

## Rattled by rats? Pest advice for controlling rats

### “Super rats” and resistance to conventional poison

Natural survivors and highly adaptable, some rats have shown evidence of evolving to become resistant to conventional poison. The media has dubbed these: “super rats”.

A study from the University of Reading revealed a new generation of rats carrying a genetic mutation which makes them resistant to conventional poison.

The report, commissioned by the Campaign for Responsible Rodenticide Use (CRRU), illustrates that rats without the genetic mutation are being killed off by poison, so the resistant species are taking their place, leaving a growing population of resistant pure-breds.

Dee Ward-Thompson, BPCA Technical Manager, explains: “This rise in resistance could be

### “A BPCA member company will be able to treat infestations quickly and safely.”

due to a number of factors. “However, it is most likely the spread has been accelerated by the application of rodenticides, by amateurs such as home and business owners doing it themselves or employing an unqualified individual to try to resolve the problem.”

Regardless, using any kind of rodenticide should always be a last resort, and any professional pest controller worth their salt will try to exclude and trap before resorting to it.

### Finding a pest controller to get rid of rats

A BPCA member company will be able to treat infestations quickly and safely.

They can help minimise pest activity with a range of techniques and have the technical knowledge and experience to apply products in an efficient manner, while minimising risk to the environment and non target species.

BPCA members all have:

- The correct insurances
- Trained and qualified technicians
- Been audited to the British Standard in pest management EN 16636
- To follow BPCA's Codes of Best Practice.

## BE PROTECTED. PROFESSIONALLY. How do you know your pest management contractor is fit for the fight?

British Pest Control Association is the trade association for professional pest management companies in the UK.

By choosing an audited BPCA member you can be assured that the services you receive are from a trained and trusted company that meets our strict membership criteria.

Our member companies meet or exceed all legal and ‘due diligence’ requirements and comply with the most current legislation.

**No other trade body gives you this security.**

Make sure you stay safe.

**Select a BPCA member.**

**Stay protected.  
Always look for  
the logo.**



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## PestAware Advice Sheet Rattled by rats?

### British Pest Control Association ‘Rattled by rats?’ pest awareness advice

BPCA is the trade association for the professional pest management sector. It’s our role to help everyone understand the importance of proper pest control, provide pest

prevention advice, and help you find an appropriately trained and trusted pest management company. Our PestAware guides are designed for home and business owners

and are packed with practical advice and tips for getting to grips with British pest species.

**Version 1. Produced for  
Three Counties Pest Control Ltd**

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Three Counties Pest Control Ltd



## Rattled by rats? Pest advice for controlling rats

Have you heard scuttling under the floorboards? Can you see signs of a potential rodent nesting site? And have you ever wondered what makes a mutant rat so "super"?

Find out everything you need to know about rats in the UK, including how and why we control them, using our complete guide.

Whether you're thinking about doing some DIY pest control or you're looking to enlist the help of a professional pest management company, this guide is for you.



Brown rat (*Rattus norvegicus*). This is the most common type of rat species in the UK.

If you think you've spotted signs of a rat infestation, you're in the right place.

It's difficult to know how many rats there are in the UK, with estimates putting the number anywhere between 10.5 million and 120 million. In the past, harsh winters were a natural method of culling those numbers. Milder winters in recent years have helped rat populations thrive, which is where professional pest control comes in.

**"Rats communicate and mark their territory by urinating everywhere they go, representing a significant public health risk."**

### In this guide

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### The dangers: why we control rats

#### Pathogens and disease

Rats communicate and mark their territory by urinating everywhere they go, representing a significant public health risk.

They can carry many nasty diseases, which can spread to humans, normally through rats' urine or body coming into contact with food preparation areas.

These include:

- Leptospirosis (often referred to as Weil's disease)
- Salmonella
- Listeria
- Toxoplasma gondii
- Hantavirus.

Black rats have also been most notably blamed for the Black Death plague that swept through Europe in the 14th and 17th Centuries, although a study in 2015 suggests that they may not actually be responsible for the pandemic.

#### Property damage

The problems associated with



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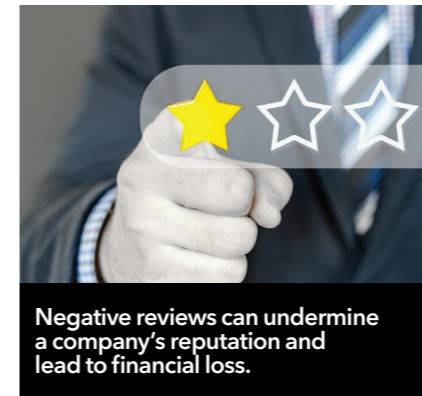
rats are not just limited to public health. They also have a knack for causing structural damage.

Rats have to gnaw in order to keep their teeth in shape, and they're not shy about what they gnaw on. Common 'gnaw-spots' include the sheathing around electrical cables, which present a significant fire risk, and pipes, which is likely to result in leaks, both water and gas.

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Cinderblock, wood, glass, metal, bone - rats' teeth will take on pretty much any challenge, which is why they can cause untold damage to both homes, businesses and the occasional finger.

Flooding from gnawed pipes and electrical fires from chewed wires may be associated with rat infestations.



Negative reviews can undermine a company's reputation and lead to financial loss.

#### Rats around businesses

Property owners have a legal obligation under the Prevention of Damage by Pests Act 1949 to keep premises rodent free, or, if rodents pose a threat to health or property, to report infestations to the local authority.

And if a company or organisation has a highly publicised rat problem, then it will heavily impact its reputation. Poor reviews of

#### DID YOU KNOW?

Musophobia or murephobia is a fear of mice or rats, one of the most common specific phobias.

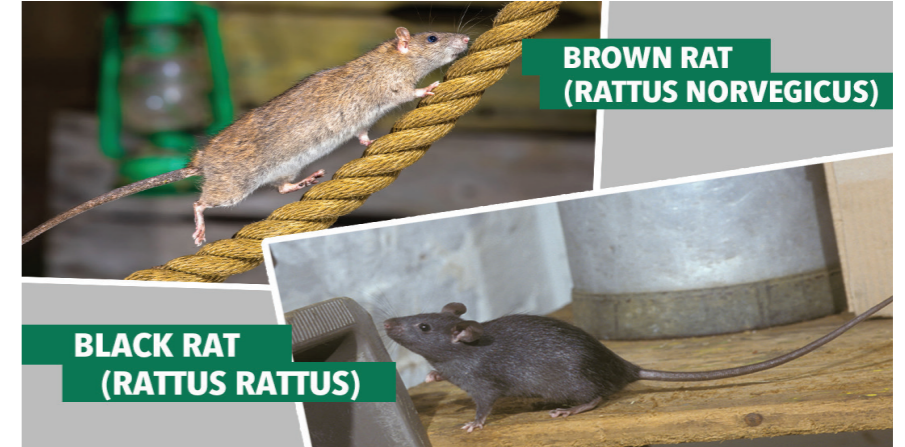
businesses or products are easily viewed and shared online.

A rat spotted running through a restaurant can mean the end of the road for that

establishment, while no-one wants to share a hotel swimming pool with a bathing rodent.

And aside from the reputational costs, there are also fines for businesses found to have a pest problem.

These usually come at a significant expense and repeat offenders are



BROWN RAT (*RATTUS NORVEGICUS*)

BLACK RAT (*RATTUS RATTUS*)

in danger of facing legal action. Environmental Health Officers can issue enforcement notices to business owners who don't have adequate pest management procedures in place.

#### Rats around the home

It goes without saying that rat infestations can have a devastating impact on personal wellbeing.

Aside from the health risks, the sound of them scuttling around the home, the evidence of their presence and the damage they can cause do little to help householders sleep easy.

#### Types of rat in the UK

There are two species of rat in Britain, the most common of which is *Rattus Norvegicus*, otherwise known as the Brown Rat or Common Rat.

The other is *Rattus Rattus*, commonly referred to as the Black Rat or Ship Rat, which is now rarely found in the UK.

Home for the brown rat is somewhere that provides food, water and shelter. In homes, they will live in roof spaces, wall cavities or under floorboards. In gardens,

they will burrow into grassy banks or under sheds. Rat holes beside solid structures are sure signs of a nest.

Brown rats are also often found living in sewer systems.

Black rats are rare in Britain but occasionally found in shipping ports.

They are also incredibly agile and so may be found nesting in roof spaces or attics.

#### The tell-tale signs that rats are about

1. One of the most common signs that rats have paid a visit is their faeces, which are dark and pellet-shaped, and look like large grains of rice. These tend to be clustered in certain areas, as rats often use the same spot to do their business and can



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leave up to 40 droppings in one night. It must be all that fibre!

- Another clue can be gnawing marks on electrical cables, woodwork, plastic, brick and



Rat droppings are dark and pellet-shaped.

lead pipes, as well as torn bags of foodstuff and materials

- In dusty, unused areas of a building, rats often leave footprints or tail marks
- Rats can also leave a more unusual calling card; a greasy residue professionals call 'smear marks'. Smear marks occur from their coats rubbing on the walls as they make their way along these trails to their nest or in search of food
- You may also be able to hear the rats scratching, gnawing and scuttling around. Brown rats are prone to grinding their teeth and chattering when stressed, both very distinctive sounds. But correct identification is key, as these sounds can also be attributed to a squirrel infestation.

### Why are rats more common in autumn?

In late summer/early autumn harvests are taking place and crops are ripened. Temperatures are warm and rodents have plenty of vegetation in which to hide from potential predators.

But as temperatures begin to drop and food becomes scarce, rats will begin looking for shelter and scraps in more urban locations.

And as autumn and winter push on, rats start to head indoors.

Although usually nocturnal, the need to survive often means they will be spotted during daylight hours in these months, as they become more bold in their search for food and somewhere warm to hide from the chill.

### Rat biology and behaviour

#### Appearance

Brown rat (Rattus Norvegicus)	Black rat (Rattus rattus)
0.5kg	0.25kg
23cm length (without tail)	15cm length (without tail)
Blunt muzzle	Pointed muzzle
Sturdy body	Slender body
Small, hair-covered ears	Large, almost hairless ears
Small eyes	Large eyes
Tail shorter than body	Thin tail, longer than body

#### Rat or mouse?

A large mouse can look like a young rat to the untrained eye, and vice versa. However there are many differences in between the adults of each species. As well as mice, there are other animals which look very similar

to a rat, such as shrews and voles. Shrews are not rodents, unlike the other three.

- House mouse:** weighs less than 25g, measures between 6-9cm (without tail), has a pointed snout with big eyes, large ears, tail equal to body length and a round body with small feet
- Common shrew:** weighs 5-12g, measures between 5-8.2cm (without tail), has a distinctive, mobile pointed snout with small eyes, small ears, a tail less than 3/4 of body length and a round, sturdy body with large feet
- Vole:** weighs 20-51g, measures between 9-13.5cm (without tail), has a blunt, round snout with small eyes, small ears, a short tail (between 2-4cm) and a shaggy-haired body.

It is important to know whether you are dealing with a mouse or a rat, as the behaviour of these two species differs and this will affect any control efforts.

#### DID YOU KNOW?

It is also important to understand these distinctions, as water voles and all species of shrew are protected under the Wildlife and Countryside Act 1981.

#### Mating and lifespan

When it comes to breeding, rats get a gold medal. If environmental conditions are preferable, a female rat can reproduce every six weeks with litters consisting of 6-8 offspring.

Each part of the cycle takes 21 days on average. When a female rat is impregnated, the gestation period lasts for around 21 days.

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### Other characteristics

A rat's tail is often the part that makes most people squeamish, but offers several functions.

It provides balance and stability, when rats need to perform a physical task. And it regulates their body temperature, as it contains a rich blood supply close to the surface.

Due to their poor eyesight, rats rely heavily on their whiskers - believed to be as receptive as a human's fingertips - to feel the world around them.

Rats may not have the best eyesight, but they have a well-developed sense of smell, taste and touch.

They also have an acute sense of hearing, frequently using ultrasound to communicate, which is especially sensitive to any sudden noise. Rats are social animals, so if you see one rat then there are likely to be more nearby.

Rats have the ability to jump around three feet into the air, four feet horizontally and can fall from a height of up to 50 feet without getting injured.

They are also incredible climbers; brick walls, telephone poles, even legs!

Rats are mammals and so they give birth to live young called pups. It then takes 21 days to wean those pups. During this time the female rat will also go through what is known as

postpartum estrus, which occurs 10 to 24 hours following the birth.

This means that a rat can become pregnant very quickly after giving birth, which is one of the reasons that a rat infestation can grow quickly out of control.

Newborns can become sexually mature after only 5 weeks, at which point they can spawn their own broods.

This means that a pair of brown rats could potentially produce as many as 200 babies and 2,000 descendants in just one year, maybe more.

Due to predation and other challenges, wild rats live for around a year on average.

In contrast, pet rats have a longer lifespan; without the threat from natural predators, and with a constant supply of food and care, domesticated rats often live between two to three years.

### What do rats eat?

Contrary to cartoon depictions, rats have never been known to cook Michelin quality, French cuisine.

As nocturnal mammals they will feed at night and can eat, on average, 50g of food a day.

Cereal products are their preferred midnight snack, although rats are not fussy eaters and will chow down on pretty much anything - even other rodents and small animals.

While we don't expect to see rats weigh over 500g, if food, shelter and water are in plentiful supply, with little competition, brown rats could get closer to 1kg.

However, this is rare as it's not their nature to live alone.

### Treating a rat bite

It is not common to be bitten by a rat, however when a rat is cornered they will often spring at the threat, biting to defend themselves. If you have been bitten by a rat, immediately wash the wound as thoroughly as possible; rat bites can



Rodents are responsible for damaging an estimated one-fifth of the global food supply each year, at a cost of over £11bn.

be deep, but it's important to do this even if the skin hasn't been broken.

Once the area is cleaned, treat it with antiseptic cream and seek medical advice. wool, leather and bird seed.

### How to prevent rats

Householders can put steps in place to try and avoid a rat infestation.

#### 1. Mind the gap

Eliminate any gaps around pipes and under sheds, as rats only need a gap of 15mm to gain entry to a structure.

You will need to search for any potential entry points and seal these up with wire wool embedded in quick-setting cement. You should focus on low level gaps first as these are the most likely areas for rats to enter. You can then consider



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any higher up vents or gaps.

Check around pipes and windows, and double check the basement.

### 2. Tackle nesting

Remove potential nesting sites by keeping yards and gardens clean and tidy, cutting back overgrown areas and clearing

#### DID YOU KNOW?

Rats are very smart and capable of learning complex tasks, so don't underestimate them!

any piles of wood or debris.

Compost heaps can also become nesting sites, so our advice is to protect it with wire mesh to prevent rodents digging a harbourage.

### 3. Think about drains

Ensure that drain inspection covers are in a good state of repair and any disused pipes are sealed off.

### 4. Feed birds carefully

If you feed garden birds, do not do this to excess and use a bird table or feeder basket if possible, to catch any off cast seed.

In urban areas, taking in bird feed at dusk is a way to remove an easy food supply during normal feeding time.

### 5. Take cover

Cover any household waste where rats can get access to it and close dustbin lids.

Recycling containers should also be washed to remove any food residue.

### Lifting the lid on refuse collection

On the subject of household waste, reports of local authorities seeking to cut back bin collections regularly make the headlines.

Frequent bin collections help reduce the likelihood of rat infestations. As such, BPCA



### 4. Don't dump food straight into your wheelie bin

Rats are really good at sniffing out their next meal. Don't lure them to your bin by placing loose food waste straight in the container.

Instead, keep it under wraps with compostable liners, plastic bags or refuse sacks, which will help control

recommends local authorities do not reduce bin collections.

Here are our tips for managing waste, to prevent rat infestations.

#### 1. Always keep lids sealed properly

Think about entry points. Even small gaps create easy access for rats - which can squeeze through a space as thin as two fingers.

#### 2. Get broken bins replaced

Make sure any cracked or broken bins are replaced. Ask your local council for a replacement where a bin is damaged.

#### 3. Place bins carefully

Bins offer a great platform for rats to reach new areas, so keep them away from windows and doors.

smells and make sure it doesn't stick to the sides of containers.

### 5. Look after your bins

It's a good idea to give your indoor and outdoor bins a rinse with disinfectant and hot water. Alternatively, hire a reputable company to do it for you.

Not only will this help with the smell that attracts rats, but it'll also mean if there are any pathogens brought in by pests, you'll neutralise them. Always wear gloves!

### 6. Don't leave your rubbish out too early

If you don't have wheelie bins, you may be required to move your waste to the side of the street in black sacks for collection - do so as late as possible,

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preferably not the night before.

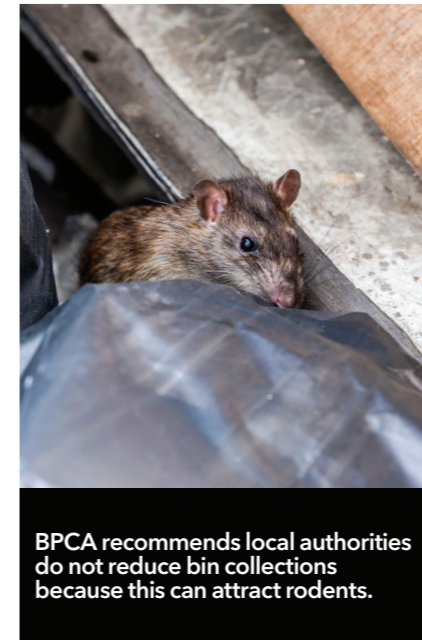
### 7. Be careful with compost

Keep compost areas well sealed and a good distance from your property. Rats love exposed compost.

### Getting rid of rats

#### DIY rat control

On the subject of household waste, reports of local authorities seeking to cut back bin collections regularly make the headlines. Rats are hard-wired to survive. They are adaptable, highly



mobile and breed rapidly.

As a result, rat control can be an uphill task for the untrained individual.

For any rat infestation, we would always recommend contacting a professional pest management company, who is a member of the BPCA.

However, members of the public can choose to carry out the work themselves, buying amateur-

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use rat poisons (rodenticides) and traps from a hardware store or garden centre.

Keep in mind that most rats are wary of new objects such as traps or poisons placed in their environment.

They will avoid them for a period before exploring them, so don't expect instant success with this approach.

Thought needs to be taken when placing poison or traps to ensure they are in a safe and secure place out of reach of non target animals, children and pets.

BPCA has a strong warning to anyone using rodenticides - **always follow the instructions on the label, and importantly search for and dispose of any dead rodents in a safe manner.**

When poison is consumed by a rat, it is likely that it will die in a cavity or roof space from which a bad smell can emit.

If you cannot locate the dead rodent, it may take several weeks for the body to decompose and the smell to dissipate.

Leaving these in the open can result in secondary poisoning of non target animals, such as pets or birds scavenging on the carcass.

Although it is not recommended to tackle these pests yourself, if you decide to give it a go then you must take all necessary precautions to ensure you do not cause collateral

damage or suffer personal injury.

#### Professional pest control

For any rat infestation, we would always recommend contacting a professional pest management company, a member of BPCA.

They are trained in rat control and will have access to a range of professional use rodenticides and tools, which are not available to the public.

Knowing how much, where, and when to deploy products is where professionals are able to take control of situations efficiently.

There's also a growing issue with resistance, due to incorrect choice of rodenticide or widespread use by members of the public.

Professional pest controllers will take an integrated pest management (IPM) approach to tackling your infestation.

A pest professional will have access to monitoring equipment, which they will use to confirm entry points into your property, the size of the infestation and to track the rat to its harbourage (nest).

They can then recommend a proofing strategy and decide on the best course of action in terms of control; this could be traps, rodenticides or a combination of both.

You should always expect to receive a full, written report from a professional pest technician.

**REMEMBER  
ALWAYS FOLLOW  
THE LABEL  
INSTRUCTIONS**