

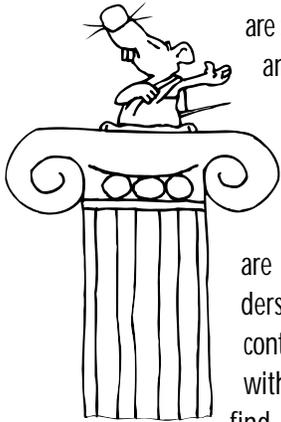
Rat Care Guidelines for Beginners

BY SUE MEREDITH



INTRODUCTION

Rats make excellent pets! They are clean, extremely smart, and very social toward humans, making them one of the best pocket pets out there. Of course, they are often greatly misunderstood—many people continue to associate them with the kind of rats you'd find in a city sewer.



However, domesticated rats are as different from wild rats as labrador retrievers are from wolves! Even animal lover Jack Hanna says that rats are the nearest thing to a dog you'll find in a small mammal! Times are changing, and rats are becoming very popular as household pets.

Sadly, compared to other companion animals, there is still not a whole lot of information out there on rats as pets—accurate or otherwise. Hopefully, this brochure will help you learn the basics of proper care for these wonderful little rodents. I also hope to help you find the perfect supplies and accessories to give your rats the best possible life. I have used many of these products myself, and highly recommend them.

Though greatly abbreviated, the information contained in here should help anyone get started, and point you in the right direction to find the facts you

NOTE

Many of the products mentioned in this resource are only available in the United States. Please check with local resources to determine what is available to you.

need. I highly recommend seeking out the items on the **Suggested Reading** list at the end to learn more.

RATS NEED COMPANY

Rats should always be kept as pets in same-sex groups of two or more, for many reasons. In the wild, rats live in immense colonies, and naturally need and enjoy the company of other rats. They groom each other, sleep together and play together. No amount of human attention can replace the company of another rat. Therefore, pet rats are better off with at least one other for companionship.

It is also believed that pet rats fare better emotionally when kept in groups, which not only keeps them happy, but healthy, too! Single rats often seem to be more easily stressed and can be more prone to disease—some rats can even develop behavioral problems or neurotic tendencies when kept alone. Since caring for two rats is no more difficult than caring for one, and the extra cost is nominal compared to the benefits of having two together, there really is no reason not to get two or more. As long as you give them attention individually, they will each bond with you—in fact, many people believe that keeping two rats actually helps them bond to you more easily.

Though it is very possible to introduce a new rat as a companion for a single rat, it is much easier to get both at the same time, preferably from the same litter, as they have grown up together and already know each other. Debbie Ducommun has written an excellent article about introducing rats,

which is available on The Rat Fan Club Web site, under Helpful Info, at www.ratfanclub.org. I have used this article to introduce my own rats, with great success.

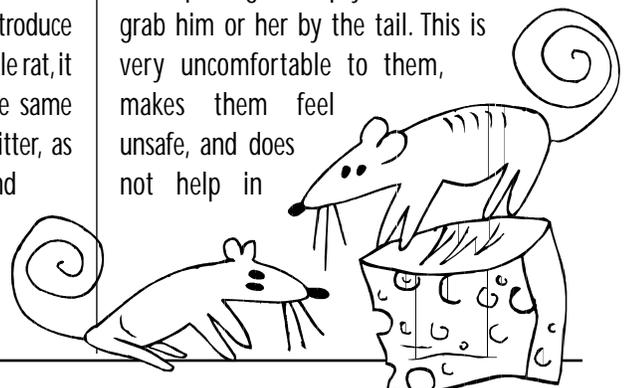
HUMAN SOCIALIZATION

Rats are very social animals, and are most easily socialized with humans when they are young. Therefore, it is important in their social development to have contact with humans from almost the moment they are born. Not only should breeders and pet store employees handle or interact with the rats at least once a day, they should also allow you to have direct contact when visiting. In many cases, the best way to choose a pet rat is to allow the rat to pick you! The most social rats make the best pets of all. Just be sure that your hands are clean—the rats may detect food scents and try to bite (thinking it is a morsel, not to be mean), or may smell another animal and become very frightened.

Most human illnesses are not transmitted to rats (strep throat is one exception), but it's better to be safe than sorry. If you are ill, avoid the pet store until you are feeling better.

HOW TO PICK UP A RAT

When picking a rat up, you should **never** grab him or her by the tail. This is very uncomfortable to them, makes them feel unsafe, and does not help in





their socialization. Tails have also been known to break off or lose skin with improper handling. Skin that has come off the tail cannot be reattached, nor will the tail grow back. Amputation of the tail tip is often required. You should always pick up a rat around its middle, and then support their feet with your other hand or your body. This makes them feel very secure, and reduces the chance of someone dropping them if they squirm. Rats that are regularly lifted by their tails tend to harbor a distrust of humans, and may not make the best pets.

HUSBANDRY

The environment pet rats live in is very important. Rats have a few special needs compared to some other pocket pets, such as hamsters or gerbils, but they are easily accommodated with a little knowledge and common sense.

CAGES

A hamster cage or Habitrail is NOT an acceptable home for a rat. Such habitats are far too small and offer poor ventilation. Glass aquariums are acceptable, but do not offer the same ventilation as a wire cage, so must be cleaned more often to avoid harmful ammonia buildup. A cage should offer a bare minimum of 2 cubic feet for one to two rats—about the equivalent of a 20-gallon long aquarium, but more room

is always better. I prefer 2 cubic feet *per rat*. I always recommend that people purchase or construct the largest cage they can afford.

Wire cages are by far preferred. They offer superior ventilation, plenty of climbing opportunities, and better flexibility for modification and “decorating.” Space between wires should be between 1/2” x 1/2” (for babies) and 1” x 2” (for adults). Some good cage manufacturers include:

- **Martin’s Cages**

Tel 888.451.2234
www.martinscages.com

- **Fern Cage Manufacturing Company**

Tel 562.696.5969
Fax 562.696.0905
www.ferncage.com

- **The Ferret Store**

www.ferretstore.com

Some people believe that wire-floored cages need to be covered to protect rat feet from developing a condition known as bumblefoot (ulcerative pododermatitis). This is not actually true. Bumblefoot is actually caused by a number of factors, including genetics, body weight, improper pressure, and cage cleanliness. I recom-

mend a *variety* of surfaces for them to walk on. In my cage, I only have one level covered with vinyl carpet runner. The ramps and balconies are left uncovered.

BEDDING

It has been found that both cedar and pine shavings are NOT acceptable as bedding for rats, mice and other pocket pets. Studies have shown that exposure to the phenols in cedar and pine (the chemical that makes them smell nice) can cause respiratory difficulty, as well as liver and kidney damage. A list of published articles is available on www.ratsrule.com. With so many better, safer products on the market, there is no longer any reason to use these soft wood shavings as bedding. Some alternatives are listed in the box below.

CLEANING

Cages should be cleaned at least once a week in a home setting. Depending on the size of the cage, ventilation, and number of rats, cages may need to be cleaned more or less frequently. A rat cage should never smell, as they are very clean animals. If the cage smells, it is because it is overdue for a cleaning. Rat urine creates ammonia fumes, so a dirty cage leads to an unhealthy build up of ammonia.

Though cages can be cleaned with a

SAFE ALTERNATIVES TO CEDAR AND PINE BEDDING

- **Care Fresh** - reclaimed paper pulp product
800.242.2287 • www.carefresh.ca

- **Yesterday’s News** - recycled paper product
Canbrands International
800.267.5287

- **Bio-Flush** - paper-based, contains baking soda
Ampro Industries
800.482.3130

- **Aspen** - shavings or pellets available from many sources

- **Small Pet Eco-Bedding** - crinkled brown paper
Ranpak Corp.
800.RANPAK.7 • www.ranpak.com

- **Sani-Chips** - heat treated aspen pellets
PJ Murphy Forest Products
800.631.1936 • www.pjmurphy.net

- **Critter Country** - grass fiber pellets
Mountain Meadows Pet
800.752.8864 • www.mtnmeadowspet.com

- **Cell Sorb Plus** - paper-based
Fangman Specialties
513.752.4500 • www.cell-sorb-plus.com

- **Alfalfa pellets** - green rabbit food pellets
Rats can’t digest it, so they won’t eat it.
Readily available from many sources.

commercial pet cage cleaner, sometimes the fumes from these types of products can cause respiratory problems. It is recommended to clean the cage with warm water and a mild soap, rinsing thoroughly. Other safe products include Critter Fresh, NilOdor, and Simple Green. A very diluted bleach solution is also acceptable. Household cleaners, such as Windex, Fantastik, etc., should never be used due to harmful fumes.

ACCESSORIES AND TOYS

Rats need to be stimulated mentally, as they are very intelligent creatures. Toys can range from bird toys to something as simple as cardboard tubes. My rats enjoy PVC tubes, purchased at a hardware/ home improvement store for about \$3.00 each. Ferret litter pans and terra cotta or plastic flower pots can make great sleeping spots. I have also made hammocks out of wood dowels and scrap fabric, and tossed empty tissue boxes into the cage.

Some rats enjoy exercise wheels, but usually only the females, and only if they have been exposed to a wheel at a young age. I personally have yet to get one of my boys to use a wheel, but all rats are different. Of course, since a rat is bigger than a mouse, hamster or gerbil, they need a bigger wheel. Wodent Wheels are made especially for rats, and come in multiple sizes, depending on the size of the rat. Wodent Wheels are manufactured by Transoniq.

• Transoniq

www.transoniq.com/wodent.html

Tel 503.277.6848

Another accessory that really should be a must for all rat owners is a carrier for transportation to the vet. I have taken my rats to the vet in cardboard boxes, plastic terrariums and glass aquariums, but nothing beats my Cabin Kennel. Similar to a cat

carrier, a Cabin Kennel is specifically designed for pocket pets like rats, ferrets and chinchillas. The Cabin Kennel is also airline approved, should the need arise to bring your pet on a plane trip. Cabin Kennels are made by Dorskocil.

• Dorskocil

Tel 800.433.5185

Fax 817.472.9810

One more accessory a pet owner might consider is a Pet Corral, which can provide a safe playspace, and not ruin any furniture. Pet Corral, and the larger version, the Grrreat Wall, are manufactured by Milestone Innovative Products. I have a Grrreat Wall, and I love it!

• Milestone Innovative Products

11823 Lindblade Street

Culver City, CA 90230

Tel 888.391.3555

NUTRITION

Hamster and gerbil mixes, rabbit food and cat food are NOT acceptable as rat food. Hamster mixes do not contain complete nutrition, and often feature fatty seeds and nuts. Rabbit feed is made from alfalfa, which rats cannot digest. Cat food contains far too much protein, which will cause coat problems, especially for males.

The best nutrition for rats is in the form of a Lab Block. It has all of the daily requirements a rat needs. Some of the best brands are listed below. Be sure to choose a block that does not have corn as its first ingredient; soy- or wheat-based blocks are preferred. I have also used Owxbow's Rodent Maintenance Formula, which seems to go over very well -- much better than most lab blocks. It contains no corn, and has the same protein content of Nutro Natural Choice Lite.

• Harlan Teklad

Tel 608.277.2070 • Fax 608.277.2066

www.harlan.com

Available at www.rat-store.com

• L/M Animal Farms

Tel 800.322.5623

Square Meal (wheat-based)

• Purina Mills or Mazuri

Tel 800.227.8941 • Fax 314.768.4894

Lab Diet for rodents or Rodent Pellets

www.mazuri.com

www.labdiet.com

Other lab blocks available via retail:

• 8-1 Plus Advanced Nutrition Diet for Rats & Mice. I have never tried this brand, so I can't comment on it.

• Kaytee FortiDiet for Rats & Mice

I have used this brand, and found it to be the most unpopular of the lot, as have many other rat owners nationwide, though it is the most widely available. Corn is the main ingredient, and Ethoxyquin is used as a preservative. For the record, ethoxyquin is NOT approved for human consumption in the US. I personally won't feed anything to my rats that I can't eat myself.

Some dog kibble is fine for babies and nursing mothers, as it helps the babies grow, and helps mom retain her strength while nursing. I have also found that adults do just as well on light dog foods (for senior or overweight dogs). The best dog food brand for rats that I have found is Nutro's Natural Choice Lite, which has low protein (14%) and is lamb- and rice-based (not corn). In general, the protein content of a rat's diet should not exceed 25%. Below 18% is best for adult males. Some rats are more sensitive to protein than others. Other good dog foods include Wellness Senior and Innova Senior.

Seed mixes formulated for rats and parrots are fine as a supplement to the staple diet, but should not be the sole diet. These mixes often contain items that go to waste, such as alfalfa pellets and tiny seeds. They also do not provide complete nutrition, and contain a lot of seeds and nuts that are high in fat, which can cause obesity and protein problems (where the rat will become itchy, and scabs will develop).

If you would like to know what I feed my own rats, feel free to take a look at my recipe at www.ratsrule.com/diet.html. I feed them a combination of Nutro's Natural Choice Lite dog food, Oxbow Maintenance (when available) and a homemade grain mix. Debbie Ducommun also has a complete homemade diet featured on the Rat Fan Club web site which offers balanced nutrition. The RMCA also has its own homemade diet. Both diets are linked from my diet page, listed above.

WATER

Rats should have access to fresh water at all times, supplied in a water bottle. A bowl can be tipped and soiled by urine, feces and bedding, so a hanging, on-demand water bottle works best. The water should be refreshed every few days, and the bottle should be cleaned well each time the cage is cleaned.

In the summer, two or more bottles should be maintained, if possible. Store unused, full bottles in the refrigerator, and switch them throughout the day. Rats can only release excess body heat through their tails, so they can become overheated fairly quickly. If a rat does happen to go into heatstroke, he can be given an electrolyte drink (I recommend Pedialyte because it has less sugar than sport drinks) to help recover. You can also immerse him in lukewarm water, and promptly dry him with a towel.

TREATS

Of course, eating lab blocks and grains all the time can be incredibly boring. Rats relish their treats! As omnivores, they will eat almost anything, but it is always best to give them healthy treats such as fresh fruits (blueberries, grapes) and vegetables (carrots, broccoli), cooked pasta with no sauce (they love it!), instant oatmeal, dry cereal and other healthy goodies. I also recommend wheatgrass, which can be purchased as PetGrass, or grown from seed. Commercial treats are fine in small quantities, but fresh foods are generally better for them. I sometimes also bake special treats for my rats.

Small items—such as Rice Krispies, Cheerios, roasted unsalted soy nuts and rolled oats—make excellent training aids. Rats love them, and they are small enough to eat quickly. In addition, the animal will not get full too quickly, so training sessions can last longer.

One product that offers acceptable commercial treats is Vitakraft. Two products of theirs that are very popular with rats are the yogurt drops (any flavor) and the Cheese Wedges.

• Vitakraft Pet Products Co.

Tel 732.560.7400

Fax 732.560.7499

www.vitakraft.de

Cheese Wedges and Yogurt Drops

Another manufacturer of yogurt drops is Eight In One. They make Yogies, which are available in a variety of flavors. My boys prefer peanut butter and cranberry, which are marketed as ferret treats. Why they don't make "rat" flavors is beyond me.

• Eight In One Pet Products, Inc.

www.eightinonepet.com

"Yogies" Yogurt Drops

HEALTH CONCERNS

I don't have enough room to cover every medical condition rats can face, but there are two major concerns that one should watch for—respiratory problems and parasites. I'm going to cover a few of the major symptoms to look out for, and make suggestions of what you can do.

I am not a vet or an expert on rat health care, but I have had first-hand experience with these conditions, and have conversed with both my veterinarian and an internationally-recognized lay-expert on rat health, Debbie Ducommun. A good source for more in-depth information about rat health is her book, *Rat Health Care*. More information about this valuable resource is listed in the **Suggested Reading** section. As always, consult a veterinarian in all medical matters when it comes to your pets.



RESPIRATORY PROBLEMS

The most common health problems in rats are often respiratory in nature. All pet rats have the bacteria *mycoplasma pulmonis* in their system, though it can remain dormant and show no symptoms. Active myco can be triggered by environment (cedar or pine bedding, drafts, air fresheners, cigarette smoke, etc.) and secondary bacterial or viral infections (SDA or Sendai). If left untreated, these secondary infections can lead to pneumonia and, ultimately, death. The most obvious symptoms of most respiratory illnesses (whether viral or bacterial in nature) can include:

- Wheezing or noises while breathing
- Excessive sneezing
- Red discharge around nose and eyes (aka porphyrin staining)

Advanced symptoms may include:

- Labored breathing or gasping
- Lethargy
- Drop in body temperature
- Disinterest in food or water
- Loss of coordination
- Noticeable weight loss

If your rat exhibits any of these symptoms, it should be treated with antibiotics from a vet. Observe the other animals in the cage for similar symptoms—secondary infections are often contagious. It is often advisable to treat all of your rats at the same time. I don't recommend separating ill rats from the rest of the colony. Most illnesses are airborne, so every rat in the house has already been exposed. It also creates additional stress, which can hinder the healing process.

A WORD ABOUT ECHINACEA

While echinacea, an herb extracted from the purple cone flower, can't cure existing respiratory problems in rats, it may help prevent secondary infections by boosting the immune system, as it does in humans. Capsules can be mixed with food, or children's flavored liquid echinacea (alcohol-free) can be given. Rats should receive about 1/10 the human dose (about a drop a day), and should not be given the herb for longer than 5 to 7 days at a time, which can weaken its effectiveness. I must reiterate that echinacea is NOT a cure for anything. It only acts to boost the immune system.

EXTERNAL PARASITES

Though not as common as respiratory ailments, external parasites, such as lice and mites, can occur in rats. Rat parasites are species-specific, so humans and other household pets cannot get them from an infested rat. Scratching and hair loss can also be caused by too much protein in the

diet or a bacterial infection, so check these possibilities first before treating for parasites. Some symptoms may include:

- Excessive itching
- Scabs or hair loss from scratching
- Visible nits on hair shafts (lice)

The best treatment for parasites is a visit to the vet for an oral or topical ivermectin prescription. Though ivermectin can be injected, it is easy to overdose, and an accidental overdose can be fatal. I prefer to apply the injectable liquid topically; just a drop between their ears, which they will groom and ingest. Another ivermectin alternative is an oral dose of a horse wormer that goes by the names Equimectrin or Zimectrin. Dosage is a blob about the size of an uncooked grain of rice, once a week for two to three weeks. This can be tricky, as the horse wormer is often not evenly mixed, so a vet check is preferred. Flea powders should never be used, as they are far too dusty, and can irritate a rat's delicate respiratory system. Shampoos will only kill the adults, and does not stay in the system long enough to affect the eggs as they hatch.

BREEDING

Female rats should not be bred from until they are at least three months old. There should be a space of at least two months between litters (starting after the last litter is weaned), to allow the mother to regain her strength after bearing and nursing a litter. Lastly, each female should not be bred more than two or three times in her lifetime. A female comes to the end of her breeding cycle at about 18 months of age, so it is not a good idea to breed her after that time. Litter sizes will decrease as her fertility wanes, and there could be complications.

Breeding, however, is not something to be

taken lightly, by any means. Breeding any animal responsibly means making an effort to improve the species as a whole, not just to make more animals. This particularly applies to rats. If you are considering breeding, it is important to know rat genetics, have a breeding goal that involves improving the species, mentor with a reputable breeder, and start with good breeding stock from a reputable breeder. Pet store rats are NOT breeding material. You need to know the health and temperament history of your rat's line, going back several generations, including extended family, before you think about breeding him or her. Breeding is a monumental responsibility, and requires a lot of dedication and hard thinking before you begin. Blue Velvet Rattery has a very good article entitled, "Should I Breed My Rats?" at www.feycat.net/bluevelvet/breed_rats.html

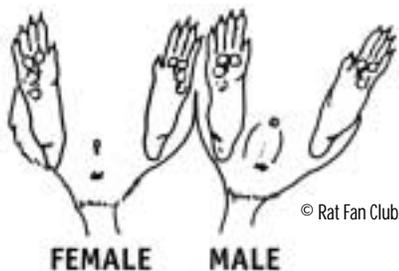
SEPARATING THE SEXES

When baby rats are a mere five weeks old, they are ready to reproduce. Therefore, males should be separated from the litter as soon as they are weaned from the mother (about 4 to 5 weeks of age), and should be kept separated from the females at all times. This will prevent the accidental pregnancies (which seem to occur at an alarming rate in pet shops). Many of these young rats are far too young and underdeveloped to healthily support an unborn litter, as they are not yet full-grown themselves. Likewise, the mother is far too weak to support an unborn litter so soon after weaning the previous litter, should one of her sons get her pregnant. Separating a litter by gender after weaning is in the best interest of the health of these young rats and their mother.

Once rats reach 3 weeks of age, it should be pretty obvious which are male and which are female (though it can be

determined sooner, with experience). The males' testicles will be visible—though they can pull them inside at will, especially if they are nervous or frightened. Females should have visible nipples on their bellies. The best thing to do is compare a few until you find two that are different, and then it will be easy to tell who is what. The diagram below should help.

DETERMINING THE SEX OF BABY RATS



FOR MORE INFORMATION

The resources listed in this section are wonderfully valuable sources of information about pet rats. I highly recommend reviewing them and keeping them handy for future reference.

SUGGESTED READING

• *Rats! A Complete Care Guide*
by Debbie Ducommun. Bowtie Press, 2002
ISBN # 1889540714 • Retail Price: \$9.95
The most complete book available on rats as pets. Every rat owner should have a copy!

• *Rat Health Care*
by Debbie Ducommun. 1995-2003
Retail Price: \$5.00
A must-have for the library. If it saves one vet visit, it has paid for itself. Available at: www.ratfanclub.org, www.rat-store.com or www.rat-a-log.com.

SUGGESTED WEB SITES

- RatsRule.com
www.ratsrule.com
- Rat Fan Club
www.ratfanclub.org
- Rat & Mouse Club of America
www.rmca.org
- Rat Palace
www.ratpalace.com
- RodentFancy
www.rodentfancy.com

ONLINE RAT FORUMS

Forums are a wonderful way to converse with other rat enthusiasts and get advice quickly. You can ask questions related to rat care, tell stories about their antics, and talk to other people who have the same interests. I am active in both forums listed below. All are very friendly and supportive places to visit, and are safe for all ages.

• Rat Fan Club Forum • Sue Meredith
www.goosemoose.com/rfc

• Rat Palace Forum • Christy Mesker
www.ratpalace.com

RAT CLUBS

Clubs are a great way to meet other rat folks, keep up to date on innovations in health care and products, and get to know people all over the world. These national clubs are highly recommended.

- Rat Fan Club (RFC)
www.ratfanclub.org
\$25 per year, includes RFC membership and subscription to *The Rat Report*.
- Rat & Mouse Club of America (RMCA)
www.rmca.org
There are also local chapters of the RMCA.
- American Fancy Rat & Mouse Association (AFRMA)
www.afrma.org
\$25 per year, includes AFRMA membership and *Rat & Mouse Tales* subscription.

Any Rat Rescue
Phoenix
info@anyratrescue.org
or by phone:
480-663-3338

Acknowledgments

BIBLIOGRAPHY

- Ducommun, Debbie. *Rats! A Fun and Care Book*. Irvine, CA: Bowtie Press, 1998.
- Ducommun, Debbie. *Rat Health Care*. Chico, CA: The Rat Fan Club, 1995 - 2000.
- Ducommun, Debbie. *The Rat Report*. Chico, CA: The Rat Fan Club, 1992 - 2003 (periodical).
- Horn, Angela and Antonia Swierzy. *Why Rats Need Company*. London: Blackstaff Rats, 1997. www.geocities.com/Heartland/Estates/3636/company.html
- Isaaksen, Mary Ann, ed. *Rat & Mouse Gazette*. Fitchburg, MA: Rat & Mouse Club of America, 1999 -

2000 (periodical, out of circulation).

ABOUT THE AUTHOR

Sue "Suebee" Meredith is a devoted rat person who would like to see every rat owner and pet store receive the information they need to properly care for pet rats. She has had pet rats since April 1996, and learns more about their care every single day. She has also consulted with veterinarians and experts in preparation for this brochure. Sue's rat-related web site is located at www.ratsrule.com. Some of the organizations she participates in include:

- Member of the Rat & Mouse Club of America (RMCA).
- Member of the Rat Fan Club
- Moderator of Rat Fan Club Discussion Forum (www.goosemoose.com/rfc)
- Active in Rat Palace Forum (www.ratpalace.com)

SPECIAL THANKS TO:

Debbie Ducommun, a.k.a. The Rat Lady, **Dr. Carolyn Orr**, DVM, **Jen** (and Jake & Elwood), **John**, my husband, and all my Rats, past, present and future! And, of course, to all my fabulous Internet rat-friends who always keep me on my toes and learning.