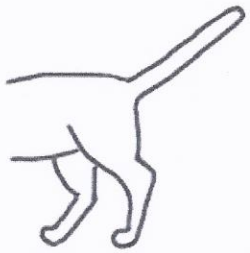
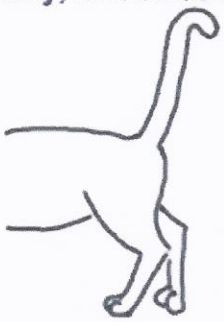
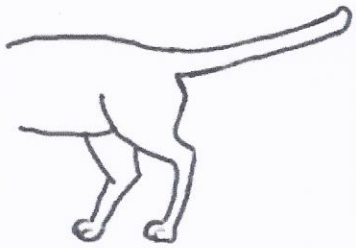
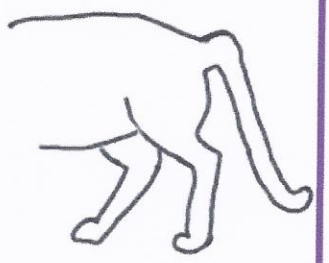
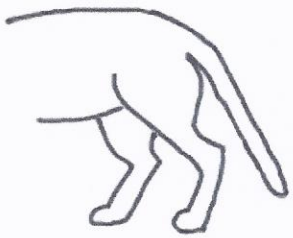
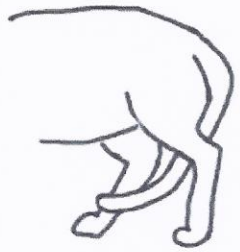
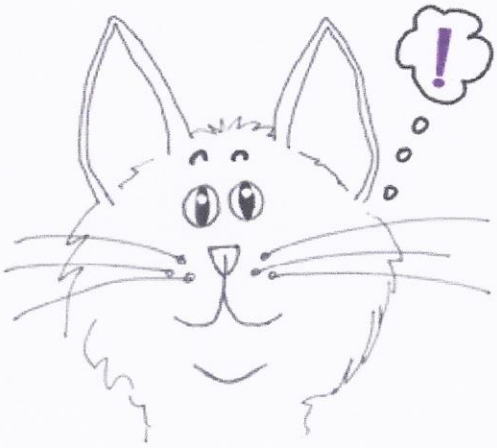
The Telltale Tail

friendly and content	non-threatening,unsure 	derisive
friendly, but unsure 	amicable, not fearful or aggressive 	defensive aggression 
angry	potentially aggressive 	submissive 
very happy to see you	excited, angry or irritable	alert, interested

catsmeowblog.com

When the Ears Speak, Listen!

1) Relaxed and Happy



2) Alert, Listening Intently

3) Agitated and Nervous

4) Frightened, in Attack Mode

catsmeowblog.com

A Gentle Kind of Cat Care

Reducing anxiety, frustration, and URI in shelter cats

BY NANCY PETERSON

Cats are invariably stressed out when they enter a shelter because they can't escape or hide, and don't know what's going to happen next. Gentling techniques can help ease their anxiety, which improves their physical health as well.

Until somewhat recently, most shelters worked to prevent upper respiratory infection (URI) by focusing on reducing crowding, effective disinfection, adequate ventilation, and vaccination. However, it's now recognized that stress is almost always the most important factor affecting URI's development, severity, and outcome. Hence, efforts to reduce emotional stress should begin as soon as a cat enters the shelter.

Nadine Gourkow has been looking at emotional stress in cats for years. Her master's degree in animal science compared the effect of various types of housing on stress, time to adoption, and rate of sickness in cats at the British Columbia SPCA in Vancouver, Canada. Based on her research and further studies at the SPCA, she developed the CatSense system and a program to train staff to implement it at the SPCA's 36 shelters. The system included the Hide, Perch & Go box and *The Emotional Life of Cats* video.

In 2007, Gourkow began her doctoral research at the SPCA to examine the relationship between emotions, immune competence, and feline URI. Her findings, she hopes, will help develop science-based shelter practices that further increase emotional well-being in cats and reduce URI.

Proper disinfection will always be important in shelters. But "we can tell people to wash their hands and attempt to disinfect everything as much as possible, but the reality is that shelters are filled with pathogens that cause URI," says Gourkow. "So, since we can't manage that very well, then the other option is to increase the cat's resistance to those [pathogens], and the way that you do that is by making them happy."

But how can a cat's emotional state be assessed?

IDENTIFYING FELINE EMOTIONS

Anxious Cats

The behavior of anxious cats includes startling and retreating to the back of the cage. Their bodies and ears are flattened; their eyes are wide open, and their pupils are dilated. They may be in the Hide, Perch & Go box or the litter box. "They're basically frozen," says Gourkow. "They don't eat, they don't groom; they don't do any of the normal exploration we can expect to see in a cat, such as walking around the cage and checking things out when you put new things in the cage."

According to Gourkow, anxious cats do better in single cages, and a place to hide is essential. A shelf that allows separation of sleeping, eating, and elimination areas is important, but one without a lip doesn't provide a place to hide or allow these cats to manage their anxiety. Draping a towel from the shelf to the cage floor is an easy way to create a hiding area below the shelf.

Anxious cats also need:

Control over interactions; let cats approach you

Gentling and hearing high-pitched, soft human voices

One principal caretaker

Spot cleaning of cages only when necessary, without removing the cats

Something with the cat's scent in the cage at all times

Starting at the Beginning

It starts with understanding that cats coming into a shelter are, almost without exception, stressed out and anxious.

People often think of anxiety as being inherently negative, but Gourkow explains that it's useful in the natural world. "It's a state of uncertainty, not knowing what's going to happen next, that's meant to assess a situation to find out if there's impending danger," she says. "But when cats are in the shelter, they can't figure out what's going on, and anxiety can last for days. They can't get out, and they can't hide. It's a very scary state to be in, and usually it should last just a few minutes."

Gourkow suggests imagining how such stretches of anxiety would play out in our own world. "Imagine that you're in your home and you think there's somebody there and you have to listen carefully to every sound to figure out if you're in danger. If you think you're in danger and there's no way out and nowhere to hide—you can't go under your bed, there's no closet to go into—it's terribly frightening, awful, and, for me, the thought that cats could live in that state for more than 10 minutes was just almost unbearable," she says.

Cats, of course, cannot speak up and tell people that they're freaked out. And while there are some feline behaviors that clearly exhibit their stress, there's also biochemistry.

During her doctoral research, 40 healthy cats helped Gourkow construct and validate the first-ever scale to assess emotional states in cats using physiological measurements of stress and immunity. The scale now has 24 behaviors that she's validated as statistically representing two negative emotions, anxiety and frustration, and one positive emotion, contentment.

Gourkow's immune measure was Immunoglobulin A (IgA), the antibody that protects cats from environmental pathogens. The amount of IgA, the main antibody secreted in mucous, is mediated in part by emotional states. "IgA acts like a glue to prevent pathogens that cause URI from crossing over into the body," says Gourkow, "and because 80 percent of cats' IgA-producing cells are in their intestinal tract, measuring [IgA in] their feces was perfect." Measuring and analyzing IgA on every stool, Gourkow found high IgA in content cats and very low IgA in anxious and frustrated cats.

Cats at the SPCA were mouth swabbed on intake, then again on day 4 and day 10, for the five common pathogens causing URI: feline herpesvirus 1, bordetella bronchiseptica, mycoplasma felis, feline calcivirus, and chlamydophilia felis.

Happy cats (like this one with volunteer Heather Koos in the colony room at the Tri-County Animal Shelter in southern Maryland) have a stronger resistance to the URI-causing pathogens found in all shelters.

THIS PAGE, LEFT: COURTESY OF NADINE GOURKOW; RIGHT: KATHY MILANI/THE HSUS. OPPOSITE PAGE: COURTESY OF NADINE GOURKOW

"We now know that content cats have higher IgA, which protects them from environmental pathogens," says Gourkow. "So I thought, is there a way to take these cats that are anxious and frustrated, and change what the scientists call 'the emotional valence' from negative to positive?"

That led to the second study of Gourkow's Ph.D. research, in which she examined the effect of gentling and mental stimulation on emotions, mucosal immune system, and health. It's the first study that looks at the relationship between behavior and IgA in cats, examining the effectiveness of behavioral interventions to induce contentment and increase immune functioning in shelter cats.

Gentle on their Minds

Behavioral interventions such as gentling have been developed for many animals. Gourkow's gentling technique allows a cat to control the amount of hand and tool con-

IDENTIFYING FELINE EMOTIONS

Frustrated Cats

The behavior of frustrated cats, revealed by night videotaping, comes in spurts and includes hanging upside down on the cage door, pushing items around, destroying things in the cage, and meowing and meowing. "These cats will look like they're doing OK, and then all of a sudden they'll get up and they're on hind limbs, standing on hind limbs, and they're scratching at the ceiling, at the floor, at the walls. They're putting their paws through the cage door, hitting it with their head. They're upside down, they're rolling around. They're trying to get out," Gourkow says. "Those are the cats that staff comes in the next morning and everything is destroyed." These cats may or may not eat a lot or groom.

Providing a perch, mental stimulation, play, and time out of the cage is the most important treatment for frustrated cats. Mental stimulation can consist of clicker training, food puzzles, and interactive toys. "Give priority to frustrated cats, when appropriate, for communal housing," Gourkow recommends.

Webster Veterinary Supply

With outstanding service, competitive pricing and a full range of quality products, Webster brings more value to your organization than any other supplier. We have extensive equipment offerings, special pricing and financing available along with specialized representatives that can help you chose the best items for your facility.

Contact Webster today to find out more information on:

- Surgical instruments (especially our spay & neuter package offers)
- Equipment, cages, and runs
- Supplies

Phone : 1-800-225-7911
Online: www.mywebstervet.com

*Formerly AVSC and PlanetVet.com

THE HUMANE SOCIETY OF THE UNITED STATES

WEBSTER VETERINARY

[Shelter Partners]

IDENTIFYING FELINE EMOTIONS

Content Cats

The behavior of content cats includes sitting and relaxing. They sleep on their sides with their undersides exposed and their necks, legs, and tails extended. Their ears are up, and they're sleeping soundly. "Those cats are really feeling safe, safe enough to go to sleep and safe enough to expose all their body parts," explains Gourkow. "They're eating and grooming, and most of them are interacting in a very friendly way with a human. Rubbing on items in the cage is another content cat behavior. The [Hide, Perch & Go box] is great for that because it's cardboard and retains their scent, and they get to keep that box when they go home." The box also serves as a perch, which is essential for content cats.

Resources

The BC SPCA CatSense system: *bit.ly/y4ulgc*

URI information sheets in the Shelter Health Portal at *sheltermedicine.com*
Multiple articles on URI, cat housing, spot cleaning, and more at *Animal Sheltering*'s website, *animalsheltering.org/resource_library*

"Feline stress and wellness: Lessons learned from animal shelters," a PowerPoint presentation at *bit.ly/w5e2Q3*

Cornell University College of Veterinary Medicine's Cat Enrichment Log Sheet at *sheltermedicine.vet.cornell.edu/documents/CatEnrichmentLogSheet.pdf*

Cat lovers already know that cats love to have their faces touched. A gentling intervention developed by researcher Nadine Gourkow eases anxiety in shelter cats by using circular movements around the head and chin.

tact he desires, and having control is of utmost importance for anxious cats. Gourkow's gentling intervention involves touching a cat, using circular movements around the head and chin only. "I used a gentling tool for cats that were too aggressive to touch by hand," Gourkow explains. "Both gentling approaches [hand and tool] mimicked allogrooming, for example, grooming by another cat, especially mom. The idea was to see if the intervention received during the first five days would prevent disease later on."

Gourkow's gentling technique gives the cat the opportunity to experience a series of short encounters with positive outcomes. "The goal was to change the cat's mind about impending danger, and for the cat to feel that, 'This is a safe place, these are safe people.' And then the gentling, touching part was really for them to experience physical pleasure, because that sets off different hormones in the body that are actually calming and reduce anxiety," says Gourkow. "This is the beautiful thing—the mucosal immune system is mediated in part by the psychological state."

It took several sessions before Gourkow was able to touch some cats, but she was amazed by how quickly and easily even they turned around. Although cats didn't improve 100 percent—some still stayed at the back of the cage and were frightened when anybody else came in—many showed improvement in about three days. The cats who took longer were usually aggressive. For those cats, Gourkow used a mechanical gentling tool, which not only increased their IgA but helped greatly in reducing their aggression.

"Preliminary results show great improvement in emotional states and a reduction in incidence of URI in cats receiving mental stimulation and gentling treatments, particularly anxious cats," says Gourkow.

Although cats who have been gentled may still get URI, "it's easier on them because they continue to eat, and they're easier to manage," Gourkow notes. Even in shelters that are treating URI, if the cats are difficult to manage and medicate, they often get euthanized, she adds.

Gourkow wants shelters to understand that this program shouldn't be an afterthought. "Changing emotional states, making cats content with shelter life with such simple techniques, has a great potential [for] saving many lives," she says. "The mind/body connection is a beautiful thing. A happy cat is a healthy cat." **AS**

JULIE BUSCH BRANAMAN