

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 species¹. 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 periods⁴, exacerbating an already prevalent issue.

Health problems

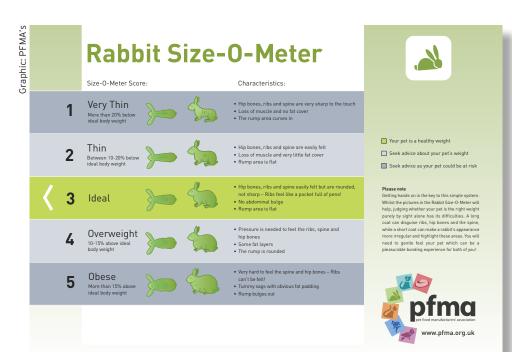
Obesity in pet rabbits, seen in over one third of the UK population, can lead to a reduction in longevity of the animal as well as several concerning health issues, whether directly or indirectly due to lack of movement or secondary to poor diet and husbandry. Linked diseases include heart disease³, vascular disease such as atherosclerosis¹, 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)3, 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 complications¹.

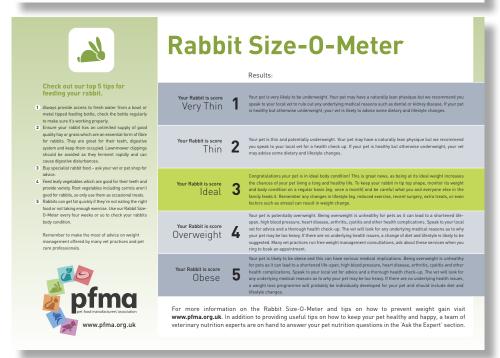
Risk factors

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 healthy5. The Rabbit Welfare Association and Fund (RWAF) 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







PFMA's Rabbit Size-O-Meter - https://www.pfma.org.uk/rabbit-size-o-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

their smaller breed counterparts spending a greater proportion of their time lying and sitting1.

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 (branddependent) and should be given in the evening, with fibre having been fed ad-lib through the day2.

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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