

# OBESITY IN RABBITS

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An example of an obese rabbit

Photo: S Miles

**O**besity can be defined as excessive deposition of adipose (fat) tissue in the body and is characterised by body weight (BW) exceeding the ideal value (normally in excess of an additional 20%) for that individual and species<sup>1</sup>. According to a recent study by the People's Dispensary for Sick Animals (PDSA), post Covid lockdown, owners have stated that their pets seemed to have gained weight over the government-mandated lockdown periods<sup>4</sup>, exacerbating an already prevalent issue.

## Health problems

Obesity in pet rabbits, seen in over one third of the UK population, can lead to a reduction in longevity of the animal as well as several concerning health issues, whether directly or indirectly due to lack of movement or secondary to poor diet and husbandry. Linked diseases include heart disease<sup>3</sup>, vascular disease such as atherosclerosis<sup>1</sup>, osteoarthritis and subsequent Sludgy Bladder Syndrome (SBS), due to the inability to posture to urinate and the subsequent incomplete emptying of their bladder. With SBS, comes urine scalding to the skin and pododermatitis to the underside of the feet, which is also exacerbated by the feet having excess weight put through them, directly due to the rabbit being overweight. Fatty liver disease (hepatic lipidosis)<sup>3</sup>, cheyletiellosis and flystrike, due to the inability to groom themselves adequately, as well as gastrointestinal stasis and dysbiosis from not being able to eat caecotrophs and resultant nutritional deficiencies are possible over time. Being obese in any species will also increase peri and post anaesthetic complications<sup>1</sup>.

## Risk factors

There are several risk factors that have been studied when it comes to understanding the causes of rabbit obesity, but the overwhelming evidence states, perhaps obviously, that too much food and not enough exercise

are the major contributing factors. Foods, such as muesli-based products, too many pellets (over 25g/kg/day) and an excess of treats, especially those high in sugars, will predispose your pet rabbit to gain weight. Not only do muesli-based foods predispose to obesity, but they lack the adequate fibre concentrations required to keep a rabbit's gastrointestinal tract healthy<sup>5</sup>. The Rabbit Welfare Association and Fund (RWAFF) recommends that a rabbit's diet should contain high levels of indigestible fibre in the form of lignocellulose, found in grass and hay, making up 85% of the rabbit's diet (a pile roughly the same size as them a day), with 10% consisting of leafy green vegetables and 5% extruded pellets or nuggets. There are diets specifically designed for various age groups, with diets for older rabbits designed specifically with a lower energy density formulated for less active rabbits, that would be otherwise prone to weight gain. Pellet-based diets are designed to be

An example of the daily amounts of pellets, hay and fresh food for an average sized 2kg rabbit








Photo: C Speight

# Rabbit Size-0-Meter

Size-0-Meter Score:

Characteristics:

<b>1</b>	<b>Very Thin</b> More than 20% below ideal body weight		<ul style="list-style-type: none"> <li>Hip bones, ribs and spine are very sharp to the touch</li> <li>Loss of muscle and no fat cover</li> <li>The rump area curves in</li> </ul>
<b>2</b>	<b>Thin</b> Between 10-20% below ideal body weight		<ul style="list-style-type: none"> <li>Hip bones, ribs and spine are easily felt</li> <li>Loss of muscle and very little fat cover</li> <li>Rump area is flat</li> </ul>
<b>3</b>	<b>Ideal</b>		<ul style="list-style-type: none"> <li>Hip bones, ribs and spine easily felt but are rounded, not sharp – Ribs feel like a pocket full of pens!</li> <li>No abdominal bulge</li> <li>Rump area is flat</li> </ul>
<b>4</b>	<b>Overweight</b> 10-15% above ideal body weight		<ul style="list-style-type: none"> <li>Pressure is needed to feel the ribs, spine and hip bones</li> <li>Some fat layers</li> <li>The rump is rounded</li> </ul>
<b>5</b>	<b>Obese</b> More than 15% above ideal body weight		<ul style="list-style-type: none"> <li>Very hard to feel the spine and hip bones – Ribs can't be felt!</li> <li>Tummy sags with obvious fat padding</li> <li>Rump bulges out</li> </ul>

- Your pet is a healthy weight
- Seek advice about your pet's weight
- Seek advice as your pet could be at risk

**Please note**  
Getting hands on is the key to this simple system. Whilst the pictures in the Rabbit Size-0-Meter will help, judging whether your pet is the right weight purely by sight alone has its difficulties. A long coat can disguise ribs, hip bones and the spine, while a short coat can make a rabbit's appearance more irregular and highlight these areas. You will need to gently feel your pet which can be a pleasurable bonding experience for both of you!



their smaller breed counterparts spending a greater proportion of their time lying and sitting!

## Seeking advice

If you have concerns about your pet rabbit, seeking the help of a rabbit savvy vet is paramount. Many veterinary clinics will offer weight clinics with often rabbit savvy nurses, who can make suggestions on the best way of improving the body condition of the rabbit, often based on a full clinical history taking and clinical examination, which will often involve body condition scoring the rabbit, and the recording of an accurate numerical weight. In some instances, further investigation such as baseline blood sampling and urinalysis may be suggested, if underlying health issues are suspected.

There is no need for rabbit weight clinics to be undertaken on a regular basis, due to the car journeys required being stressful to any prey species. At the initial consult, a weight loss programme should be planned and initiated, with the progression being easily monitored by the veterinary professional through telephone or email communication. All the contributing risk factors mentioned previously must be addressed. Additionally, analgesia may be required in obese individuals suffering from musculoskeletal pain. Any weight loss programme will take several months for the target weight to be reached. It should be noted that this will fluctuate depending on the severity of the individual case. Once the target weight is reached, the patient's weight should continue to be monitored. Minimal pellet use is recommended; pellet use should not exceed 25g/kg bodyweight/day (brand-dependent) and should be given in the evening, with fibre having been fed ad-lib through the day<sup>2</sup>.

If your rabbit is overweight, ensure you are not overfeeding your pet and that you are providing adequate opportunity for your pet to exercise. If you continue to struggle to get that additional weight off, seek a rabbit savvy vet or nurse's help to put in place an

individually-tailored weight loss programme for your pet. It should, however, not be forgotten that prevention is always better than cure, and hopefully this article has provided an insight into the various ways owners can slip up and inadvertently allow their pets to suffer from obesity.

## References

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# Rabbit Size-0-Meter

Results:

Your Rabbit is score <b>Very Thin</b> <b>1</b>	Your pet is very likely to be underweight. Your pet may have a naturally lean physique but we recommend you speak to your local vet to rule out any underlying medical reasons such as dental or kidney disease. If your pet is healthy but otherwise underweight, your vet is likely to advise some dietary and lifestyle changes.
Your Rabbit is score <b>Thin</b> <b>2</b>	Your pet is thin and potentially underweight. Your pet may have a naturally lean physique but we recommend you speak to your local vet for a health check up. If your pet is healthy but otherwise underweight, your vet may advise some dietary and lifestyle changes.
Your Rabbit is score <b>Ideal</b> <b>3</b>	Congratulations your pet is in ideal body condition! This is great news, as being at its ideal weight increases the chances of your pet living a long and healthy life. To keep your rabbit in tip top shape, monitor its weight and body condition on a regular basis (eg. once a month) and be careful what you and everyone else in the family feeds it. Remember any changes in lifestyle (eg. reduced exercise, recent surgery, extra treats, or even factors such as stress) can result in weight change.
Your Rabbit is score <b>Overweight</b> <b>4</b>	Your pet is potentially overweight. Being overweight is unhealthy for pets as it can lead to a shortened life-span, high blood pressure, heart disease, arthritis, cystitis and other health complications. Speak to your local vet for advice and a thorough health check-up. The vet will look for any underlying medical reasons as to why your pet may be too heavy. If there are no underlying health issues, a change of diet and lifestyle is likely to be suggested. Many vet practices run free weight management consultations, ask about these services when you ring to book an appointment.
Your Rabbit is score <b>Obese</b> <b>5</b>	Your pet is likely to be obese and this can have serious medical implications. Being overweight is unhealthy for pets as it can lead to a shortened life-span, high blood pressure, heart disease, arthritis, cystitis and other health complications. Speak to your local vet for advice and a thorough health check-up. The vet will look for any underlying medical reasons as to why your pet may be too heavy. If there are no underlying health issues, a weight loss programme will probably be individually developed for your pet and should include diet and lifestyle changes.

For more information on the Rabbit Size-0-Meter and tips on how to prevent weight gain visit [www.pfma.org.uk](http://www.pfma.org.uk). In addition to providing useful tips on how to keep your pet healthy and happy, a team of veterinary nutrition experts are on hand to answer your pet nutrition questions in the 'Ask the Expert' section.

## Check out our top 5 tips for feeding your rabbit.

- Always provide access to fresh water from a bowl or metal tipped feeding bottle, check the bottle regularly to make sure it's working properly.
- Ensure your rabbit has an unlimited supply of good quality hay or grass which are an essential form of fibre for rabbits. They are great for their teeth, digestive system and keep them occupied. Lawnmower clippings should be avoided as they ferment rapidly and can cause digestive disturbances.
- Buy specialist rabbit food – ask your vet or pet shop for advice.
- Feed leafy vegetables which are good for their teeth and provide variety. Root vegetables including carrots aren't good for rabbits, so only use them as occasional treats.
- Rabbits can get fat quickly if they're not eating the right food or not taking enough exercise. Use our Rabbit Size-0-Meter every four weeks or so to check your rabbits body condition.

Remember to make the most of advice on weight management offered by many vet practices and pet care professionals.



## PFMA's Rabbit Size-0-Meter - <https://www.pfma.org.uk/rabbit-size-0-meter>

very palatable - many owners utilise them as a ration, hand-feeding them to reward desirable behaviours. Healthy treats can be given, but ideally only sparingly, for example a fingernail-sized piece of carrot or apple. This author strongly advises against grain or fruit-based treats, as they have high levels of sugar and starch.

A quarter of the rabbits in the UK still live in an enclosure that is under the recommended size for their species, according to a recent study by the PDSA. In small enclosures, without the ability to exhibit normal foraging and digging behaviours, a rabbit will be prone to putting on weight. Housing should allow for ample exercise, whilst allowing the rabbit to exhibit normal foraging behaviours and allow the opportunity to dig. It goes without saying that a rabbit should have a companion - this not only benefits the rabbit mentally, but also increases the amount of exercise that individual undertakes. Outside space, wherever possible, should be provided.

Rabbits that have been neutered will be more prone to putting on weight. This is, however, not a reason to not neuter your rabbit, with the benefits drastically outweighing the negatives associated with it. It should, however, be born in mind that the weight of a neutered individual should be closely monitored, especially as they get older, to ensure they do not become obese. Some studies suggest that there is a potential link between the breed of the rabbit and the likelihood of obesity also, with giant rabbits, in comparison to