

## HOUSING

**CAGES** – Each rat needs to have 2 cubic square feet of space. Measure the width, depth and height of your cage. You can use the formula below or use an online cage calculator such as: [www.ratclub.org/cgi-bin/cage3.cgi](http://www.ratclub.org/cgi-bin/cage3.cgi). Features to consider when choosing a cage are size, condition (if bought used), and ease of cleaning, levels, door location and sizes, quality of materials used. This website [www.petinfopackets.com/rats/ratcages.html](http://www.petinfopackets.com/rats/ratcages.html) has a great breakdown of rat cage options. We like Martin's Cages at [www.martinscages.com](http://www.martinscages.com), you can only order these online and require assembly, powder coating is a must have. We also really like the Critter Nation by Mid-West, [www.petstreetmall.com](http://www.petstreetmall.com) has free shipping. Upgraded pans can be purchased from [www.bassequipment.com](http://www.bassequipment.com) located under "ferret pans."

To get the volume of a cage in cubic inches use the following formula:

- |   |                                   |
|---|-----------------------------------|
| 1. Multiply the cage dimensions (length by width by height)                               | Example:                          |
| 2. There are 3456 cubic inches in 2 cubic feet, so divide the result of the above by 3456 | 30" x 18" x 36" = 19,440          |
| 3. The result is the number of rats the cage can comfortably hold                         | Divide by 3456                    |
|   | 19,440/3456 = 5.625 rats / 5 rats |

**CAGE FLOORS** – The cage floor of any rat cage should be solid. Shelves can be gridded or solid. Solid shelves will need to be wiped down often or covered with an absorbent material; a rat should not be walking in their own urine. Gridded shelves should be at least partially covered. Completely covered every inch of gridded shelf is not necessary.

**HAMMOCKS**- Can be purchased at commercial pet stores however the quality will not match the price. We like handmade hammocks from The Rat Stash [www.theratstash.com](http://www.theratstash.com). Another option is a Space Pod which is essentially a plastic hammock [www.lixit.com/node/814](http://www.lixit.com/node/814). Hammocks are a must have!

**WATER BOTTLE** – Most basic, plastic, water bottles will work just fine. Glass water bottles are good for rats that will chew the plastic water bottle through the cage bars, this is not very common. Choosing plastic or glass is a personal preference some people have to cleaning or aesthetics. We suggest a backup water bottle or more than one water bottle if you have a large cage or a lot of rats. We also recommend a water bottle cleaning brush. We really like Lixit Quick Fill Bottle ~\$12; it has a silent stainless steel valve and a top filling lid, [www.lixit.com/node/807](http://www.lixit.com/node/807)

**HIDEY HUTS** - must be provided. There are a number of materials used for a hidey hut. Plastic igloos are a favorite, they will need regular cleanings, and these can be run through the dish washer which is convenient. Cardboard boxes are cheap and disposable; changing out the hidey hut can be exciting or distressing for the rat. Take into consideration which you would prefer and which your rat prefers. Huts made out of wood are porous. If you choose a wooden hut you will need to soak the entire hut in a cleaning solution to clean it, most people decide this is more work than it's worth.

**TOYS** - Rats are incredibly intelligent, thus much happier when given a variety of toys. Bird, cat, baby toys and handmade toys are great options. Consider keeping a large variety of toys and changing them out to keep your rat simulated with new objects.

**WHEELS** – All rats should be offered a wheel. Almost all young rats regardless of sex will use the wheel. Adult females are more likely than adult males to use a wheel. The foster home may be able to expand on your new rat's wheel preferences. Just like humans the more a rat exercises the better, so give your new rat access to a wheel. If after 2 weeks the wheel is still not being used please feel free to remove it. You can donate the wheel back to the rescue. Some of our favorite wheels are: Super Pet Chinchilla 11" Giant Run-Around ~\$15, Super Pet Chinchilla 12" Giant Silent Spinner ~\$22, Wodent Wheel 'Wobust' semi-enclosed 12" ~\$40. Enclosed exercise balls are not recommended.

**BEDDING** - The Bedding Dilemma [www.afrma.org/beddilemmap1.htm](http://www.afrma.org/beddilemmap1.htm) is a great article discussing bedding options. Trying out different beddings is the best way to figure out which you and your rats prefer. Do not use clay based cat litters as they contain a 'clogging agent' which can be lethal to rats. Non-commercial options might be right for you: Non-looped thread towels, clean old towels and sheets, t-shirts, disposable white paper towels, shredded paper, and newspaper printed with soy ink. Considering mixing more than one product to gain the most benefits. We recommend paper pellets because of their impressive ability to absorb and control odor. Adding another softer bedding option such as CareFresh or fleece makes up for what the hard bedding lacks. CareFresh or CareFresh Ultra are very popular options. If you choose to use CareFresh please freeze it for 24 hours before use. This will kill any little buggies coming in that may have hitched a ride from the store or warehouse it was before it came to you. Aspen shavings are an acceptable option. Never use pine or cedar shavings, which contain phenol compounds that have been found to cause liver changes and respiratory problems. Paper pellets are sold by different brands such as Yesterday's News, Critter Country, Cell Sorb, Cell Sorb Plus, Tek-Fresh, and Crown (sold at Pet Food Express).

**CLEANING** – Cage cleaning is not an exact science, not by a long shot. Most of us do not live under totally sanitized conditions; however, we are not usually restricted to a relatively small amount of living space where germs and bacteria are likely to collect. Because most of us do confine our critters to cages of one sort or another, it's important we are aware that this can happen. There are many cleaning products available. For more information visit [www.afrma.org/howclean.htm](http://www.afrma.org/howclean.htm)

We recommend a solution of vinegar/water/Pet Food Express Brand Clean 'n Smart (unscented) which is organic & safe. You can also add these products to your laundry to wash your cloth bedding.

## DIET – RATS ARE WHAT THEY EAT!

Block – 80% Fresh Veggies – 20%

Rattie Ratz recommends a high grade lab block or Oxbow Regal Rat. Most high grade lab blocks have growing (under 8 months) formulas and adult maintenance formulas. Oxbow is an adult maintenance formula. Oxbow is available at Pet Food Express locations throughout the Bay Area. Harlan is a high grade lab block option. It can be purchased from your rescue contact, from *For Other Living things* in Sunnyvale, CA or from *Petite Pet Supply* at [www.theratshop.com](http://www.theratshop.com) or from [www.thecraftyrat.com](http://www.thecraftyrat.com).

Also provide fresh vegetables and fruit to supplement their diet (no more than 20% of their daily intake). This is a great way to bond with shy rats. Generally, if you would eat a food, you can give it to your rats. However, there are exceptions to this rule.

## DON'T OVERLOOK WATER

One source of toxins that's often overlooked is tap water. Do not use tap water that is fluorinated. Fluorine can cause brain damage in rats. Chlorine is also toxic (There is evidence that chlorinated water raises the risk of miscarriage in women in the first trimester). If your tap water is chlorinated, buy a filter that removes chlorine (such as Britta or Pur) and only give your rat filtered water.

Make sure your rats have a fresh supply of water daily. A bottle system is preferred over bowls to ensure water stays clean and available. It's a good idea to clean the water bottle out with a bottle brush every so often. Use a tiny brush or cotton swab to clean the sipper tube.

You should also keep track of the level in the bottle so you can make sure your rats are getting water. Sometimes, the ball bearing in the sipper tube gets stuck and blocks the flow of water so it's important to check to make sure the bottle is working properly after changing the water, re-filling, or if you notice the water level not lowering.

## REMEMBER THESE FOOD TIPS

- ❖ To keep a large supply of lab block fresh use zip lock back and store in the freezer.
- ❖ Spoiled or moldy food can contain deadly toxins.
- ❖ Never give nuts, grains, veggies or other food that looks or smells questionable.

- ✘ Mold can grow even in sealed plastic bags. When cutting up veggies, cut off the dried part that has been exposed from the previous cutting and throw it away. If you see mold growing on a food, throw the whole thing away. Do not attempt to cut away the moldy section. Invisible mold filaments penetrate deep into the food.
- ✘ Never allow your rat access to household or outside plants as many are toxic to small animals.

## FORBIDDEN FOODS

The following should never be fed to rats:

- ✘ Bitter Almond – May yield from 6 to 8% of hydrogen cyanide, a deadly substance
- ✘ Blue Cheese – Contains Toxic Mold
- ✘ Green Bananas – Inhibits starch-digesting enzymes
- ✘ Green Potato Skin and Eyes – Contain solanine, a toxin
- ✘ Licorice – Contains a suspected neurotoxin
- ✘ Orange Juice – Forbidden for male rats only, contains d-limonene in the skin oil which gets into the orange juice during squeezing, can cause kidney damage and kidney cancer due to a protein that only male rats have in their kidneys. Pieces of the orange fruit are okay if you wash the orange-skin oil off after peeling it
- ✘ Poppy Seeds – May cause neurological damage, or even death
- ✘ Raw Artichokes – Inhibits protein digestion
- ✘ Raw Bulk Tofu – May contain bacteria; packaged raw tofu is safe
- ✘ Raw Dry Beans or Peanuts – Contains anti-nutrients that destroy vitamin A and enzymes needed to digest protein and starches; causes red blood cells to clump. (Note: roasted peanuts you buy in stores are safe. Frozen beans from veggie mixes are also okay because they've been pre-cooked)
- ✘ Raw Onion – Can lead to anemia and an upset stomach
- ✘ Raw Red Cabbage and Brussel Sprouts – Contain an anti-nutrient that destroys thiamin
- ✘ Raw Sweet Potato – Contains compounds that form cyanide in the stomach
- ✘ Rhubarb – Contain high levels of oxalates which bind up calcium
- ✘ Wild Insects – May carry parasites

## CAUTION FOODS

The following should be fed sparingly and with caution:

- ✘ Apples – Apples are fine, except for the seeds which contain a cyanide derivative that is deadly
- ✘ Avocados – Great as a treat to feed rats that need to gain weight quickly (make sure the fruit is ripe) due to their high fat content. However, the pit, rind, skin and leaves of avocados are toxic. The part of the fruit in contact with the pit has a higher concentration of toxins
- ✘ Carbonated Drinks – Rats can't burp!
- ✘ Carob – Contains vitamin A, B vitamins, and lots of protein. Carob pods have been used to treat diarrhea for centuries. Carob should be taken with plenty of water. Too much Carob will produce the opposite effect and cause constipation.
- ✘ Chocolate – Contains stimulants that can lead to heart failure or neurological poisoning in high quantities. However, a *very small* piece of **dark** chocolate can be given in times of emergency to temporarily alleviate respiratory distress. For there to be any benefit the cocoa has to be at 75% or above
- ✘ Dried Corn – Can have high levels of fungal contaminants which can lead to liver cancer
- ✘ Iceberg Lettuce – Full of water with no nutritional value
- ✘ Peanut Butter – May cause choking in rats. If you want to give your rats some, mix it with jam or something liquid to make it less sticky
- ✘ Source: <http://www.rattieratz.com/rat-food/forbidden-foods/>

## TRUST TRAINING AND BONDING WITH YOUR NEW PET

Young rats (9 months or less) generally do very well with bonding to their new owner. It is as simple as pick them up and play with them. You want to spend a minimum of thirty minutes at a time playing with your new pet. Simply taking the rat out of the cage is not enough though. You need to hold and cuddle them and allow them to wander around a very small area. Beds work perfectly or even a couch. This gets them used to the idea that you are not going to just give up and walk away when they do not want to play. You also want to make it a point to talk to them through the cage bars as often as possible. Every time you walk past the cage, say a simple hello and how are you. This will allow them to get used to the sound of your voice, as well as your smell. You should start to see a bond develop fairly quickly. Rats love attention and are happy to be loved!

Older rats (9 months to 2 years) sometimes need a bit slower of an approach. Depending on their past, and how they were treated, some older rats may have trust issues. The best way you can distinguish this behavior from a fearful baby is that the rat will sit in the corner of the cage hunched down as low as he or she can get. They will back up when you go to reach in and wait for you to give up and remove your hand. The best approach to this is patience. Sit in front of the cage for as long as you can AND as often as you can. Read aloud, sing, and/or talk to the rats in order for them to know that you are not going to be leaving any time soon.

After the rat has gotten used to your presence outside of the cage and has stopped cowering in the corner (i.e. starts grooming themselves, sniffs, eats, drinks or plays) you can move ahead and start putting your hand in the cage with him/her. This does have a bit of caution to it because they may try and bite you to get you out of their cage. This depends on how fearful and untrusting the particular rat is. You are going to want to sit with your hand in the cage for about a week until they accept that you are ok and move on with their daily lives even though your hand is there. Once you have developed that trust, you can move ahead again to actually petting your rat. Again, follow the same precautions and the same procedures though you will know they have learned to trust you when they will take treats from you and not shiver or freeze when you touch them.

Keep in mind that there are three main "fear types" of rats.

- ✘ Under Socialized– these rats have had very little to no contact with humans and need to be taught that we are not something to be afraid of.
- ✘ Fear Biters – These rats are generally ones that have been abused, neglected or have medical issues such as being blind or in pain. They will bite without much warning and generally just need to have understanding and patience.
- ✘ Aggressive rats – These are the rats that will huff and puff at you through the cage bars and act as though they are much bigger than we are. They need the most time and experience to be worked with and should not be taken on by new rat persons. There are many ways to overcome this aggression though and they can be brought around with training of both the rat and the handler.

## THE HEALTH CHECK

By doing a daily health check, you will be aware of the rat's physique and behavior which will help you see any changes that indicate the need to take a trip to the vet. When you are familiar with doing health checks, the whole process only takes a minute. That's one minute of care to provide peace of mind for an entire day!

### 1. Breathing:

Learn to spot symptoms of respiratory infections before they become advanced to the point of emergency intervention. Listen for abnormal breathing sounds such as wheezing, congestion, or clicking noises. Note any abnormalities such as labored breathing or gasping. Other signs may include: discharge from the eyes or nose, poor appetite, hunched posture or puffed up fur. A rat with a respiratory infection will need to be treated to prevent chronic respiratory problems.

### 2. Teeth:

Look at the rat's teeth and gums to see if there is any misalignment of teeth, gum swelling, redness, pus, or foul odor. In adult rats, the uppers are dark yellow-orange and the lowers are yellow. The incisors should be even, not too long and not piercing the cheeks or gum. Oral infections can be aggressive and need early medical intervention to be resolved.



### 3. Eyes:

Check the rat's eyes to assure they are clear, bright and free of discharge. Look for cloudiness or ulcerations. Bulging eyes may be indicative of SDA infection, tumors or an abscess behind the eye.

### 4. Ears:

Check the rat's ears for discharge, growths or unusual odors.



### 5. Injuries and Wounds:

Visually inspect your rat's body for bleeding, cuts, bites and bruising.

### 6. Tail and Feet:

Visually inspect your rat's tail and feet for injuries or symptoms of bumblefoot (feet) and ringtail (tail).

### 7. Movement:

Remove the rat from its cage and watch it walk. Keep your eyes open for trembling, limping, tilting, circling or weakness in the limbs. Note the general posture and the activity level. A rat exhibiting a "hunched up" posture or lethargy may not be feeling well.

### 8. Body:

Carefully massage the rat's body with your fingers checking for lumps, swelling, or areas of sensitivity that might indicate growths, swelling or pain.

### 9. Fur and Skin:

Watch the rat's behavior to see if it is scratching excessively and check for any hair loss. Look at the skin and fur for possible parasites. Fleas and lice are large enough to see. Mites are harder to see, but often you will see nits in the hair shaft or a characteristic scabbing around the rat's face, shoulders and neck.

### 10. Genital Area:

Female: Examine your female rat's vaginal opening for any discharge or blood. In a non-pregnant rat, this could mean a problem such as a uterine infection (often mycoplasma), cysts or tumors. Male: In a male, check the penis for discharge. (Occasionally you will need to inspect closer by pushing back the sheath to make sure there is no blockage.)

### 11. Color:

Check the extremities (feet, ears, tail, paws, etc.) for either pale or heightened skin color.

### 12. Odor:

Sniffing your rat may help alert you to problems. Learn your rat's "normal" odor. A "bad" smell may be indicative of infection. A sickly sweet smell could be diabetes.

### 13. Hydration:

You can perform what is called a "pinch test" to check for dehydration. Using two fingers, take a little fold of skin on the

rats back and lift up. When you let go, the skin should return to its normal position. If the skin stays raised, even for a few seconds, your rat may be dehydrated.

#### 14. Temperature:

Get to know what your rat's normal temperature "feels" like so you can recognize when the rat is too cool to the touch or fevered.

### QUARANTINE: TIME RECOMMENDED AND WHAT TO LOOK FOR

The term quarantine means to separate and isolate to prevent the spread of disease. With newly adopted rats, this includes bacterial infections, viruses, and fungi.

After taking in any rats into your home (Rattie Ratz, personal, or otherwise) all of the rats in your home are considered "in mandatory quarantine" for a minimum of 2 weeks. Rattie Ratz recommends this when rats are adopted at Adoption Fairs because they are exposed to other rats at the fair, as well as any bacteria and germs on the handlers clothing.

Quarantining at a separate rat-free location and maintaining a persistent quarantine environment is possibly the most efficient way to prevent illness and/or death from contagious disease in a colony. However, if this is not possible, house your newly-adopted rats in a closed off room such as another bedroom or bathroom (provided it is warm in the room) and remember to handle the newly-adopted rats last. Wash and change your clothes or even shower in between handling your rats and the newly adopted rats. By doing this, you avoid direct contact of any bacteria between rats, thus reducing the chance of spreading a virus.

Even if they were quarantined in another person's home for 3 weeks and then you brought them in to your own home, doesn't guarantee the rats won't contract an illness. The risk of them spreading a virus is still present. Think of it this way....when you have healthy children, they go to a daycare center and then 2 weeks later they come down with a cold or the flu. Each child's immune system is different and each child has antibodies to a different strain of whatever virus. When they come into contact with an unfamiliar strain of the cold or the flu, they get sick. The same thing happens with rats.

During the quarantine, it is important you watch for any signs of illness. Most illnesses will show themselves within about the first week. If no illness is noted, then your quarantine is over in 2 weeks. If illness is noted, contact your vet to begin treatment immediately. Quarantine ends 2 weeks after onset of symptoms or 10 to 14 days after symptoms go away – whichever is longer.

#### SIGNS OF ILLNESS MAY INCLUDE, BUT ARE NOT LIMITED TO, ANY OF THE FOLLOWING:

Excessive porphyrin secretions from eyes and/or nose.  
Sneezing  
Wheezing  
Rough coat  
Labored breathing  
Lethargy  
Hunched Posture

Swelling on neck or body  
Abscesses  
Scabs or itching  
Diarrhea  
Constipation  
Lack of appetite  
Eye ulcerations, bleeding or swelling.

Visual identification of parasites including lice nits.  
Abnormal odor from rat  
Abnormal smelling feces or urine.  
Respiratory distress  
Head tilt or abnormal gait  
Thinness

Quarantine is a perfect time to bond with your new rats without having to compete for attention with your other resident rats. Quarantine also allows the adopter to learn more about your new rats' personalities and find out what kind of toys or treats your new rat likes.

After quarantine is over, it is safe to move your new rats' cage to the main rat room.

## RAT TO RAT INTRODUCTIONS by Debbie Ducommun (of Rat Fan Club)

The willingness of rats to accept a new roommate depends on their personality and age. It will take more time--sometimes up to several weeks--to introduce a newcomer to adult rats, but it can be done. With time and patience, almost any rat will accept a newcomer.

The introduction process has several steps and the time required for each may vary. The easiest pairing will be two young rats, while the most difficult introduction is between two adult males, especially if they aren't neutered. On the other hand, as rats start to age they can mellow out and be more accepting of new roommates. A young rat is the best choice for a new roommate for an adult male, but the newcomer should be at least six weeks old. This is because adult males will sometimes kill strange baby rats younger than this.

When introducing rats, you should have two cages so the new rat can have his own cage at first. (The second cage can be the resident rat's travel cage.) Never just plop a new rat in the resident rats' cage because the residents will always defend their territory.

During the introduction process, you should only advance to the next step if there is no sign of aggression within 30 minutes. A resident rat will express aggression by puffing up his fur, arching his back, and swinging his body sideways at the newcomer. If you see this type of behavior, remove the new rat quickly to prevent an attack. Use care when picking up an aggressive rat as they will sometimes bite. Pick them up with a towel. Or if need to quickly break up a fight, you can pick up the aggressor by the base of his tail. If an introductory session results in aggression, try again later, or go back a step.

When introducing a new rat to a group of rats, usually only the dominant resident rat will be aggressive toward the newcomer at first. This is the dominant rat's "job". Once the new rat is accepted by the dominant rat, the others may show some aggression in turn, but it usually won't be as severe.



(Please note: this page and the following page are directly from [ratfanclub.org/newrat.html](http://ratfanclub.org/newrat.html)).

### THE INTRODUCTION PROCESS

The first step is to place the cages near each other so the rats can see and smell each other. Place wire cages far enough apart so the rats can't reach through the bars to the other cage, or the result may be bitten toes or tail. The next step is to switch the rats to each other's cage, even briefly. This allows them first-hand experience with each other's scent. You may have to do this several times.

The next step is to introduce the rats in neutral territory, which should be someplace where the resident rats are not used to playing. The bathtub is a good place. This will give them a chance to become acquainted without the residents feeling the need to defend their territory. Another technique that can work is to take the rats for a car ride in a neutral carrier.

The next step is to let them interact in an area where the residents are used to playing. Watch them carefully, because this is where some fighting may break out. It may also help if you put the new rat(s) in your lap along with the other rats. By holding everyone at the same time, it may let the residents know that YOU have already accepted the new rat.

The final step is to clean the larger cage out completely and rearrange the furnishings so it appears to be a new cage. Trim the back toenails of the rats to minimize scratching in a scuffle. Put vanilla extract or perfume on all the rats to make them smell the same. Then put the rats in this cage. The best time to do this is in the morning when rats tend to be sleepy.

The dominant resident will probably sniff the newcomer and then "attack" him, forcing him over on his back. If you've followed the introduction process correctly, don't rush to take the new rat out. Instead, carefully observe the fight. Observe whether the resident rat is showing the raised hair, arched back, and sideways approach that are signs of aggression. If so, remove the newcomer, but if not, leave them together. The resident rat must establish his or her dominance and it's normal for them to "beat up" the newcomer. Just because the new rat is squeaking doesn't mean it's getting hurt. This is just a rat's way of saying "I give up". As long as you have followed the introduction process step by step, and as long as the resident rat isn't showing the signs of aggression, you should let the fight run its course. If you take the new rat out, you'll prolong this adjustment phase.

However, if it appears that the new rat is being injured, or if the attack seems especially vicious, then of course you should remove him from the cage. But in most cases the "fight" will be over quickly. The dominant resident rat will probably beat up the newcomer frequently for the first few days, and you shouldn't interfere as long as there are no injuries. But the first attack is usually the worst, and before long the rats will typically become the best of friends, sleeping together and grooming each other.

One of my members also suggested something that worked well for her. She smeared all her rats with pudding! After they got it all licked off each other, they had bonded! But this was a group of rats who had lived in the same house for a while, not brand new rats. You would still need to go through all the preliminary steps first.

Because rats are individuals with their own personalities, occasionally two rats will take a dislike to each other and constantly fight. In some cases, this means the pecking order is changing and the fighting will stop eventually. Neutering any males involved will usually solve the problem. (After a male is neutered, it can take up to 8 weeks for their behavior to change.) However, if these fights continue for more than several weeks, such rats should be separated permanently.

## SURRENDERING RATS BACK TO RATTIE RATZ

"Welcome Back!" is a program available to all of our adoptive families. Although we try our best to ensure an excellent match, there are certain things that are beyond our control. If, for any reason, you need to rehome an animal adopted from our organization, we welcome our animals back with open arms. Generally speaking, the returned animal will go back to the foster home that was caring for the animal prior to adoption.

Please contact Rattie Ratz first to see if your issue may be resolved before considering returning your adopted rat. (Fewer transfers from home to home means a happier and healthier rat).

## RATTIE RATZ CONTACT INFORMATION

*Emails and phone calls are going to private volunteers!  
Please be patient for their responses.*

Email: [info@rattieratz.com](mailto:info@rattieratz.com)

Phone: **415-340-1896**

General Mailing Address: **Rattie Ratz – 5433 Clayton Road Suite K #276, Clayton, CA 94517**

