

Fur pulling can be a sign of boredom, or it may be that the rabbit is following a natural instinct, in trying to build a nest and wants to line the nest with fur.

**When a rabbit's ears are pointing forward,**

This will mean that the rabbit is curious, while the **ears straight up** means the rabbit is alarmed and trying to listen better.

**Lying very flat on the ground,**

Means a rabbit is frightened and is trying to make itself hidden and unseen.

**A Rabbit leaning forward with its tail extended,**

Means they are being curious.

**And if the tail flicks from side to side,**

It is probable that the rabbit is either, about to attack, or wants to mate.

**Head flat on floor,**

This is a sign of submission, or request for grooming from you, or from another rabbit.

**A rabbit panting**

Means they are too hot or ill.

**Digging at, or biting your feet,**

Means they are trying to get your attention, or that they want you to move your feet out of the way

**Rabbit sleeping,**

Now, you may, or may not, know that rabbits mostly sleep of a daytime and they often sleep with their eyes open. So sometimes, it can be hard to tell if a rabbit is asleep or not.

One way to tell when a rabbit is sleeping is that they will often twitch, and their noses stop wiggling/twitching.

Some rabbits will close their eyes and completely flop out. On many occasions an owner has got a fright thinking their rabbit has died when this happens, only to find they are simply sleeping.

**When a rabbit mounts, or humps another rabbit, or your foot,**

or your leg, or indeed anything it can find, means that the rabbit wants to mate and is a fair sign that the rabbit should be neutered.

This behaviour can stop a month or two after neutering/spaying, **BUT** this is not always the case, so don't be worried if the mounting or humping continues.

**Mounting,**

Mounting is also used by rabbits of both sexes, as a sign of dominance. The dominant rabbit will mount the other rabbit to show who's in charge, or who the dominant one is.

Once the dominance and submissive roles have been decided, this behaviour usually stops, but again this is not always the case, so do not worry if it continues.

# Top Tip 6

## How to Recognise Rabbit Mites and What to Do

It's never nice when a pet gets mites, fleas or ticks etc, and it is the same with rabbits. The most common rabbit parasite is a mite called '**Cheyletiella**'.

The Cheyletiella, also referred to as '**mange**' mites, cannot be seen with the naked eye, **BUT** the infestation can, and any infestation looks like a 'walking dandruff' effect, which is actually dandruff caused by the mites movement.

Rabbits will try and scratch the infected area, which should give you a clue there is a problem.

If your rabbit has these mites you will notice small round areas of missing fur, in the nape of the neck and/or on the back of the rabbit, leaving a bald effect, and there may be sores in the area that look like holes. The 'walking dandruff' will easily be seen.

*If you are unsure what this 'walking dandruff' effect looks like, then a quick search on Google images will clearly show you.*

These mites can travel on hay, and it has been known for them to carry Myxomatosis which is another reason to buy hay from a trustworthy source, as well as making sure your rabbit/s has been vaccinated.

There can be a rather difficult problem when trying to get rid of these mites, because sometimes, not always, they can burrow deep into a rabbits skin, and treatment alone may not always stop these parasites from reoccurring in a rabbit.

The cause for this is that if a baby rabbit inherits the mites from the mother, the mites burrow deep under the skin, and this is the reason why sometimes the mites just keep coming back.

If these mites seem to keep reoccurring to a rabbit of yours, do not lose hope, as I have had rabbits with this problem, and with persistent treatment and care, you can control the situation and in some cases, the mites have eventually gone.

However, there is a chance that you will never totally get rid of the mites and it will be a question of managing the problem.

If the mites problem is inherited from the mother, as explained above, then the rabbit has no immunity to the mites, especially as the rabbit gets older, so it will be something the rabbit, and you, have to deal with and continually keep under control.

There are treatments available that you will be able to do yourself but, firstly, please read the rest of this article.

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In addition to Cheyletiella mites, there are **Fur mites** which are a lot larger than the Cheyletiella mite. Fur mites are two tone in colour. With some care, you will be able to see these fur mites, just!

The same applies to fur mites as they do to Cheyletiella mites, in that they can travel on hay, and have similar effects on the rabbit. It would be very obvious if your rabbit has any type of fur mites, as the rabbit will scratch, and there will be fur loss.

The other types of mites to watch out for are the **Ear mites**, named '**Psoroptes Cuniculi**'.

These invade the ear canal and cause intense irritation which results in a discharge commonly called '**Canker.**'

An ear mite infection can be the most painful skin infection a rabbit can suffer with. Again, this can be noticed by the rabbit scratching its ear. There will be soreness at the base of the ear and a grey- brown to reddish scaly crust inside the ear. Once infected it is hard to mistake the signs.

Mites will usually appear in spring or mild weather. With house rabbits it can be at any time, since a house rabbit is living in a permanently warm environment in the home.

Any type of mite will be passed from rabbit to rabbit, simply by contact and mites can also be passed to, or from, other animals as well as to humans.

**So, if your rabbit gets mites, how do you deal with it?**

Well firstly, assuming you are getting the rabbit treated, you will also have to treat the rabbits living area.

**BUT you must be very careful in the choice of treatment.**

**The treatment 'Frontline' is meant for cats and dogs only, and can seriously harm, even kill a rabbit, and so do not use this on a rabbit.**

**You must never use any goods that contain 'fipronil' or 'permethrin', which as it happens, are common ingredients in flea and mite treatments, and insecticides.**

Do not use flea powders or flea shampoos, even if it says they are 'rabbit safe'.

Do not use flea baths, dips or flea control sprays, and in any event you should not bath a rabbit in this manner, as it will stress the rabbit, and cause additional problems for you.

**So, you can see where we are going with this. Basically don't use anything!!**

Instead, get your rabbit to a vet, who is experienced with rabbits, and who will be aware of the above, and you can be guided by the vet's advice.

Once you have settled on a plan of treatment with the vet, make sure you regularly use a flea comb, in combination with the treatment.

Combing your rabbit will be immensely beneficial to the rabbit both physically, in helping to solve the mite problem, and also psychologically, because rabbits really do love being combed.

As for cleaning the hutch and the rabbit's environment, the same rules apply. You should **NOT** use any of the products mentioned above. I have found a good old hose down with water and washing up liquid, will clean out the problem, **but do remember to rinse well.**

**As already mentioned, it is particularly important to clean the rabbit's hutch and surroundings, at the same time the rabbit is treated.**

# Top Tip 7

## Keep Internal Parasites away

Internal parasites can be found in the intestinal tract and elsewhere in a rabbit, some more common than others. All these different types can be treated and many can be prevented, with a little care and attention.

With early treatment, most parasitic infections are not life-threatening to the rabbit and worm invasion can be eliminated easily with medication.

The parasites include **worms (nematodes)** and other **microscopic organisms (protozoa)**.

**Nematode adult worms** consist of around 1000 cells, of which hundreds are reproducing and parasitic nematodes (pinworms & oxyurid) are bacteria feeding round worms, which live in the lower portion of the intestines.

If you have a healthy house rabbit, it is unlikely they will suffer from worms as the right conditions, for the different larval stages are not present.

If the rabbit is kept indoors all the time, then there is not a problem with worms, **unless you are feeding your rabbit unwashed greens and grass, from the garden.**

Having said that, many house rabbits do go out into a daytime run, or in the garden, at some point, and that is when a rabbit can pick up a parasite/worm infection.

Let me explain. Many parasites are called '**heteroxenous**', meaning '**Multihost**'.

This means, that to be able to reproduce, they must live in several host intermediates, before being able to affect the final host, in this case the rabbit.

In other words, to get parasites/worms, a rabbit will need to eat something growing in the garden, that perhaps has a snail or something on it, and it is the snail that hosts the worms. There are different types of worms found in different types of snail.

**Worms** infect the **snail**, snail sits on the **grass**, **rabbit** eats the grass = **worm infestation**

As an example, the '**little fluke larvae**' needs to live in snails and ants, before it can infect a rabbit. So if a house rabbit is not in contact with snails or ants, then the connection is broken.

However, a rabbit that grazes in the garden, or similar areas, **will be** at risk.

There is, what is called a **single host parasite (monoxenous)**, and their larval stages are usually found in wet grassland, hay or stagnant water. Because it is a single host parasite, it can be digested by a rabbit, and infect the rabbit. These worms are more common to rabbits.

Worms can cause loss of good health in a rabbit, and also be of some risk to humans.

### **So how do you know if your rabbit has worms?**

To be honest it is difficult, especially in the early stages, but there are ways, which are explained below.

With any infection, there are good de-worming products you can buy, that are harmless to rabbits.

They come in a cream form, and you give it to the rabbit periodically, every few months or so.

If you can't get your rabbit to take the treatment or you can't seem to get the cream in their mouth, simply put the required amount on a piece of carrot, or on some basil leaves, and the rabbit will eat it without any hesitation. **Simple! Job done.**

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A single celled protozoa, named '**Coccidiosis**' is the most common internal parasite in rabbits. It is caused by a species of protozoa called '**Eimeria**'. It is a microscopic parasite that infects a rabbit's liver or intestine.

This parasite multiplies and lays eggs in the faeces of the rabbit, which is how you tell if there is an infection. Several samples need to be collected, at different times, to confirm if there are parasites, or whether they have been cleared up.

There are at least 4 species of Coccidia that live in the intestines, and one that grows in the liver, and if they exist in an untreated environment, they can live for years.

**Thorough cleaning of the rabbits feed, water and hutches etc will get rid of them, but this must be done at the same time the rabbit is having treatment.**

If you separate an infected rabbit from any other rabbits it lives with, this will also break the life cycle of the organism.

Rabbits tolerate bacteria and worms, and moderate numbers of some species of coccidian, without showing illness, as not all coccidiosis are equally harmful.

I won't go into the various types of coccidian here, but suffice to say that the more dangerous types result in diarrhoea, weight loss, no appetite, pot belly, tissue or liver damage and an extreme case could be fatal.

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**Tape worms** do not often cause problems to a rabbit; they can be seen in the faeces or around the anus.

Rabbits are infected with tapeworms by swallowing fleas while grooming, so obviously if you have more than one rabbit, together, then they may all have the worms.

If a rabbit has **roundworms**, you will see pale white to beige, coiled like a spring worms, in the faeces. They grow up to 4" (10cm) in length and the rabbit picks them up by eating the larvae. The adult worm grows inside the body, with the worms and eggs being passed out in the faeces.

A common parasite in rabbits, named '**Encephalitozoon cuniculi (E. Cuniuli)**', is spread by infected urine or from a mother rabbit.

This infection is particularly nasty, as it can cause a rabbit's head to tilt to one side, or flop backwards, along with seizures, limb weakness and loss of balance. You may well think that your rabbit is having a fit.

**Now, ALL of these parasites/worms can be treated with medication.**

To prevent worm or parasite infection, **ALWAYS** thoroughly wash any forage or greens from the garden, and avoid areas where there may have been dogs, cats or, worse still, rats, mice, other rodents etc.

**Change your rabbits hay, bedding and litter area/s daily.**

Hay needs to be kept fresh and clean, so if you do not change the rabbits hay daily, you could always use a feeding rack for the hay, so it does not get in contact with faeces or urine.

# Top Tip 8

## What is Poisonous, and What You Shouldn't Feed a Rabbit.

This is a difficult subject to cover, for the reason that there is a massively long list of plants, weeds and foods that are harmful, or poisonous to rabbits, and if I listed them all here, I would probably have to write a complete book on the subject.

So, I will cover the more common and familiar foods, plants, and weeds, that up till now, you may have thought it is okay for rabbits to eat.

### With rabbits you must always think, 'digestive problems!'

Rabbits have a very sensitive digestive tract, they cannot expel or release gas, so if given or eating an incorrect diet, they may suffer with terrible digestive problems, and possibly get a fatal condition called G.I. Stasis.

As you will have read at the beginning of this book, a rabbit's diet should consist of around 75% to 80% hay, along with high fibre nuggets, a little fresh vegetable and herbs.

It is best to avoid Alfalfa hay, as it is high in calories and will make your rabbit fat.

### Okay, that was the easy bit, but, what about what they cannot eat?

Just because rabbits are vegetarians, does not mean they can eat any vegetable or plant, far from it. Think of a rabbit in its natural surroundings, in the wild where they have adapted their whole digestive system, to graze on grasses and particular foliage.

To start with, **NEVER** feed your rabbit **lettuce**, as lettuce contains lactucarium which causes diarrhoea in a rabbit, and can also cause GI stasis (Gut stasis), a fatal rabbit digestive complaint.

Other common vegetables not to feed your rabbit are **Beans, Cabbage, Cauliflower, Kale, Parsnips, Potato, Rhubarb, Spinach, Swedes and Tomato leaves.**

Vegetables that are in dispute and therefore probably best to avoid, are **Broccoli, Brussels sprouts, Mustard greens, Peas or Pea Pods, and Radish tops.**

Why feed your rabbit something if you are not sure? It is simply safer not to do it.

If your rabbit has access to your garden you must avoid the following,

**Anemones, Arrow Grass, Bluebells, Broken Fern, Burdock, Buttercups, Clover, Daffodils, Dahlia, Deadly Nightshade, Delphiniums, Fireweed, Foxglove, Hemlock, Horehound, Honeysuckle, Iris, Ivy, Jimson Weed, Lilies, Laurel, Lupine, Milkweed, Poison Hemlock, Poppies, Primrose, Snowdrops, Sweet Clover, Tarweed, Tulips, Water Hemlock.**

Do you know what most of these look like? If you're like me, then probably not. So you can see the danger in letting a rabbit loose in the garden.

Good examples of common garden plants that are dangerous to rabbits are,

**Eggplants, Potato plants, Tomato plants and Mustard plant roots.** The 'eyes' of potatoes also apparently contain a toxin that is harmful to rabbits.

Vegetables from the **onion family, including garlic and chives etc**, can cause gastrointestinal problems, which is fatal to rabbits.

Do not feed food high in carbohydrates, such as **Beans, Breakfast cereals, Bread, Cookies, Corn or nuts.**

There are also many plants, foods, weeds that are poisonous, to rabbits, including the **pips of certain fruits.**

**Do not feed the pips of apples and pears** which contain very minute particles of cyanide, that can supposedly harm a rabbit, although when eaten by humans, have no ill effect.

There are also compounds, poisonous to rabbits, in the **pits of Apricots, Peaches and Plums** and the same again in **Almonds, Cassava roots, Mangoes and Millet Sprouts.**

A substance called '**Psoralens**' which is poisonous to rabbits, can be found in **Parsnips,**

The toxic compound called '**Persin**' found in **Avocado fruit, seeds & leaves** and in **bark**, is harmful to **rabbits and the bark and twigs of Cherry trees, should also be avoided.**

**Grapes** can be harmful to rabbits.

**Rhubarb** is harmful to rabbits, as it contains oxalates, which prevent absorption of calcium.

**Spinach** is harmful, and there are foods that can be harmful over time, such as **mushrooms.**

Food from the home, that is harmful or poisonous to rabbits, includes **chocolate**. Dark chocolate is more dangerous, than milk or white chocolate.

Foods that contain **coffee/caffeine** can cause diarrhoea, thirst, urination, tremors and seizures.

Anything containing **alcohol** can cause diarrhoea, breathing difficulties, problems with the nervous system, coma and death.

As already mentioned, **nuts** are harmful, as can be **raisins**.

**Bread** and definitely **yeast dough**, (especially before the dough is cooked and the yeast has risen) can cause gas problems, which the rabbit cannot pass, leading to GI Stasis.

Lots of baked products and candy, contain '**Xylitol**' which can cause an insulin rush in a rabbit, which can lead to liver failure.

**Milk based products** can cause diarrhoea and digestive problems, because rabbits do not have the required amount of lactase, to break down lactose in milk.

**Salt** will result in excessive thirst and sodium poisoning in rabbits.

So, quite a long list and I have only named the fairly common ones; there are plenty of other plants and weeds etc, which most of us would not recognize if we saw them, in any event.

There will also many other foods not mentioned here, that can be harmful to rabbits.

When considering what to feed your rabbit, always remember that rabbits cannot expel gas, and some plants and foods cause gas, which will only result in bloating and pain, for your rabbit and, if not careful, can even be fatal.

**Please note.** *Anything I have NOT mentioned here does not mean it is not harmful to your rabbit. I have just tried to mention the foods and plants etc, which you may be familiar with. There are plenty of others.*

Foods that are okay for humans may be harmful to rabbits in varying degrees, and again I have not personally tested all the foods etc mentioned here, to confirm whether they are harmful to rabbits.

So, it is better, to be familiar with **WHAT YOU CAN FEED** your rabbit, and then exclude anything else.

**ONLY FEED YOUR RABBIT WHAT YOU KNOW TO BE SAFE.**

Therefore stick to hay, the fibre nuggets, along with a little fresh vegetable and herbs such as Basil, Beet greens, Carrots and Carrot tops, Celery leaves, Dandelion leaves and flower, Dill, Grasses, Milk Thistle, Parsley, Watercress and Wheatgrass.

**Do remember, to wash any grass or dandelion etc, picked from the garden, to avoid internal parasites.**

**Apples, Pears, Raspberries and Strawberries** are okay for a rabbit, but only in small amounts and only occasionally, as fruit are very high in sugar. Some rabbits may like little pieces of these fruits, while other rabbits may not.

When/if your rabbit is grazing in the garden, make sure you keep the rabbit to a safe, possibly, grassy area.

If you think that your rabbit may have eaten something that could be, or is, harmful, then take the rabbit to the vets, and if you can, take a sample of what the rabbit has eaten with you.

Rabbits do not always show any ill effect straight away, it may take a day or two.

**If you think your rabbit has eaten something that could be poisoning, then take the rabbit to the vets.**

# Top Tip 9

## Teeth Problems Will Cause a Rabbit Severe Pain & Discomfort

Well, to start with rabbit's teeth grow continuously throughout their lives, similar to humans fingernails. This is called '**open rooted**'.

**Continuously growing teeth are one of the reasons why rabbits must have a high fibre diet.**

Now, an important part of that high fibre diet is hay, and with a proper diet, it is possible to avoid some of the common problems associated with rabbit's teeth.

If your rabbit's teeth are kept in good condition, **it will save having your rabbit operated on, and save you vets costs.**

Rabbits do not just use their teeth for eating and chewing.

They also use them for, grooming themselves and other rabbits, marking their territory, moving things around in their surroundings and expressing emotion such as being content or in pain. This last point is very important as it will indicate to you if there are any problems, or not, with your rabbit.

Throughout a rabbit's life, the teeth are worn down by a process of chewing and grinding of the teeth, against each other. This is why hay is so essential to a rabbit's diet.

The important continuous chewing and grinding motion of a rabbit, is when you notice the jaw moving from side to side.

As a rabbit chews hay, it will ensure the teeth are ground down properly, that they are correctly aligned, sit correctly in the mouth, and that the back teeth are the correct length. It will also stop sharp spurs developing on the molars.

When you look directly at rabbits teeth they should be straight in alignment, not misaligned.

The teeth must not be overgrown in any way, not growing onto each other, nor overgrown into the lips or gums, or protruding in any way. They must be straight and proper, similar to human's front teeth.

If this is not the case, and your rabbit's teeth are misaligned in some way, then the rabbit will suffer and will be in discomfort.

This will eventually lead to extreme pain. Early identification of teeth problems, in rabbits, is essential.

Rabbits have a total of 28 teeth. They have four front teeth (*incisors*), two on the top and two on the bottom.

A second set of upper incisors (*2 teeth*), called '**peg teeth**', are hidden behind the set of teeth you see when you look in the mouth, and these are the teeth used for grabbing and cutting their food.

The rest of the teeth (molars) are in the back of the mouth, on either side, and are used for grinding the food.

These molars are kept short by the grinding action. The incisors are kept short by chewing on pieces of wood and other objects.

When a rabbit's teeth do not meet correctly, and have become misaligned, they then become overgrown and this condition is called '**malocclusion**'.

**There are three reasons for malocclusion.**

- The first reason is that the rabbit could have been born with the problem
- An injury to the face which will lead to disruption of the tooth roots
- An infection of the tooth roots, which can lead to a change in the direction of the tooth growth.

Malocclusion is more common in the smaller or dwarf breeds of rabbit, and is detectable from an early stage.

If the molars become overgrown, or sharp spurs develop on the molars, then the rabbit will stop eating and rabbits cannot go long without eating.

**Even though not eating, the rabbit will still be alert and active, so you do not always know there is a problem, until the pain has got quite bad. This is a common difficulty with rabbits, when there are tooth troubles.**

A good sign of when a rabbit is having teeth problems is, when you hear them grinding their teeth.

You have to be a little careful here, as if they are grinding their teeth gently or lightly (*like a gentle purring sound*) while resting, it likely means they are relaxed, content or happy, so it needs to be a heavier grinding, to be a sign of teeth problems.

The heavy or loud grinding of teeth can also mean the rabbit is in severe pain, which was covered earlier in this book.

Either way, if you hear the teeth grinding, then you should be alerted.

Rabbits should be allowed to chew on safe objects such as cardboard, untreated wood and certain types of tree branches (do not give a rabbit cherry branches to chew on).

Chewing on the above safe materials will help to keep a rabbit's teeth in good condition. But if your rabbit is continually chewing at the hutch, for example, you should get the teeth checked.

*Incidentally, chewing at a hutch door only, can often mean the rabbit knows the way out, which is not surprising, since they will have seen it opened a thousand times!*

**Common signs of tooth pain, or problems, can be wetness, swellings or drooling around the mouth area.**

Other signs are if a rabbit changes its eating pattern, from hard to soft food or, shows an interest in food, but only cautiously tries to eat it.

Of course, if a rabbit does not eat at all, this could also be a sign of serious tooth problems and pain.

Apart from the teeth becoming overgrown; rabbits can also get infection by faeces (droppings), or other matter becoming trapped between abnormal teeth. This would cause the rabbit to be listless, sluggish and have a loss of appetite.

**Fortunately, infections can be treated with antibiotics from the vet.**

**When you look at a rabbit's gums, they should be a healthy pink, not red or purple.**

Opening a rabbit's mouth to view the teeth can be a bit worrisome, if you are not sure how to do it. So, if you are not sure of the correct way, then ask a responsible and experienced rabbit owner, or have a vet show you.

**IF YOU HAVE ANY CONCERNS ABOUT YOUR RABBIT'S TEETH THEN TAKE THE RABBIT TO THE VETS.**

# Top Tip 10

## A Rabbit's Nails

Rabbit's nails, the same as humans, grow continuously, and must be trimmed from time to time, or when they get too long, or overgrown.

Without proper care, the nails become long and sharp, making it uncomfortable and painful for the rabbit.

**This is a job you can do yourself, with care, but I would recommend that on the first occasion, you take your rabbit to a vet and ask the vet to show you how to do it correctly.**

Many rabbit owners have tried to do the job themselves the first time, and have given up after a short while, deciding that the vets is not such a bad idea, after all.

A vet experienced with rabbits, will do it quickly, effortlessly with minimal discomfort and stress to the rabbit, and after watching, you may then have the confidence to try it yourself, if you wish.

House rabbits, or rabbits that are left in a hutch a lot, can suffer from nail problems more than a rabbit that gets regular runs in the garden. The reason for this being that digging and burrowing etc, helps to keep a rabbit's nails trimmed down.

So, plenty of exercise in a run, or similar, will help to keep your rabbits nails in trim.

Incidentally if you do have a run for your rabbit, it is a good idea to have a paved or concrete area in part of that run, precisely for the purpose of keeping the nails worn down.

If you have a run with no paved area, it is worth considering placing a paving slab, or two in the run.

**To clip a rabbit's nails yourself, you will need a second person to help you. It really is one of those jobs where doing it on your own, can end in calamity.**

You need to hold the rabbit correctly, with the rabbit's back against your chest, one hand under/supporting the underside of the rabbit, and the other hand under the bottom. In this way, the paws are accessible and the nails will be easier for a second person to clip, without the rabbit struggling.

You will need the correct nail clippers for rabbits, a towel, cotton swabs and something to treat the nails with, if you accidentally cut them too short.

Before getting the rabbit in the correct holding position, wrap the towel around the rabbit's body to help keep the rabbit securely restrained, more relaxed and calmer.

Make sure the hind end is held firmly, so that the rabbit cannot kick out too much. Holding a rabbit like this will enable you to isolate each paw more easily.

Do not hold the rabbit around the head or neck, as the rabbit will struggle and may hurt itself.

If the rabbit's nails are lightly coloured, you will see the blood vessels inside the nails, and you clip, so as not to cut or interfere with the blood vessels. If the rabbit's nails are darker coloured it will be harder to see the blood vessels.

**Trim only the tip of the nail.** It is obviously better to trim off too little, rather than too much.

Place the clippers where the nail is to be cut, and apply gentle pressure. If the rabbit flinches, then move further toward the tip of the nail. A swift, firm cutting motion will ensure the nail is not crushed.

If you accidentally cut a nail too short, and cause the rabbit to bleed, wipe the blood away with a cotton swab, apply a little pressure and quickly put a pinch of 'Kwik stop', or similar product, or cornstarch or flour, on the end of the nail and pack it gently.

If you are trimming more than one nail, take a break if the rabbit is restless or struggling too much, and check the rabbit is not becoming too hot in the towel.

Allow time for cutting any rabbit's nails, it is a job that cannot be rushed, especially if inexperienced.

When finished, just check to make sure no nails are bleeding.

**Job done!**

**But like I say, if all this seems too scary the first time round, then let your vet do it, so you can see how it is done.**

# Top Tip 11

## How to Avoid the Deadly Killer, GI Stasis, and What to do if Your Rabbit gets it

GI Stasis, technical term *ileus*, is a silent and deadly killer in rabbits.

GI Stasis is an intestinal blockage, where food matter is not moving through the gut as normal, to when it finally stops altogether.

The gut contents compact in a solid immovable mass blocking the digestive tract, **resulting in a very painful death for the rabbit.**

A slowdown in the gut movement can cause ingested food matter to lodge in the intestinal tract and build up a blockage. Food matter in an immobile gut may also ferment and cause a build up of gas, resulting in pain for the rabbit, eventually leading to death.

Remember, that a rabbit does not have the ability to vomit, or pass gas/wind in any way.

**All this can happen in under a single day, and the best cure is prevention, so you need to do as much as you can to prevent it in the first place.**

There are several reasons for a rabbit getting GI Stasis; it can be one, or a combination, of the following,

- **Incorrect diet**
- **Stress**
- **An underlying disorder or illness**
- **Infection**
- **Wind**
- **Dental problems**
- **Lack of fluids**

GI Stasis is not an illness. It is a symptom of another underlying problem, and it will become an emergency, in a rabbit, extremely quickly. If it is not treated by a professional vet, the rabbit will die.

**It is crucial that the underlying problem is dealt with.**

**This is not an illness you can deal with yourself.**

**So how do you recognize this problem?**

Well, the main symptoms are, that the rabbit stops passing faecal pellets/droppings, or very few compared to what is usual. The droppings may also be very small.

**If your rabbit is not passing any faeces/droppings, then you must take your rabbit to the vets immediately.**

Other symptoms are that the rabbit will become very lethargic, will hardly move around, has no appetite, becomes disinterested in everything, or becomes hunched up in a round ball.

As mentioned elsewhere in this book, you will hear the rabbit grinding or crunching its teeth loudly, which means the rabbit is in serious pain. In general, the rabbit is just not right.

*Please remember though, that a rabbit grinding its teeth softly often suggests contentment.*

Although not such a common symptom of GI Stasis, you might also hear some sounds in the belly, which you have not heard before. Bloating is an extreme form of GI Stasis.

It is incorrect to assume that a rabbit stops eating, and as a result does not produce any droppings.

It is more accurate to say that the rabbit stops passing droppings first, and then loses its appetite and will stop eating, so by the time you notice the rabbit is not eating, GI Stasis has already got a grip on the rabbit.

The rabbit may eat normally up to when the GI tract shuts down, and because a rabbit's stomach and intestine are never empty, there will be a large mass of food in the stomach when GI stasis happens.

A mass in the stomach that may be identified as a hairball, is more likely food and hair, held together by mucus, creating a large mass, which is not able to pass through the intestines. This must be broken down as swiftly as possible.

When a vet diagnoses GI Stasis, they will try and discover the cause, and then decide on what should be done.

Treatment will vary from stimulating the movement in the digestive system by using motility drugs, or giving enzymatic digestives aids to soften the impacted mass , using dehydration and giving fluids to soften the mass, along with pain relief, and syringe feeding with essential nutrients.

In addition, if the rabbit's cecum is not emptying quickly enough, the cecum's natural defence system is overridden by harmful bacteria, thereby giving the rabbit severe pain and producing deadly toxins, causing damage to the liver.

Therefore if the vet finds signs of a bacterial infection, then antibiotics may be used.

This is all something you can discuss with your vet at the time.

These treatments all take time, and if your rabbit makes a full recovery, it will take patience and care.

It may be a day or two before any faecal pellets/droppings are seen, with the first few being small. They may also be misshapen and /or covered in mucus. Recovery is slow.

Sometimes GI Stasis is mistaken for hairballs, but you should remember that hairball is more likely a result of GI Stasis, not the cause.

### **So, how to try and avoid this condition?**

In my experience, I have to say that diet is a very common factor.

Stick to the correct diet explained in this book. All rabbit's diets **MUST** be high in fibre.

Any illness or underlying infection **must be dealt with immediately**, as this can be a cause of GI Stasis.

Ensure there are **NO** teeth problems.

### **The less stress the better.**

You should be aware of any changes in the rabbits living circumstances which will cause a rabbit stress, such as a change of environment, loss of a fellow rabbit, a new pet in the house, noisy music, loud televisions, anything that is different or strange to the rabbit's usual living conditions, etc.

Stress, and its many reasons, can be a common factor for GI Stasis.

One family I know of, had a piano, for their daughter to play, moved into the same room as their rabbit, which was obviously creating a stressful condition for the rabbit.

Always make sure there is **plenty of fresh clean water** available for the rabbit.

All rabbits must have **regular exercise**. They need to be able to move around, this applies to a house or garden rabbit.

**By doing all of the above you can lessen the chances of your rabbit getting GI Stasis.**

# Top Tip 12

## The Best & Most Vital Tip of Them All

So, here we are, the last tip and I call this one the most vital and simple tip of them all, because without the point I am about to make, all the other tips can be pretty pointless, to be honest.

You can give your rabbit the best and most proper diet possible, you can make sure your rabbit is vaccinated against all diseases known to man. The rabbit can be spayed or neutered, and have the best rabbit housing achievable.

**Yet, if your rabbit is lonely and bored, it can all count for nothing.**

**Rabbits NEED company, love and exercise. I cannot stress the importance of this enough. The company can be human or other rabbits, as long as they have it!**

Obviously, if your rabbit is with another rabbit and they do not get along, then that is another matter and a problem that will need to be resolved, but that aside, all rabbits must have some sort of company.

Now, I am not saying that you need to sit by the hutch 24 hours a day or the rabbit has to spend all its time running around the garden, house or whatever.

No, what I am saying is, do not leave a rabbit on its own in a hutch, or similar, for hours and hours on end, without some form of company or companionship.

Take a look at your rabbit in its hutch, and imagine if you had to live in a room, relative to that hutch and your own size, all the time. It does not bear thinking about, right? So, you cannot expect a rabbit to live in such a small area for a long period, and stay healthy and happy.

Do make sure your rabbit has the largest hutch and run you can practically afford, time and space wise. That is your base point, but then please do remember they need company on a regular basis.

Give your rabbit things to occupy itself with. You do not have to go out and buy expensive pet toys, which, frankly, will probably be of little interest anyway.

Try placing objects in the run or hutch, and changing them, from time to time.

A favourite trick, when you feed pellets, is to sprinkle the pellets among the hay (*fresh & clean hay*). Let your rabbit search and find its food.

Give a rabbit objects to jump up onto, cardboard tunnels, and cardboard boxes, there are all manner of things, if you put your mind to it.

If your rabbit is lucky enough to have a grassed run, make sure there is somewhere to burrow. This comes naturally to a rabbit, though obviously you will need to keep a daily check that the burrowed holes do not go too far.

*Incidentally, if you DO find that a burrowed hole is too deep or going too near the run's boundary, you can either put a brick, or stones, down the hole or refill and pack tight, with the burrowed out soil. The rabbit will then start to burrow another hole.*

*By doing this, you can keep a tight check on burrowed holes and rotate them, so that the rabbit will go back to digging a previously hollowed out hole.*

I guess, ideally, rabbits should live in pairs, or more, but that is not always practical, and anyway if you give a single the rabbit the attention it needs, that will be fine.

**If you talk and interact with a rabbit, they WILL respond. They are intelligent, loving creatures and if you give them the attention they need, I can assure you they will pay you back twice over.**

**Best of luck!**