



Fancy Spirit

Perth  
Rat  
Rescue &  
Rehab



3 Month Spirit

## Tumours

Tumours are one of the ailments that most frequently effects Rats. Tumours can be benign or malignant and can cause serious problems resulting in death if treatment is not started as soon as a lump or mass is found. I personally am not a vet or other qualified animal doctor and as such anything you find within these pages is as a reference guide only. Please see our [disclaimer](#).

Tumours do effect both Male & Female Rats however it is more frequently seen in Females.

Benign tumours are almost always encapsulated in a membrane and separate from near by tissues. Benign tumours can normally be removed surgically by a small animal vet but this depends greatly on the location of the tumour. Although benign tumours can grow as fas as malignant tumours , they don't usually cause as much damage or spread to other parts of the body.

Benign tumours will still end in death if not removed due to them :-

- pressing on vital organs
- causing bleeding internally
- by growing so big that the Rat has difficulty moving around
- not being able to eat enough to support both the tumour and normal body functions.

Malignant tumours, also called Cancer, usually invade and damage nearby tissues. They sometimes also spread to other parts of the body, but not always. Malignant tumours result in death due to organs being damaged and failing. Some of the signs and symptoms of cancer being present are:

- Skin Ulcers
- Ulcerated or Bleeding Tumour
- Infected Lump
- Abscess that Doesn't Heal
- Distended Abdomen
- Weight Loss (although visual weight loss can be seen, actual weight of Rat may be the same or more depending on the size and stage of the tumour)
- Lethargy
- Poor Hygiene
- Poor Coat Condition

In some cases cancer involves the internal organs, so symptoms often are not seen until the disease is well advanced and euthanasia is the only alternative. We encourage all Rat owners to examine their Rats on, at least a weekly basis to feel for signs of lumps.

Some malignant tumours can be removed which will give your Rat a better quality of life for possible a few extra months however some tumours are too advanced or have invaded and attached to organs and body tissue and can not be removed.

A malignant brain tumour is life threatening. It may be malignant because it consists of cancer cells or it may be called malignant and still consist of benign cells, but located in a vital area.

Brain tumours in Rats are generally considered inoperable and will end in death. Other parts of the body that would be considered inoperable for Rats would be the spine, most organs, unless it is a kidney that they have 2 of and can live with one removed.

A Malignant brain tumour made up of cancerous cells may spread to other locations in the brain or spinal cord. It can invade & destroy healthy tissue so it cannot function properly.

Malignant tumours grow just like a plant does, sending out roots that invade various tissues, or they shed cells that can travel to other parts of the brain. Some cancerous cells remain localised.

Brain tumours rarely spread to other parts of the body outside of the brain and spinal cord. Often the damage done by a brain tumour is due to their size. Because the Rats skull is bone it does not have the ability to expand to make room for any type of small mass that grows within it. As a result of the skull not being able to expand the tumour presses on and displaces normal brain tissue. This pressure generally damages and destroys delicate brain tissue.

Many of the symptoms of a brain tumour are the result of this pressure that builds. Some brain tumours can also cause swelling due to accumulation of fluid.

Tumours that start in the brain are primary brain tumours. Metastatic brain tumours are formed by cancer cells that start elsewhere in the body and spread to the brain.

## Mammary Tumours

Benign mammary tumours are the most common type of tumour in Rats. This type of tumour is often stimulated by estrogen and usually occur after a Rat stops ovulating at around 18 months of age. Approx half of all female Rats will get a mammary tumour, and it is common for them to get several mammary tumours during their life. The most commonly seen mammary tumour are seen in the armpits and in the belly and groin area however because female have such widespread mammary tissue they can occur anywhere on the body, except the head, tail & extremities. Again we urge all Rat owners to do a weekly check on their Rat to feel for lumps so that any possible tumours can be identified early and treated quickly by a professional.

Mammary tumours often start out squishy and flat and over time become more firm but they can also start out quite hard. Because mammary tumours grow so quickly they can outgrow their blood supply, die and become **necrotic** and filled up with puss. It is also common for mammary tumours to contain milk. Benign mammary tumours are usually distinct lumps just under the skin that are only loosely attached. When you feel a lump you can usually move it separately from the skin and underlying muscle. If a tumour feels tightly attached to the underlying tissue, this can be a sign that it is malignant although some benign tumours can also present this way.

Some statistics indicate that spaying your female Rat can reduce the chance of mammary tumour from around 74% down to around more than 4% after spaying. Mammary tumours rely on estrogen and spaying reduces the amount of estrogen present in your females body.

## Adenoma (of the pituitary gland)

This type of cancer is the second most commonly seen in female Rats, particularly aged females. The pituitary gland lies just beneath the brain. Although this type of tumour is believed to generally be benign it is not normally operable due to its location. As the tumour grows it presses on the brain and eventually causes loss of control in your Rat. Symptoms may appear slowly or quickly depending on how aggressive the tumour is and its growth rate. The first symptom that usually appears is loss of coordination, followed by paralysis. One symptom that is usually used to help identify a pituitary tumour is a quite distinctive posture; first the front and then the hind legs are held out stiffly and can not be flexed by the Rat.

Other possibly symptoms that may be seen include:

- Seizures
- Head Tilt
- Circling (or Rolling)
- Lethargy

The above symptoms can also be the result of an inner ear infection that can be treated with antibiotics.

Treatment for neurological impairment generally consists of the use of steroids and a particular antibiotic which has helped with shrinking this type of tumour. If treatment has not been given early the chance of a full recovery is less. If despite treatment the Rat is no longer able to feed itself then it is time to consider euthanasia.

## Testicular Tumours - Affecting only Male Rats

Testicular cancer can occur in some Male Rats however it is generally seen in Males over the age of 2 years. The actual cause of testicular cancer is still unknown however the tumours can be benign or malignant.

It is unusual for testicular cancer to spread to other organs or parts of the body.

Secondary testicular tumours have been recorded, however they are from other tumours in your Rats body that have spread to the testicles and developed.

The recommended treatment for testicular cancer in Rats is for the Rat to be neutered, removing the testicles. It is rare for a testicular tumour to spread to other parts of the body however removal of the testicles is still the treatment of choice because the growth of the tumour can cause blockages in the urethra and bowel.

## Tumours Effects On The Body

Tumours can cause many symptoms and generally speaking Rats with Cancer have trouble with keeping up their nutritional requirements. Loss of appetite or the desire to eat is one of the most common symptoms seen in Rats with cancer, this symptoms can be seen early or later as the tumour grows and spreads around the body. If your Rat is refusing foods and loosing weight try offering small portions of high protein & high calorie foods frequently.

Some foods that will add protein & calories to your Rats food include:

- Butter
- Skim Milk Powder
- Honey
- Brown Sugar

You can also try feeding foods that you have processed. Make the food into a baby food consistency which will make it less energy draining for your Rat to eat. You can experiment with flavours, textures and consistency. This is important as food preferences can change each day.

Avoid giving drinks with food as this may make your Rat feel full before they actually are, offer a drink or high fluid foods after the main meal has been eaten.

## Preventing Tumours

There is no way that you can prevent 100% of tumours from effecting your Rats however there are specific actions that you can take to limit or reduce the chance of your Rat getting cancer.

It is considered that spaying your female Rat or neutering your male Rat will reduce the chance of mammary or testicular cancer respectively.

Spayed female Rats are believed to not only have a reduced occurrence of mammary tumours after spaying but also a reduced rate of pituitary tumours. Spaying is said to be most effective between 3-6 months of age however it does have benefits at all ages.

Choosing male Rats over female Rats may also be an option. While males can also get tumours, the benign mammary & pituitary tumours that are so common in females occur in only around 4% of males.

There are many variables when dealing with tumours like species, general health, age, environmental factors & genetic predisposition to cancer.

Diet can also help prevent cancer, please see out [what to feed](#) and [what not to feed](#) information pages.

**Last Note – A tumour will not go away on its own. If what appeared as a tumour has gone, then it was not a tumour but more likely to have been an abscess or cyst.**

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\*We would like to thank Mr D.Wiggerman.for supplying us with reliable information regarding this and other matters.

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