Team Welfare Guidelines

Revision A

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INTRODUCTION

HOPE Team Welfare Guidelines: Helping the Helpers

Introduction by Judy Johns

All over the world, and for almost as long as time, dog and Man have partnered for work and pleasure. Today, the physiological and psychological benefits of the Human-Companion Animal Bond (HCAB) are well-documented and the field of animal-assisted activities and therapy is firmly established. Science has proved what we already know: dogs and other animals have an uncanny ability to bring comfort and love.

As a certified member of HOPE Animal-Assisted Crisis Response, you and your dog provide specialized relief to people who have survived the unexpected. Together, you and your fellow teammates fulfill the mission of HOPE, bringing comfort and encouragement to individuals, families, emergency response personnel, and others affected by crises and disasters of all types.

There is nothing routine about HOPE deployment. Although part of your training will be to build on the experience of previous teams, each incident is largely a new and different situation. You and your canine partner will enter uncharted waters. Each incident requires judgment and challenges and you'll need to think on your feet – all six of them – in the heat of the moment.

These guidelines are designed to help you do that. They allow you to *quantify* and *objectify* the care and concern you have for your dog, so that neither of you suffer any negative effects during your work helping others. But they're no substitutes for common sense and your own judgment. These guidelines are tools, not rules.

Just as the Henneke System is a standardized system for judging a horse's condition regardless of the observer's background, preferences, and possible prejudices, these Guidelines offer a reliable method for determining if it is safe to perform your HOPE work, and for how long.

This manual is divided into sections. Section two defines ***Variable Risk Factors*** that you should consider for each deployment. These include scene predictability, team experience, travel conditions, living conditions, temperature at the working scene, your dog's physical characteristics and how they may be affected by heat or cold, noise, congestion, and air quality. The remaining sections contain ***Resource Materials*** on canine body language and stress signals, hazardous materials, zoonotics, pet poison safety tips, basic field care and first aid concerns, safety (SOS) cards, lessons learned and provides a list of recommended reading.

The risk value system for each variable defined will make it easier for you to judge the potential danger to you and your dog in any given situation – the lower the risk value, the less risk; the higher the risk value, the higher the risk. Considering the numbers for each risk variable will give you an idea of the potential for physical harm and/or psychological stress on your dog. But remember, these risk variables are tools, not rules. There's no substitute for the knowledge and understanding that you alone have of your dog. Always remember the *Three C's*: *Caution, Caring and Common Sense.*

A "real-world" example and rationale for assigning each variable a risk value follows each chart. These are backed up by scientific research and expert advice.

This manual was conceptualized by Claudine Singer (HOPE member) with the assistance and contribution of Dave Valantine, (HOPE member) Diane Valantine, (HOPE member) Roxanna Sanchez, (HOPE member) and Judy Johns (Certified Animal Safety Representative for American Humane). The contents of these guidelines have been prepared with a deep appreciation for all you do as a member of HOPE AACR. We hope these guidelines will contribute to keeping you and your dog safe and healthy as you comfort people in need.

The contents of this manual have been edited by Nick Nolan, a noted author, grammarian, teacher and dog lover.

This work was also reviewed by Dr. Dean Cerf, a renowned Veterinarian from New Jersey.

The next phase of this important work will be to create a PowerPoint presentation for the purpose of teaching about some of the materials found in this manual.

HOPE ANIMAL-ASSISTED CRISIS RESPONSE
TEAM WELFARE GUIDELINES

Section 1

RISK VARIABLES INDEX

Variable	Description
Travel	Modes of travel and Distances
Living Conditions	Familiar vs. Unfamiliar; Comfortable vs. Uncomfortable
Predictability	Callout Scene Predictability Risk Factors
Temperature (Hot)*	Hot Weather / Dew Point in the Working Environment
Temperature (Cold)*	Cold Weather/Wind Chill in the Working Environment
Noise Exposure*	Exposure to Various Noise Levels and Frequencies
Congestion	Callout Scene Activity; Mechanical and Human Traffic
Air Quality Index*	Clean Air vs. Contaminated Air
Team Experience	Experience Levels by Quantity and by of Levels of Callouts
K9 Characteristics **Hot & Cold Weather**	Body Condition and Breed Type Factors in Hot and Cold Weather conditions.

** An asterisk indicates these risk factors can terminate a callout response if the risk factor reaches the extremes. Note that these risk variables are color coded to help you visualize the danger.*

Modes of Travel/Distances

Risk Value	Definition
1	Short Automobile trip - Less than Two Hours
2	Longer Automobile trip - Two to Fours Hours
3	Automobile trip - Fours Hours or more
4	Bus Transportation or Boat with Slight Movement
5	Train/Subway Transportation
6	ERV (Emergency Rescue Vehicle) without sirens
7	Boat Transportation
8	Large Airplane Trip lasting less than two hours
9	Large or Small Airplane trip - Two Hours or more with subsequent transport to site
10	Helicopter Transportation ***(Consider only if Trained)!***

NOTE: For your dogs comfort, consider not feeding your dog or reduce the amount fed twelve hours prior to departure on long trips.

Modes of Travel – *continued*

Risk Value	*Definition*
1	Less than two hours of travel one way, with or without overnight stay. Short car ride from home base to disaster/crisis site. May need a potty brake in route. Have water, food and treats on hand and necessary gear for an overnight stay.
2	Two to four hours of travel one way, with or without overnight stay. Longer car ride from home base to disaster/crisis site. May need one or two potty breaks. Have water, food and treats on hand. In the event of an overnight stay, plan accordingly for hotel reservations, additional dog food, dog bed, crate, etc. May also be housed at another team's home or possibly in an RV.
3	Four hours or longer one way with overnight stay. Long road trip from home base to disaster/crisis site. Will need one or two potty breaks. Have water, snacks and treats on hand. Consider a possible overnight stay and plan accordingly for hotel reservations, additional dog food, dog bed, crate, etc. May also be housed at another team's home or possibly in an RV. Must give your animal some down time and play time before beginning HOPE work.
4	Frequently running bus, train (e.g. Amtrak) or boat with minimal motion. Most likely to be short distance travel. Dog will embark and disembark through a narrow door. Dog will have to lie at your feet on the floor. May be a cramped experience if you have a large dog. Floor vibrations are greater than a car. Engine noise is louder. May be crowded with other passengers some of whom may experience fear. Have food, treats and water for the duration. Also have a blanket for your dog to lie on while traveling or for use at the response site.
5	Subway transport without gear for overnight stay. May need to access via underground tunnels which are generally darker and noisier. Use stairs or elevators and ***not*** escalators. Entrance and exits are through small to large doors. Beware of space between platform and subway. Be aware of floor vibrations and noise level that may be higher. Side to side motion may cause the dog to experience added stress. May be crowded with other passengers some of whom may experience fear. Have food, treats and water for the duration. Also have a blanket for your dog to lie on while traveling and for use at the response site.
6	Emergency Rescue Vehicles (ERV) transport without sirens. Most likely to be a short distance from one staging area to another at the scene of a disaster/crisis. Flooring in vehicle may be metal, hot or cold and possibly slippery. Heat may be generated by the vehicle's engine. Vehicle may be loaded with multiple pieces of gear and equipment resulting in a noisy and cramped ride. Have food, treats and water for the duration. Also have a blanket for your dog to lie on while traveling or for use at the response site.

Modes of Travel – *continued*

Risk Value	*Definition*
7	Boat transport with substantial motion. Distance may vary from short to long before arriving at the disaster/crisis site. May be accessed on foot or by car loaded on ferry. Your dog may experience motion sickness. Have necessary cleaning gear with you. Be ready to muzzle your dog since it may be a requirement of the transportation authority. Muzzling may cause your dog added stress. Have food, treats and water for the duration. Also have a blanket for your dog to lie on while traveling or for use at the response site.
8	Large airplane (e.g. 737, MD80 or larger) transport. Entering through a jet bridge in lieu of stairs. Flight is two hours or less. Teams must go through security. You and your dog will have to pass through security screening*. Small dogs may be placed in carriers and stowed under seat. Large dogs will be required to lie at your feet. Upon check-in, request a bulkhead seat. Take off and landing may be stressful and cause your dog to bolt, tremble, vocalize or even urinate. Have a pee pad available for your dog to lie on. It may be to your advantage to wait until everyone has left the airplane to exit with your dog. Teams must have everything needed for an extended stay. You will need additional transport, hotel reservations or other accommodations, portable kennel, dog food, bowls, second leash and collar, vaccination records, veterinary health certificate and photograph of your dog. Give your dog some down time and/or play time before beginning HOPE work. Expect the unexpected.
9	Small airplane ride of any duration or large airplane ride longer than two hours with subsequent modes of transportation. You will need to plan in advance for transport and hotel reservations or other accommodations. Bring portable kennel, dog food, bowls, second leash and collar, vaccination records, veterinary health certificate and photograph of your dog. Teams must go through security. You and your dog will have to pass through security screening*. Small dogs may be placed in carriers and stowed under seat. Large dogs will be required to lie at your feet. Upon check-in, request bulkhead seat if it is not an emergency exit row. Take off and landing will be very stressful and may cause your dog to bolt, tremble or even urinate. It may be to your advantage to wait until everyone has left the airplane to exit with your dog. Find an appropriate area to relieve your dog before boarding another vehicle. These additional modes of transport must be prearranged. Once you have arrived at your hotel or other accommodations, give your dog plenty of rest, play and or down time. Allow your dog to acclimate to the environment. Begin your HOPE work the following day.
10	Helicopter transport. Based on previous training experience by multiple teams, a helicopter ride should be avoided unless proper training is utilized. ***Transporting a dog in a helicopter should be considered ONLY after proper training.***

* Refer to Transportation Safety Administration policies regarding traveling with pets/service animals.

TSA Policies for Pets/Service Animals

Traveling with Pets:
http://www.tsa.gov/travelers/airtravel/assistant/editorial_1036.shtm

Our security procedures do not prohibit you from bringing a pet on your flight. You should contact your airline or travel agent, however, before arriving at the airport to determine your airline's policy on traveling with pets."

You will need to present the animal to the Security Officers at the checkpoint. You may walk your animal through the metal detector with you. If this is not possible, your animal will have to undergo a secondary screening, including a visual and physical inspection by our Security Officers.

Your animal will NEVER be placed through an X-ray machine. However, you may be asked to remove your animal from its carrier so that the carrier can be placed on the X-Ray machine.

Traveling with Service Animals
http://www.tsa.gov/travelers/airtravel/specialneeds/editorial_1056.shtm

Although HOPE dogs are not Service Animals, they are considered "working dogs". As such, some of the policies enumerated below are appropriate. Remember, never claim your dog is a Service Animal!

General Polices:

- If you have a service animal, you are encouraged to inform the TSO that the animal accompanying you is a service animal and not a pet. This will provide you with an opportunity to move to the front of the screening line since the TSO may need to spend more time with you.
  Note: *At no time should a HOPE member claim their dog is a service animal!*
- It is recommended that persons using an animal for assistance carry appropriate identification. Identification may include: cards or documentation, presence of a harness or markings on the harness, or other credible assurance of the passenger using the animal for their disability.
- At no time during the screening process will you be required to be separated from your service animal.
  Note: *Never let go of your dogs leash!*
- TSOs have been trained not to communicate, distract, interact, play, feed, or pet service animals.
- The TSO should ask permission before touching your service animal or its belongings.
- You must assist with the inspection process by controlling the service animal while the TSO conducts the search. You are required to maintain control of the animal in a manner that ensures the animal cannot harm the TSO.
- If you need to leave the sterile area to relieve your animal, you must undergo the full screening process again. Inform the TSO upon your return to the security checkpoint and she/him will move you to the front of the screening line to expedite the screening process.

TSA Polices for Pets/Service Animals– *continued*

Service Dogs:

- Advise the TSO how you and your dog can best achieve screening when going through the metal detector as a team (i.e., whether walking together or with the service animal walking in front of or behind you).
- If the WTMD alarms in the situation where you and the animal have walked together, both you and the dog must undergo additional screening.
- If the WTMD alarms on either you or the dog individually (because you walked through separately), additional screening must be conducted on whoever alarmed the WTMD.
- If the dog alarms the WTMD, the TSO will ask the PWD's permission and assistance before they touch the dog and its belongings. The TSO will then perform a hand inspection of the dog and its belongings (collar, harness, leash, backpack, vest, etc.) The belongings will not be removed from the dog at any time.

Note: Because HOPE dogs are not Service Animals, they are not provided "access rights" under the Americans with Disabilities Act. However, traveling by air can be a stressful experience for dogs. As such, it is important to try and fly with your dog in the cabin. You will need to explain to airline personnel why your dog needs to fly with you and not be crated in the cargo hold. Remember, it is unethical for any HOPE member to claim ADA protection unless their dog is also their service animal.

Living Conditions

Risk Value	Definition
1	Return home after each day of deployment, one to two days.
2	Return home after each day of deployment, three days or more.
3	Staying in someone else's home or hotel for one to two days.
4	Staying in someone else's home or hotel for three days or more.
5	Staying in a Recreational Vehicle for one to two days.
6	Staying in a Recreational Vehicle for three or more days.
7	Housed in a shelter for one to two days.
8	Housed in a shelter for three or more days.
9	Staying in a tent or other vehicle for one to two days.
10	Staying in a tent of other vehicle for three or more days.

Living Conditions – *continued*

Risk Value	*Definition*
1	Travel to crisis site, work then travel back home, and repeat one or two days. The environment is familiar and comfortable for both dog and handler.
2	Travel to crisis site, work then travel back home, and repeat three days or more in a row. The environment is familiar and comfortable for both dog and handler.
3	Due to the distance to a response site, one must make arrangements to stay overnight either at a hotel or at another team's home for one to two days. It is unfamiliar territory for the dog to relieve itself, eat, rest and play. A walk in the neighborhood might be needed to replace regular off-leash play activity. Your dog may also need to be crated in the hotel room so that you may go for a meal if the dog is not allowed in with you. Check with the hotel to make sure this is allowed.
4	Same as above, but over a longer period of time, such as three or more days. Have a long lead with you so you can safely play with your dog in appropriate locations.
5	Staying in an RV one or two days. This may be your RV or another teammate's. More than one team means more than one dog. Due to stricter restrictions in camping facilities, dogs should be on-leash at all times while outside. Stress may arise from other neighboring animals. Sites and sounds are unfamiliar and quarters a bit tighter.
6	Same as above, but over a longer period of time may pass before returning to a normal routine
7	Shelter living conditions will mean a lack of privacy. One cannot hide from constant interaction. Plan on being bombarded with questions about who you are, why you are there, etc. It will probably feel like you are on the job site 24/7. The handler may be affected by lack of sleep, since the conditions will be chaotic. This kind of living situation is not recommended.
8	Same as above, but over a longer period of time. You may become exhausted and moody. Dogs are astute readers of body language and will pick up on your stress signs. If you are unable to find some quiet time away from the shelter for both you and your dog, you may need to excuse yourself for a few days. This kind of living situation is not recommended.

Living Conditions – *continued*

Risk Value	*Definition*
9	Staying in a tent or a vehicle for one to two days will be uncomfortable. This kind of camping may not suit you or your dog at all. Know what you are getting yourself into prior to deployment. You will not be effective to others if you are unable to adjust to this situation. This kind of living situation is not recommended.
10	Staying in a tent or a vehicle for three or more days may be more than a team can handle. The need to look professional at all times may be a challenge in this case. Conditions will be very exhausting and uncomfortable. Think of all the supplies you may need prior to being deployed. This kind of living situation is not recommended.

Predictability of Elements

Risk Value	Definition
1	All elements of the crisis response are predictable based on site evaluation
2	80-90% predictability
3	70% predictability
4	60% predictability
5	50% predictability
6	40% predictability
7	30% predictability
8	20% predictability
9	10% predictability
10	None of the elements of a response are predictable.

NOTE: People with whom HOPE Teams might interact with on deployment:

- *First Responders only,*
- *Victims and their families or friends*
- *Victims and First Responders, and*
- *Support personnel (e.g. 911 operators, FEMA personnel, etc.)*
- *News Media*

Predictability of Elements Tutorial

Introduction

By their very nature, crises and disasters are not predictable. They come upon us with little or no warning. When this happens our world gets turned upside down which causes stress in us and in our animals.

As crisis response teams we must consider how a deployment scene might affect us and our dogs. Trying to rate a disaster scene for predictability may, on the surface, seem impossible, however, this is a necessary exercise for the first teams that arrive on scene. A highly unpredictable environment can cause stress levels to rise quickly and without warning. Some crisis response teams may want to avoid highly unpredictable deployment locations.

The chart below lists the predictability of a scene in terms of percentage with a description of what that scene might look like. Teams on scene must try and evaluate honestly the predictability of the event, which can only be a *best guess*. When looking over a disaster scene, try and evaluate the situation keeping the best interests of your dog and fellow team members in mind.

Risk Value	***%***	***Definition***
1	90-100	This is a scene that is ***very*** predictable. This might be an incident command base, or other location where people on scene are calm and in control of their emotions. A scene like this might be encountered days to weeks after a crisis or disaster occurred.
2	80-90	This is a scene that is ***quite*** predictable. Teams may occasionally encounter people expressing emotions, with rare expressions of strong emotions. Teams may experience mild stress at times.
3	70-80	This is a scene that is ***somewhat*** predictable. Teams may encounter people expressing emotions, with some expressing strong emotions. Teams may experience short periods of stress.
4	60-70	This is a scene that is ***more*** predictable than not. Teams will encounter people expressing emotions, with some expressing strong emotions. Teams are likely to experience periods of stress.
5	50-60	This is scene that is ***slightly more*** predictable than not. Teams will encounter people expressing emotions, and will encounter people expressing strong emotions. Teams will experience stress, and *may* have some periods with little stress.
6	40-50	This is a scene that is ***slightly more*** unpredictable than not. Teams will encounter people expressing strong emotions, with some people expressing moderate levels of emotions. Teams will experience longer periods of stress

Predictability of Elements – *continued*

Risk Value	*%*	*Definition*
7	30-40	By their very nature, crisis and disasters are not predictable; they come upon us with little or no warning. Teams will encounter people expressing strong emotions, and may encounter people expressing moderate levels of emotions. Teams will experience stress more often than not.
8	20-30	This is a scene that is ***definitely*** unpredictable. Teams will encounter people expressing strong emotions. Teams will experience stress much of the time. Taking frequent breaks will be necessary. Time on scene should be reduced.
9	10-20	This is a scene that is ***very*** unpredictable. Teams will encounter people expressing strong emotions frequently. Teams will experience high levels of stress most of the time. Taking frequent breaks is now critical. Time on scene should be short.
10	0-10	This is a scene that is ***very*** chaotic and may only be appropriate for very experienced crisis response teams. A team might encounter this type of scene if they arrive within a few minutes to a few hours after a crisis or disaster occurred. Very strong emotions are expressed almost constantly. Teams will experience high levels of stress almost constantly. Taking frequent breaks may not reduce stress levels. ***THIS TYPE OF SCENE IS ONLY APPROPRIATE FOR VERY EXPERIENCED TEAMS***.

Hot Weather/Dew Point

In the working environment

Risk Value	Definition	Rating
1	75 degrees with 0% to 95% humidity	Safe
2	80 degrees with 0% to 45% humidity	Safe
3	85 degrees with 0% to 10% humidity	Safe
4	80 degrees with 45% to 95% humidity	Caution
5	85 degrees with 10% to 60% humidity	Caution
6	90 degrees with 0% to 30% humidity	Caution
7	85 degrees with 60% to 90% humidity	Extreme caution
8	90 degrees with 30% to 70% humidity	Extreme caution
9	95 degrees with 10% to 50% humidity	Extreme caution
10	**100 degrees or more with 0% to 100% humidity**	**Danger**

Hot Weather/Dew Point – *continued*

Risk Value	*Definition*
1	***75 degrees with 0% to 95% humidity*** **– No time limit** **Safe** – This is a safe temperature and humidity for canine's and handlers. Always be mindful of surfaces your dog may walk on such as asphalt and metal. These could be too hot and uncomfortable for pink pad dogs. Feel the surface with the back of your hand to test how hot a surface is.
2	***80 degrees with 0% to 45% humidity*** **– No time limit** **Safe** – This is usually a safe temperature and humidity level as long as you are not in direct sunlight for too long, especially black coated dogs. Always be mindful of surfaces your dog may walk on such as asphalt and metal. These could be too hot and uncomfortable for pink pad dogs. Feel the surface with the back of your hand to test how hot a surface is.
3	***85 degrees with 0% to 10% humidity*** **– No time limit** **Safe** - This is usually a temperature and humidity level as long as you are not in direct sunlight for too long. Try and find a shaded area to work in. Take breaks in shaded areas frequently, providing cool water. Watch for panting, one sign that your dog is trying to cool itself down. The giant and large breed with long coats and dark coats will be unable to tolerate as much as others.
4	***80 degrees with 45% to 95% humidity*** **– Limit exposure time** **Caution** – With a temperature reading of 80 degrees, once you step outside, this level of humidity will make you feel sticky. Look for a shaded area to work in. Your body does not cool efficiently due to the extra moisture in the air. Prolonged exposure may cause fatigue to you and your dog. Keep a close eye on your dog and limit their exposure time. Take frequent breaks indoors, in shaded areas or in an air conditioned vehicle. Offer lots of cool water. Be aware of the surfaces your dog will be walking. Booties will help protect your dogs feet, but only use them for a few minutes at a time, as booties can rapidly cause overheating and heatstroke. Dogs can only sweat through the pads of their paws and pant to cool themselves.
5	***85 degrees with 10% to 60% humidity*** **– Limit exposure time** **Caution** – With a temperature reading of 85 degrees and this range of humidity, you and your dog will be more affected by heat than humidity. Look for a shaded or indoor area to work in if possible. Prolonged exposure may cause fatigue. Keep a close eye on your dog and limit their exposure time. Take frequent breaks indoors, in shaded areas or in an air conditioned vehicle. Offer lots of cool water. Be aware of the surfaces your dog will be walking. Booties will help protect your dogs feet, but only use them for a few minutes at a time, as booties can rapidly cause overheating and heatstroke. Dogs can only sweat through the pads of their paws and pant to cool themselves.

Hot Weather/Dew Point – *continued*

Risk Value	*Definition*
6	***90 degrees with 0 to 30% humidity*** **– Limit exposure time** **Caution** – 90 degrees is reaching a point where limiting exposure time is more critical. Even short exposure times will cause fatigue. Look for a shaded or indoor area to work in. Watch your dog closely! Take frequently breaks indoors or in an air conditioned vehicle. Offer lots of cool water. Be aware of the surfaces your dog will be walking on. For those with small dogs, it may be better to carry your dog over hot surfaces rather than use booties. Dogs with erect ears or exposed skin may need sunscreen lotion to prevent sunburn. Large breed, giant breeds, breeds with long or dark coats, and breeds built low to the ground will be affected faster by this very hot temperature. Visiting teams from other regions may have a hard time adjusting to the local climate. Limit your time outdoors. Have a gel collar you can wet and put around your dog's neck to help him stay cool.
7	***85 degrees with 60% to 90% humidity*** **– Very limited exposure time** **Extreme caution** – At this heat an humidity level sunstroke, muscle cramps, and or heat exhaustion are possible with prolonged exposure. If exposed to this kind of temperature it is advisable to do your work indoors. When walking from your vehicle to the site, if possible, walk on surfaces that will be cooler. If not available and your distance is long, use booties on your dog, BUT limit this to just a few minutes to avoid over-heating your dog. Small dogs should be carried. Do not push the exposure time at this level. Your dog will have difficulty staying cool since they do not sweat like we do.
8	***90 degrees with 30% to 70% humidity*** **– Very limited exposure time** **Extreme caution** – The heat and humidity will make working outdoors difficult with sunstroke, muscle cramps, and or heat exhaustion are possible with prolonged exposure. If exposed to this kind of temperature it is advisable to do your work indoors. When walking from your vehicle to the site, if possible, walk on surfaces that will be cooler. If not available and your distance is long, use booties on your dog, BUT limit this to just a few minutes to avoid over-heating your dog. Small dogs should be carried. Do not push the exposure time at this level. Your dog will have difficulty staying cool since they do not sweat like we do.
9	***95 degrees with 10% to 50% humidity*** **– Very limited exposure time** **Extreme caution** – Very hot temperatures! Sunstroke, muscle cramps, and or heat exhaustion is possible with prolonged exposure. If exposed to this kind of temperature it is advisable to do your work indoors. When walking from your vehicle to the site, if possible, walk on surfaces that will be cooler. If not available and your distance is long, use booties on your dog, BUT limit this to just a few minutes to avoid over-heating your dog. Small dogs should be carried. Do not push the exposure time at this level. Your K9 will have difficulty staying cool since they do not sweat like we do.

Hot Weather/Dew Point – *continued*

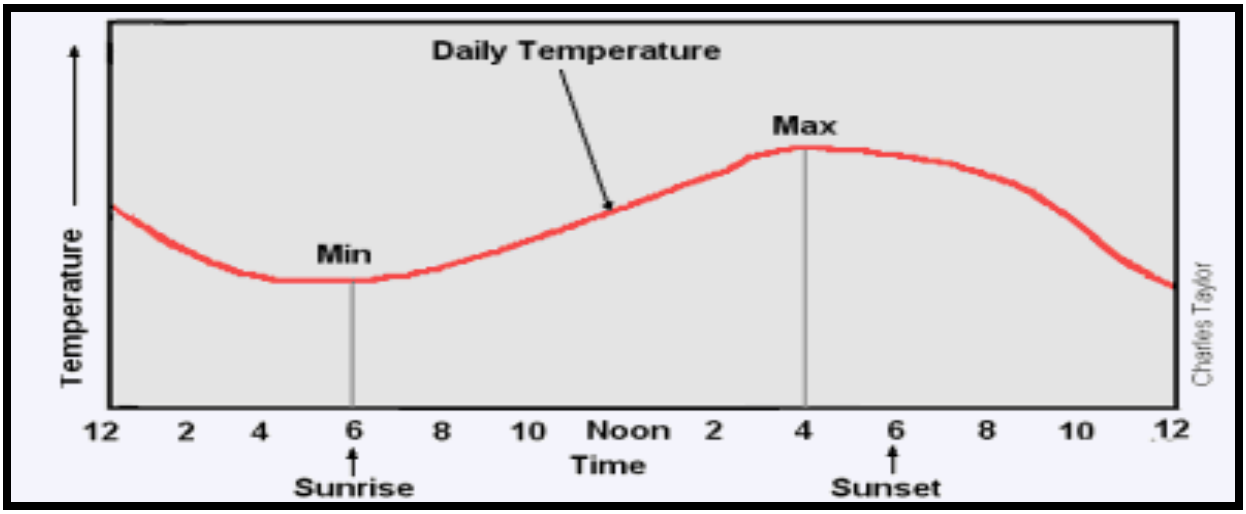
Risk Value	*Definition*
10	***100 degrees or more with 0% to 100% humidity*** **– DON'T WORK!!** **Danger** - Very hot temperatures! Sunstroke, muscle cramps, and or heat exhaustion are likely with even short exposure times. Heatstroke possible with prolonged exposure. If exposed to this kind of temperature, under no circumstances should anyone work outdoors. If you cannot work indoors, then you must decline the call out. Putting yourself and your K9 in danger is not an option. When walking from your vehicle to the site, if possible, walk on surfaces that will be cooler. If not available and your distance is long, use booties on your dog, BUT limit this to just a few minutes to avoid over-heating your dog. Small dogs should be carried. Your K9 will have difficulty staying cool since they do not sweat like we do. **Be very, very cautious!**

Hot Weather/Dew Point – *continued*

Temperature and Dew Point Tutorial

Temperature

Temperature is defined as "The degree of hotness or coldness of a body or environment." Restated, temperature gives us a way to express our hotness or coldness in terms of numbers instead of subjective terms (cold or hot). Thus, temperature is commonly used in the realm of weather.



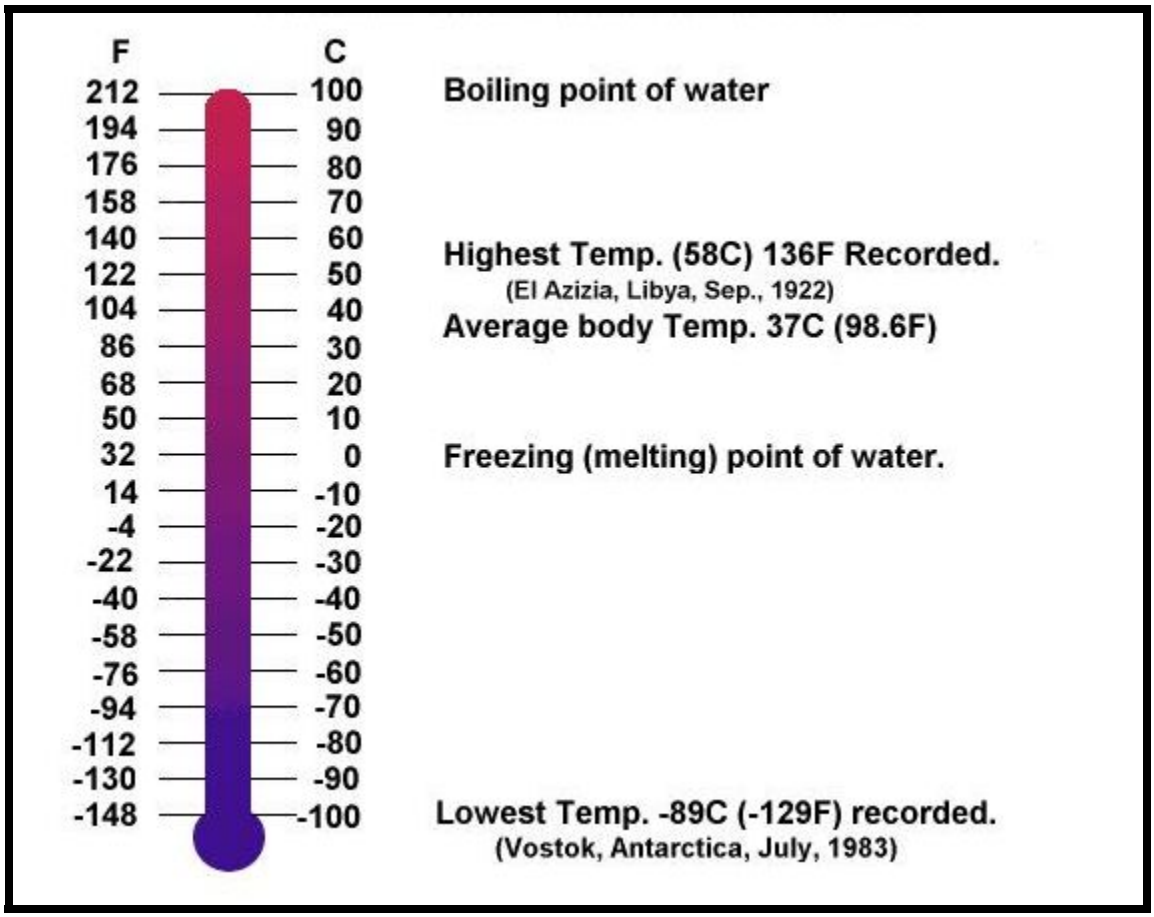
The normal variation of temperature with respect to a given day is shown by the above graph. As you can see, temperature has a minimum in the morning hours and has a maximum in the early evening. This of course is based on the amount of sun that a given area receives during the day. During daytime hours the sun is shining and the temperature increases. But after the sun sets the temperature slowly starts to lower until the sun comes back up the next day. The magnitude of the highest and lowest temperature is based on the time of year. In the summer, high temperatures occur and in the winter low temperatures occur. It is important to note: that this only occurs in the Northern Hemisphere. The Southern Hemisphere's seasons are reversed. So when we are having our winters they are enjoying their summers.

Hot Weather/Dew Point – *continued*

Two Temperature Scales

Most people are aware of the two common temperature scales, Fahrenheit and Celsius. The graph below shows a comparison of the two scales.

Comparison of the Two Temperature Scales



More information on temperatures:

1. If temperature is falling rapidly (10 degrees in an hour is rapid), then a cold front is likely passing by. You can expect to receive precipitation.
2. If temperature has risen steadily and it is warmer then normal, then a warm front has passed by. You can expect warm weather until the cold front passes.
3. Clear nights (no clouds) are colder then cloudy nights.

Hot Weather/Dew Point – *continued*

Dew Point Temperature

Dew Point temperature is defined as, "The temperature at which dew begins to form." Dew is the water you find on your grass or car early in the morning. If the temperature reaches the dew point temperature, then dew will form. Some things to know about dew point:

1. The current dew point will never be higher then the current temperature.
2. If the temperature is at the dew point and the temperature falls, the dew point must follow.

How Dew Point is Measured

A more common way to measure dew point is to actually measure the Relative Humidity (Rh) and then through mathematical equations figure out the dew point.

Relative Humidity

Relative Humidity is the ratio of the amount of moisture in the air at a specific temperature to the maximum amount that the air could hold at that temperature, expressed as a percentage. Essentially, the Dew Point is an indicator of how much moisture is in the air. High Rh numbers (50% or higher) along with high temperatures will make the air feel "sticky". Low Rh number of 50% or less indicate a more comfortable environment, where temperature alone is the greater factor.

More facts about dew point and RH

1. High dew points occur in the tropics (Equator) and low dew points are found in deserts and polar areas.
2. Rh near 100% is an indication of dew, frost (frozen dew) and fog.
3. In the US, high dew points usually occur ahead of cold fronts.
4. Rh normally reaches 100% during periods of rain.

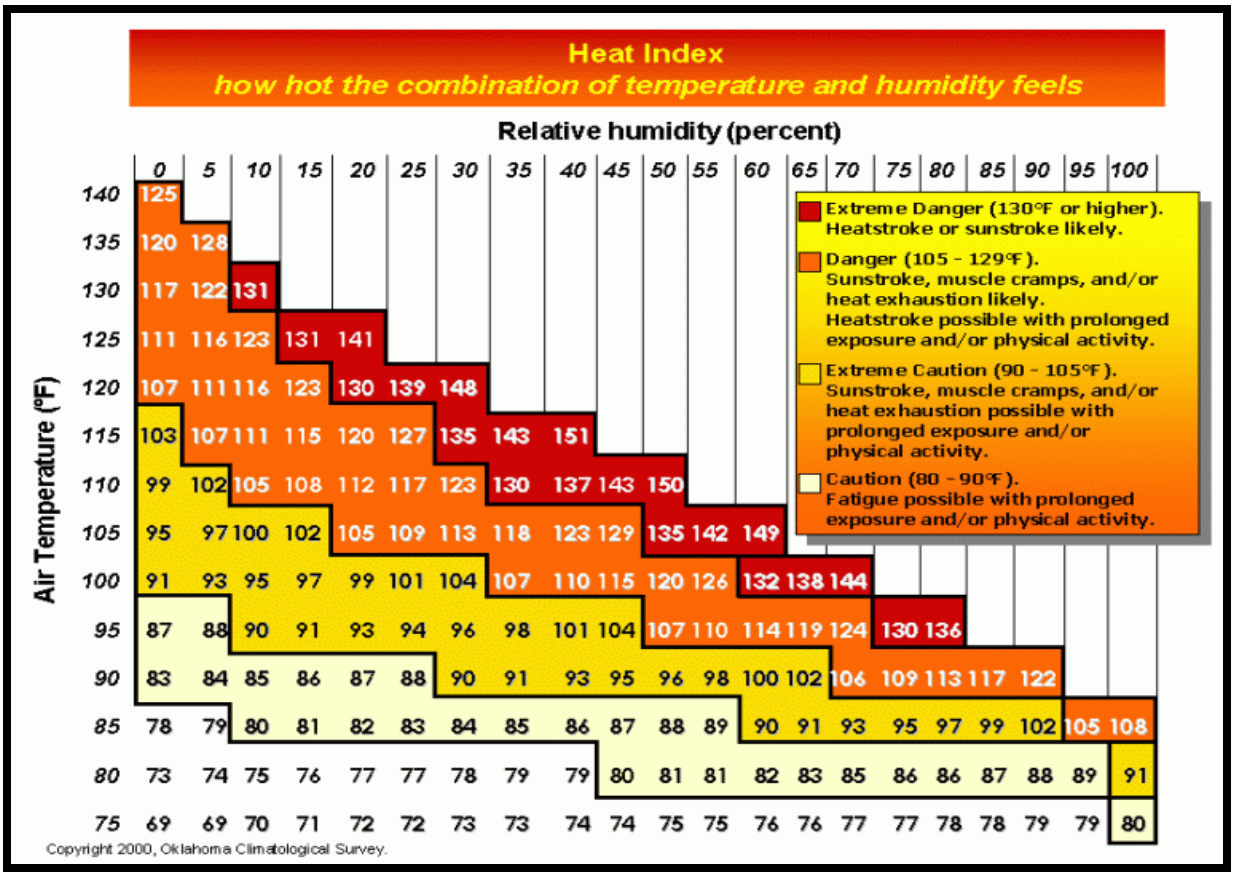
Hot Weather/Dew Point – *continued*

Heat Index

Have you ever noticed how some days are just plain hot and other days it is hot and sticky, but the temperature is the same? There is a very simply explanation as to why this occurs. The body is designed to cool itself by sweating. We all know this but what we might not know is that if the sweat does not evaporate, it serves no purpose. That is because evaporation is a cooling process. When water (or other liquids) evaporates, it takes some heat with it and thus leaves the original surface cooler.

The reason why some days it feels sticky is that the water is not evaporating. This is caused by the fact that there is already a high amount of moisture in the air so it is hard to evaporate more water into the air. So some water stays on the skin and we feel sticky. This issue is serious enough, that the NWS (National Weather Service) uses something called the Heat Index. The Heat Index shows what the temperature "feels" like because of the lack of evaporation of water from our skin. It is based on the temperature and dew point (measure of moisture). If both variables are low, then there is a low heat index, but if both are high then the heat index is also high.

Here is a chart showing some different Heat Index combinations:



Hot Weather/Dew Point – *continued*

Heatstroke or Hyperthermia

What is Heatstroke or Hyperthermia?

Heatstroke occurs when normal body mechanisms cannot keep the body's temperature in a safe range. Animals do not have efficient cooling systems (like humans who sweat) and get overheated easily. A dog with moderate heatstroke (body temperature from 104° to 106° F) can recover within an hour if given prompt first aid and veterinary care (normal body temperature is 101 – 103° F). Severe heatstroke, or Hyperthermia (body temperature over 106°F) can be deadly and immediate veterinary assistance is needed.

Common Situations That Can Cause Overheating:

1. Being left in a car in warm weather, even if the windows are left slightly open.
2. Wearing booties or a muzzle.
3. Short-nosed breeds such as pugs, bulldogs, boxers.
4. Any pet with an airway disease.
5. Being confined outside without shade or an adequate supply of fresh water.
6. Keep pets with predisposing conditions like heart disease, obesity, older age, or breathing problems cool and in the shade. Even normal activity for these pets can be harmful.

Suggested Treatment:

1. Mild Hyperthermia can sometimes be treated by simply removing a pet from the situation and/or environment where overheating has occurred, and placing it in a cool place in the shade or in an air-conditioned room.
2. If a pet is unsteady on its feet and you have moved it to a cooler location, you can start cooling it by placing cool water on the feet. Rubbing alcohol on the skin of your pet's stomach (with a fan blowing on the pet) can also aid in cooling.
3. While these steps are in progress, have someone call your veterinarian so that they can determine if you should bring your pet in for treatment.

Note: it is very dangerous to cool an overheated pet too quickly. Never put a pet in an ice bath, or use ice cold water, unless under the direct supervision of your veterinarian. Cool water is best.

The most common sign of hyperthermia is restlessness and agitation, with vigorous panting. A pet's saliva may be thick, and the gums and tongue may be bright red. Depending on the severity of the hyperthermia, the gums can also be very pale and a pet may be lying down with its head, neck, and limbs extended and thick saliva coming from the mouth and nose.

Always call your veterinarian, even if the pet appears to have recovered from hyperthermia, after you have administered any of the treatments above. Your veterinarian may not want to see your pet if it has recovered, but it is always best for them to determine whether or not your pet needs to be examined.

Hot Weather/Dew Point – *continued*

Signs of Hyperthermia and Heat Stroke:

- Rapid panting
- Bright red tongue
- Red or pale gums
- Thick, sticky saliva
- Depression
- Weakness
- Dizziness
- Vomiting – sometimes with blood
- Shock
- Coma

Prevention:

1. Provide plenty of fresh water.
2. Avoid concrete or asphalt areas where heat is reflected and there is no access to shade. Hold the back of your hand on the ground to test for heat.
3. Put booties on your dog to get you across a parking lot to your work location. Avoid stopping to chat, while going from safe environment to safe environment. *Remove the booties when you arrive at your work site*.
4. Wetting down your dog with cool water can help maintain a normal body temperature
5. Make sure dogs have access to shade.
6. Carry a rectal thermometer to check their temperature.
7. Be familiar with your dog's "normal" temperature as this may vary from animal to animal.
8. Use a "cooling" collar to help maintain your dogs temperature during hot weather.

Resources:

- *American Kennel Club* – http://www.akcpethealthcare.com
- *Pet Education.com; Dr's Foster & Smith's Source for expert pet information* - http://www.peteducation.com/article.cfm?articleid=1683
- *Temperature Tutorial* - http://apollo.lsc.vsc.edu/classes/idm3020/tut_folder/nick_tutorial/
- *Wikipedia*

Cold Weather / Wind Chill

In the working environment

Risk Value	Definition	Rating
1	65 degrees	Safe
2	60 degrees	Safe
3	55 degrees	Safe
4	50 degrees (Refer to Body Type information)	*Caution*
5	45 degrees (Refer to Body Type information)	*Caution*
6	40 degrees (Refer to Body Type information)	*Caution*
7	35 degrees Potential Frostbite (Refer to Body Type information)	*Extreme Caution*
8	30 degrees Imminent Frostbite (Refer to Body Type information)	*Extreme Caution*
9	25 degrees DO NOT WORK OUTSIDE!	*Danger*
10	20 degrees DO NOT WORK OUTSIDE!	*Danger*

Note: The temperatures given are “apparent” with wind chill factored in.

Cold Weather/Wind Chill - *continued*

Note: All temperatures given are "apparent" meaning they represent the wind chill temperature. If the wind speed varies, the apparent temperature will change. Refer to the tutorial in the next section.

Risk Value	*Definition*
1	**65 Degrees** – No time limit **Safe** – This temperature is comfortable for most people and dogs. Dogs of all sizes, colors and coat types will do well. If the call out takes place outdoors, have a vest or jacket packed in your backpack. You may want to have a blanket for you and your dog to sit on when working with children.
2	**60 Degrees** – No time limit **Safe** – At this temperature some people may want a vest or light jacket. Most dogs will be comfortable but some may show signs of being a bit chilled. If the call out takes place outdoors, have a vest or jacket packed in your backpack. Most dogs will do fine at this temperature, but some short coated dogs may shiver if you are not moving. You may want to have a blanket for your dog to sit on when working with children. You may want to take breaks indoors if possible or inside your vehicle.
3	**55 Degrees** – No time limit **Safe** – At this temperature most people will want a vest or light jacket. Many dogs will be comfortable but some may show signs of being a bit chilled. If the call out takes place outdoors, have a vest or jacket packed in your backpack. Most dogs will do fine at this temperature, but some short coated dogs may shiver if you are not moving. Short coated dogs may do better with a sweater. You may want to have an insulated blanket for your dog to sit on when working with children. You may want to take breaks indoors if possible or inside your vehicle.
4	**50 Degrees** – Limit exposure time (refer to Body Type information) **Caution** – At this temperature we begin to limit the exposure time. Wear warm clothing. Layering is always advisable. Breeds with heavy coats will do well at this temperature. Breeds with short coats may not fair well to extended exposure unless they are protected with a sweater. You may want to have an insulated blanket for your dog to sit on when working with children. You may want to take breaks indoors if possible or inside your vehicle.
5	**45 Degrees** – Limit exposure time (refer to Body Type information) **Caution** – At this temperature you need to limit the exposure time. Wear warm clothing. Layering is always advisable. Breeds with heavy coats will do good at this temperature. Breeds with short coats will not fair as well to extended exposure unless they are protected with a sweater. It's advisable to find an indoor area to work in, or at least an area out of the wind. You may want to take breaks indoors if possible or inside your vehicle.

Cold Weather/Wind Chill - *continued*

Risk Value	*Definition*
6	**40 Degrees** – Limit exposure time (refer to Body Type information) **Caution** – At this temperature an outdoor call-out should not be considered. 40 degrees is not comfortable for any length of time for you or your dog. Your concentration will not be on the crisis and the task at hand if you are trying to keep warm and comfortable. Therefore retreat to the indoors
7	**35 Degrees** – Potential Frostbite (refer to Body Type information) **DO NOT WORK OUTSIDE AT THIS TEMPERATURE!** **Extreme caution** – Potential frostbite – Have necessary clothing to travel from your vehicle to the building where you will be working. Exposure to low wind chills can be life threatening to both humans and animals alike. Water freezes at 32°F (0°C) regardless of what the wind chill is.
8	**30 Degrees** – Imminent Frostbite (refer to Body Type information) **DO NOT WORK OUTSIDE AT THIS TEMPERATURE!** **Extreme caution** – Imminent frostbite – Have necessary clothing to travel from your vehicle to the building where you will be working. Exposure to low wind chills can be life threatening to both humans and animals alike. Water freezes at 32°F (0°C) regardless of what the wind chill is.
9	**25 Degrees** – Imminent Frostbite (refer to Body Type information) **DO NOT WORK OUTSIDE AT THIS TEMPERATURE!** **Danger!** - Imminent frostbite – Have necessary clothing to travel from your vehicle to the building where you will be working. Exposure to low wind chills can be life threatening to both humans and animals alike. Little dogs should be carried from the vehicle to the building where you will be working. Medium to large dogs with a short coat should have protective clothing, such as a sweater or coat that will be removed once inside. Dogs with erect ears are susceptible to frostbite of the ears.
10	**20 Degrees** – Imminent Frostbite (refer to Body Type information) **DO NOT WORK OUTSIDE AT THIS TEMPERATURE!** **Danger!** - Imminent frostbite – Have necessary clothing to travel from your vehicle to the building where you will be working. Exposure to low wind chills can be life threatening to both humans and animals alike. Little dogs should be carried from the vehicle to the building where you will be working. Medium to large dogs with a short coat should have protective clothing, such as a sweater or coat that will be removed once inside. Dogs with erect ears are susceptible to frostbite of the ears.

Cold Temperature Tutorial

Overview

Wind chill is the apparent temperature felt on exposed skin due to the combination of air temperature and wind speed. Except at higher temperatures, where wind chill is considered less important, the wind chill temperature (often popularly called the "wind chill factor") is always lower than the air temperature. In cases where the apparent temperature is higher than the air temperature, the Heat index (HI) is used instead.

Humans do not sense the temperature of the air. When we feel that it is cold outside, we are actually sensing the temperature of our skin. Because our skin temperature is closer to the air temperature when it is windy, we feel that the wind makes it colder outside. That is the essence of wind chill.

Wind Chill

Wind chills is the term used to describe the rate of heat loss on the body resulting from the combined effect of low temperature and wind. As winds increase, heat is carried away from the body at a faster rate, driving down both the skin temperature and eventually the internal body temperature.

Exposure to low wind chills can be life threatening to both humans and animals alike. Water freezes at 32°F (0°C) regardless of what the wind chill is. The real meaning of wind chill isn't that wind actually decreases the temperature; it's that wind makes our skin feel as though the temperature is lower than it really is due to a process known as transpo-evaporation. When moisture evaporates, the surface from which it evaporates loses some heat. Even if you didn't just emerge from a quick dip in the Baltic Sea, there is always moisture on your skin; that's just the way it is with us humans.

When the wind hits it, the evaporation process is sped up, so your body loses heat more quickly than it would normally at the current temperature, making your brain think that it's actually colder out than it really is.

Cold Weather Tutorial – *continued*

Significance of Wind Chill

The concept of wind chill is of particular significance in very cold climates such as the Arctic and Antarctic, at high altitude, at high speeds, or in very high winds. In much of North America in winter, wind chill is forecast and reported by news media. To some degree, people make decisions as to how they will dress for outdoor activity, or whether they will take part in outdoor activity based on the wind chill.

Schools use the wind chill forecast to decide whether or not to let students outside for recess or lunch in cold weather. Heart patients pay attention to the wind chill, to estimate the stress the weather might place on their circulatory systems to avoid problems. The military modifies its training exercises when wind chill reaches dangerous levels. It is of great importance to the survival of humans and animals, and can even affect some machinery and heating systems.

Ultimately, wind chill should be considered before HOPE teams respond during the winter months.

A Chart of Wind Chill Temperature for Given Air Temperatures and Wind Speeds

WIND - CHILL CHART

ESTIMATED WIND SPEED MPH	ACTUAL THERMOMETER READING F										
	50	40	30	20	10	0	-10	-20	-30	-40	-50
	EQUIVALENT TEMPERATURE F										
CALM	50	40	30	20	10	0	-10	-20	-30	-40	-50
5	48	37	27	16	6	-5	-15	-26	-36	-47	-57
10	40	28	16	4	-9	-21	-33	-46	-58	-70	-83
15	36	22	9	-5	-18	-36	-45	-58	-72	-85	-99
20	32	18	4	-10	-25	-39	-53	-67	-82	-96	-110
25	30	16	0	-15	-29	-44	-59	-74	-88	-104	-118
30	28	13	-2	-18	-33	-48	-63	-79	-94	-109	-125
35	27	11	-4	-20	-35	-49	-67	-83	-98	-113	-129
40	26	10	-6	-21	-37	-53	-69	-85	-100	-116	-132

LITTLE DANGER FOR PROPERLY CLOTHED PERSON

INCREASING DANGER

GREAT DANGER

Wind speeds greater then 40 MPH have little additional effect

DANGER FROM FREEZING OF EXPOSED FLESH

Cold Weather Tutorial – *continued*

Frostbite / Hypothermia

What is Frostbite?

Animals have ways of dealing with cold temperatures but when exposed to extreme freezing temperatures for an extended period these same mechanisms that work to keep them warm and alive can actually cause damage and death to the tissues of their extremities (tips of ears, tail, and foot pads.) more commonly known as frostbite.

Your dog's fur provides insulation just like us wearing a coat. Its hairs, when exposed to cold air undergo pilo-erection. This is like you and I getting goose bumps. The hairs "stand up erect" trapping the air in that layer. This air is warmed by the body and acts as additional insulation.

When the body's core temperature decreases, an involuntary reflex by the skeletal muscles known as "shivering" is triggered to generate heat, thus warming the animal. When the body is really getting cold and the animal's life may be at risk, the body responds by vasoconstricting the peripheral tissues. This means the body is being selective in where it sends the warm blood.

The internal organs are the most important to keeping an animal or human alive. By restricting blood flow to extremities the core functions of the body (heart, liver, kidneys and lungs,) are maintained until the body's normal temperature is attained. By this stage, if a dog has not received First Aid or warmth on its own, frostbite will develop. Tissues that have frozen due to this response die. Dogs often experience frostbite on the tips of their ears, tails, face, footpads, legs, and the genitalia in male dogs. Frostbite can result in the loss of limbs, toes or the tips of ears.

Early signs of frostbite

In dogs, the early signs of frostbite are easily missed as the areas affected are usually covered with hair. These areas are the ear tips, tail, scrotum, and face. When frozen or near-frozen, the skin appears very pale. As the skin warms, it becomes reddened and the area becomes painful. Eventually the skin becomes scaly. If the circulation has been severely affected, the tips or edges of the tissue may slough off. Severe cases of frostbite may necessitate amputation of the affected tissue.

Signs of Frostbite

Symptoms to look for if your dog is suffering from frostbite:

- Ice on body and limbs
- Shivering
- Tissues are bright red followed by pale color (vasoconstriction) to black color (death of tissue/sloughing of skin)

Frostbite Treatment

- Warm the affected area rapidly with warm water using towels or warmed ice packs.
- If it is a limb or paw that is frozen, soak it only in a bath or bowl of warm water.
- Dry gently after you have warmed the area.
- Do not rub or massage the frozen tissue.
- Do not apply snow or ice.
- Do not immerse your dog completely in a bath as this will cause the body temperature to decrease and cause hypothermia.

Cold Weather Tutorial – *continued*

What is Hypothermia?

Hypothermia occurs in dogs when their core body temperature falls below the normal range (101 to 103 degrees Fahrenheit). This occurs when heat loss exceeds heat production. Loss of body heat occurs through four primary mechanisms. Conduction is an exchange of heat between two objects of different temperatures, such as from the warm dog to the cold rock upon which he is sitting. Convection is the loss of heat due to the movement of air from around the body. An example of convection is when wind carries away warmed air from around the dog and replaces it with colder air which the dog then needs to warm back up. Radiation is known as the transfer of heat by an infrared process between two objects of different temperatures. Evaporation of water from the skin, mucous membranes, and through the respiratory passages is also a significant source of heat loss.

3 Categories:

- **Mild** – Above 36 C or 96 F. Shivering is increased. Lethargy and increased muscle tone are noted.
- **Moderate** – 32-34 C or 90-94 F. Typified by stupor, lack of coordination, loss of shivering reflex, and unconsciousness.
- **Severe** – 28-26 C or 82-86 F. Collapse, labored breathing, and fixed, dilated pupils.

Signs of Hypothermia

- Shivering
- Weakness
- Low body temperature (below 37.5 or 99.5 F.) Take your dog's temperature rectally. A lubricated electronic thermometer is easy to use.

Hypothermia Treatment

Hypothermic animals should be warmed ***slowly***. There are several ways to do this. The animal can be placed in a warm room and wrapped in warm blankets (run dry blankets or towels through the clothes dryer for a few minutes to warm them).

Bottles filled with warm water can be wrapped in a towel and placed next to the animal (plastic soda bottles work well) in the armpit and groin areas where there is less hair. ***Do** not* place hot water bottles directly in contact with the animal's body since burns could occur even if the bottles do not seem that hot to you.

Hair dryers can be helpful, especially if the animal is wet as well as hypothermic. Warm water baths can be used for animals mildly hypothermic who will not have to be transported – taking a wet animal back out into the cold to go to the veterinarian will only make matters worse.

Use plastic zip lock bags filled with uncooked rice that you warm in the microwave for one to two minutes then wrap in a towel.

As they recover and move about, young animals, especially, may benefit from some honey or sugar dissolved in water (two tablespoons to a cup of warm water).

While warming the animal, contact your veterinarian who can assess what other treatments may be necessary. Animals that are severely hypothermic may need additional care including intravenous fluids, oxygen, or warm fluids administered into the stomach, colon, or abdominal cavity as a way to warm the body core.

Monitor your dog's rectal temperature every 10-15 minutes. When his or her body temperature is back to normal (101 to 103 F), stop warming. An over heated animal is just as dangerous.

Cold Weather Tutorial – *continued*

Cold Weather First Aid Kit

For handlers who frequently work their dogs in cold weather conditions, these additions to their first aid kits should be considered:

1. Absorbent towels for drying dog
2. Space blanket or other heat reflective blanket
3. Cold weather dog jacket if appropriate for dog, to be removed when you arrive at your work site.
4. Put booties on your dog to get across a parking lot to your work location. Avoid stopping to chat, while going from safe environment to safe environment. Remove the booties when you arrive at your work site.
5. Small dogs should be carried when moving from car to building.

Seek Veterinary care even if it looks like your dog is fine after you have warmed him or her. Kidney and bladder problems are common in dogs that have been exposed to cold temperatures. An animal that has been hypothermic and or has frostbite is in danger for his or her life. Veterinary care is a must!

Resources:

- *Pet.ca* – http://www.pets.ca/articles/article-frostbite.htm
- *Pet Education.com; Dr's Foster & Smith's Source for expert pet information* - http://www.peteducation.com/article.cfm?cls=2&articleid=301
- Absaroka Search Dogs – http://www.absarokasearchdogs.org/medical/canine_hypothermia_and_frostbite.php
- Wikipedia

Noise Exposure

Risk Value	Definition
1	Whispered conversation can be heard
2	Louder than a whispered conversation can be heard
3	Normal conversation level
4	Normal conversation level w/constant moderate noise at a distance
5	Normal conversation level with occasional startling moderate noise interruptions
6	Moderately elevated conversation level due to constant loud noise nearby
7	Raised conversation level due to occasional loud noises
8	Very raised conversation level due to occasional loud noise nearby
9	**Shouted conversation level due to a very loud noise nearby, such as chain saw.**
10	**Shouted conversation level due to a very loud noise nearby, such as a jet taking off.**

Noise Exposure – *continued*

Risk Value	*Definition*
1	Unlimited exposure time A whispered conversation can be heard at this sound level.
2	Unlimited exposure time A somewhat louder than whispered conversation can be heard.
3	Unlimited exposure time This is a normal conversation level.
4	Unlimited exposure time This is a normal conversation level with occasional moderate noise interruptions.
5	Unlimited exposure time This is a Normal conversation level with constant moderate noise at a distance.
6	Exposure time limited to 4 hours before hearing loss occurs Moderately elevated conversation level due to occasional loud noise nearby. Sound levels would be similar to standing near a running diesel truck at about 50 feet.
7	Exposure time limited to 30 minutes before hearing loss occurs Raised conversation level due to constant loud noise nearby. Sound levels would be similar to very loud music from a nearby stereo.
8	Exposure time limited to 15 minutes before hearing loss occurs Very raised conversation level due to occasional loud noise nearby. Sound levels would be similar to standing about 50 feet from a chain saw or leaf blower.
9	Exposure time limited to 2 minutes before hearing loss occurs Shouted conversation level due to constant loud noise nearby. Requires shouting in the ear of another. Sound levels would be similar to standing about 10 feet from a chain saw or leaf blower.
10	Immediate hearing loss will occur! – **DANGER** Shouted conversation level due to constant loud noise nearby. Requires shouting in the ear of another. Sound levels would be similar to standing around a jet taking off.

Noise Exposure Tutorial

Introduction

An important environmental factor to consider while working on a call-out is *noise*. Loud, piercing sounds, common to some crisis and disaster scenes, can cause us and our dogs to be uncomfortable, and may cause fatigue and pain. Prolonged exposure to high decibel sounds can cause permanent hearing loss. This document attempts to explain how sensitive our animals are to sound, how sounds affect us and our dogs, and what sound levels are safe and hazardous.

Human and Canine Hearing

Second to a dogs sense of smell is their sense of hearing. Your dog relies more on their sense of hearing than their eyesight. They can hear sounds too faint for us to detect, and can hear sounds at a much higher frequency. Humans rely far more on their eyesight than do dogs. In fact, canine vision is better adapted to seeing at night and for detecting motion.

Sound is measured primarily as a function of frequency (Hertz or Hz) and intensity (decibels or dB). A *normal* human ear is capable of hearing frequencies that range from about 20 Hz (very low bass) to 20 KHz (very high treble). The canine ear is capable of hearing sounds that range from about 45 Hz to about 45 KHz. Most sounds we hear during the course of daily living consist of a wide range of frequencies, at various intensity levels.

Human and Canine Ear Anatomy

A dog's ear is structured a bit different than humans. Sounds are collected by the ear flap (pinna) and are directed down to the large ear canal to the eardrum (tympanic membrane). Sound waves (moving air) strike the ear drum, thus moving the small auditory bones (ossicles). This movement of the ossicles is transmitted to the bony canals of the inner ear.

Within the inner ear, is the cochlea, the receiver for hearing. This organ contains fluid that converts sound vibrations into fluid waves, and thus into nerve impulses and conducted by the cochlear nerve to the auditory nerve.

Dogs also derive their sense of balance via the ear. There is an organ of balance that is composed of semicircular canals. This organ helps to synchronize eye movements and maintain posture, balance and coordination. In addition there is the auditory tube (Eustachian tube) than connects the middle ear to the nasal cavity so that air pressure is equal on both sides of the eardrum.

The inside of the cochlea is lined with very tiny hair like structures (Stereocilia) that, when moved, stimulate the auditory nerve which then transmits the sounds to the brain. These tiny cilia are fragile and can be easily damaged with sounds that are very loud. Once the cilia are damaged, they do not repair themselves.

There are many similarities between a canine ear and a human ear.

Noise Exposure Tutorial – continued

The drawings below illustrate a comparison between the human ear and the canine ear.

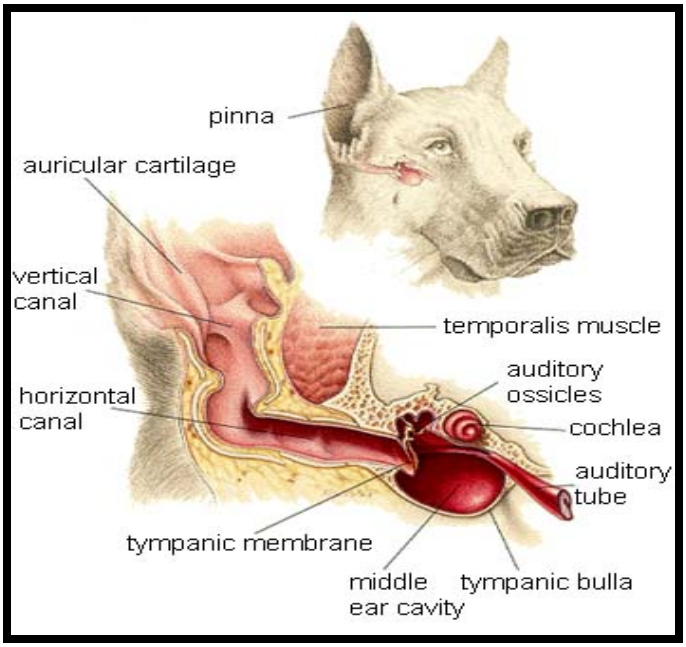


Figure 1 – Canine Ear Anatomy

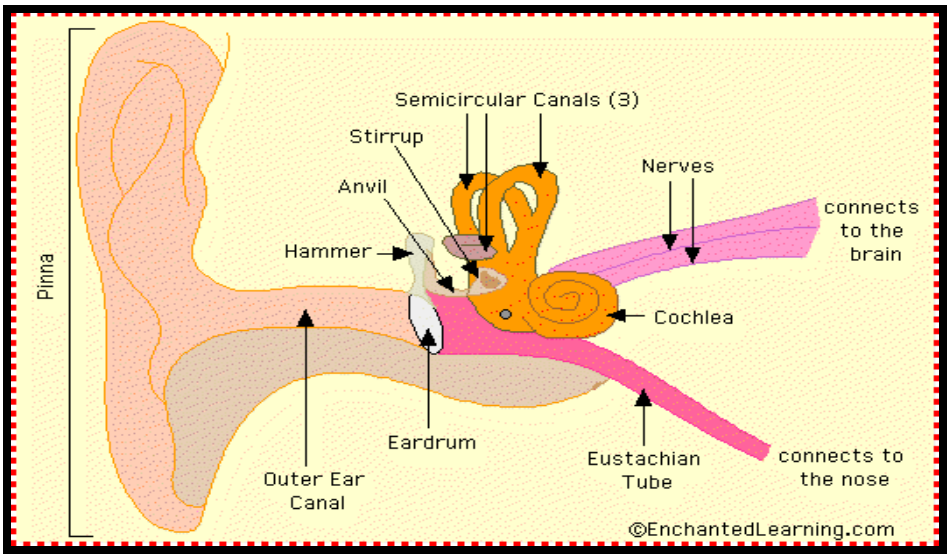


Figure 2 – Human Ear Anatomy

Noise Exposure Tutorial – continued

Sound Safety

Being that our primary concern is for the welfare of our working animals, we need to identify sounds than might be hazardous to us and our dog. It is generally agreed by sound experts that continued exposure to noise above 85 dB will cause damage to the inner ear (cilia) and permanent hearing loss over time. For this discussion we can assume that sound will affect our dogs in the same way it affects us. In fact, our dogs have hearing that is even more sensitive than our own. If sounds are affecting you they are affecting your dog.

This list identifies the intensity (in Decibels) of common sounds:

- **0** **The softest sound a person can hear with normal hearing**
- **10** **Normal breathing**
- **20** **Whispering at five feet**
- **30** **Soft whisper**
- **50** **Rainfall**
- **60** **Normal conversation**
- **70** **Household Appliances**
- **80** **Alarm Clock**
- **90** **Truck or heavy traffic at 45 feet**
- **100** **Loud music**
- **110** **Shouting in ear, chain saw, leaf blower**
- **120** **Jet Takeoff at 200 feet; Rock Concert**
- **130** **Thunderclap, Siren at three feet**
- **140** **Jet Engine, Jack Hammer at 30 feet**
- **180** **Space Shuttle Launch**

Decibel Exposure Time Guidelines

Accepted standards for recommended permissible exposure time for continuous time weighted average noise, according to NIOSH and CDC, 2002. For every 3 dB's over 85 dB, the permissible exposure time before possible damage can occur is cut in half.

Continuous dB	*Permissible Exposure Time*
75 dB and under	**unlimited exposure**
85 dB	**8 hours**
88 dB	**4 hours**
91 dB	**2 hours**
94 dB	**1 hour**
97 dB	**30 minutes**
100 dB	**15 minutes**
103 dB	**7.5 minutes**
106 dB	**3.75 minutes**
109 dB	**under 2 minutes**
112 dB and higher	**almost immediate permanent damage to hearing**

Noise Exposure Tutorial – continued

Startling vs. Constant Sounds

The primary difference between startling verses constant sounds is whether or not the sound produces involuntary reactions from us or our dogs. Startling sounds usually cause the central nervous system to respond by triggering an involuntary muscle reaction. In other words, a person or dog might jump when a startling sound is heard. This isn't necessarily a problem if our dogs recover from the startle response quickly. If an animal is startled to an extreme, they may attempt to flee the area that produced the sound. Obviously, a dog that reacts strongly to a sound and attempts to flee should be removed from service or moved to an area that does not cause reactions. In some cases, a sound may produce a startle reaction, but if it continues at a variable rate of repetition, we and our dogs may become habituated (we get used to it) to the sound. When this happens, the central nervous system is no longer shocked by the sound and the involuntary muscle reactions diminish. In all cases, whether a sound is considered startling or constant, remember it's how loud a sound is that affects your hearing the most.

Note: *Intermittent, piercing sounds, even at a distance, will damage your hearing over a period of time*

Noise Harms More Than Our Ears

Continued exposure to loud noise will cause hearing loss. Exposure to noise, or unwanted sound, however, is far more than just a threat to our ears. William H. Stewart, former U.S. Surgeon General, stated, "Calling noise a nuisance is like calling smog an inconvenience. Noise must be considered a hazard to the health of people everywhere." Studies have correlated noise with physiological changes in sleep, blood pressure and digestion. Studies have also linked noise with a negative impact on the developing fetus.

Noise and Sleep

According to Alice Suter, noise expert, noise is one of the most common forms of sleep disturbance and when sleep disruption becomes chronic, adverse health effects are great. Research shows that intermittent and impulsive noise is more disturbing than continuous noise. The Environmental Protection Agency identified an indoor day-night average sound level (DNL) of 45 dBA (equivalent to a night-time average sound level of 35 dBA) to protect against sleep disturbance.

Noise and Cardiovascular Changes

Studies show that exposure to noise is associated with elevations in blood pressure. There is some disagreement as to whether or not these changes are permanent or temporary. It has been reported that increased levels of epinephrine and norepinephrine suggesting cardiovascular involvement. Studies have also found a correlation beyond noise annoyance and adverse cardiovascular effects.

Noise and Gastrointestinal Changes

Studies have linked noise exposure with increased gastric emptying, with increased peristaltic esophageal contraction and increased anxiety. Another study found an increase in the use of antacids and hypnotics, sedatives and antihypertensives in a noisy community, as compared to a quiet community.

Noise Exposure Tutorial – continued

Noise and Annoyance

Noise is also a significant source of annoyance. In a 1997 study, Arline Bronzaft, PhD, found that nearly seventy percent of the residents surveyed living within flight corridors reported that they were bothered by aircraft noise and that these noises interfered with daily activities. Further, the subjects who were bothered by aircraft noise were more likely to complain of sleep difficulties and more likely to perceive themselves to be in poorer health.

Noise and Mental Health

We all know the stress created by unwanted sound. Even noise that may not be at hazardous levels to our hearing can make us tense and angry. Consider how irritating the simple dripping of a faucet can be in the middle of the night, let alone more intrusive noises. Studies have found noise to be associated with increased aggression and less helpful behavior. Numerous articles in major newspapers have reported noise disputes leading to violence and in England, (August, 1995) the Daily Mirror reported that in the previous six years, sixteen people or more were murdered or committed suicide due to chronic noise.

Beyond the Research

Although more research is necessary, anecdotal reports to the Noise Center indicate that noise has devastating effects on health. People report that noise interferes with the ability to sleep, eat and causes a wide range of health problems which affects the overall quality of life. People not only have the right to peace and quiet, their health depends on it.

Resources:

- http://www.lhh.org/noise/facts/evironment.html
- http://www.enchantedlearning.com/subjects/anatomy/ear/
- http://vetmedicine.about.com
- Wikipedia

Air Quality Index (AQI)

Risk Value	*AQI*	*Definition*
1	0 – 20	Good air quality
2	21 – 40	Good air quality
3	41 – 60	Good to moderate air quality
4	61 – 80	Moderate air quality
5	81 – 100	Moderate air quality
6	101 – 125	Unhealthy for sensitive groups
7	126 – 150	Unhealthy for sensitive groups
8	**151 – 200**	**Unhealthy**
9	**201 – 300**	**Very unhealthy**
10	**300 +**	**Hazardous**

Air Quality Index – continued

Risk Value	*AQI*	*Air Quality Definition*
1	0 – 20	**Good** – Pollution poses no risk
2	21 – 40	**Good -** Pollution poses little or no risk
3	41 – 60	**Good to Moderate –** Air quality is acceptable; however, for some pollutants there may be a moderate health concern for a *very small number* of people who are unusually sensitive to ozone. They may experience respiratory symptoms
4	61 – 80	**Moderate –** Same as above
5	81 – 100	**Unhealthy for Sensitive Groups –** (SMOG), people with either lung disease or heart disease are at greater risk from exposure to particle pollution (SMOKE).
6	101 – 125	**Unhealthy for Sensitive Groups –** (SMOG), people with either lung disease or heart disease are at greater risk from exposure to particle pollution (SMOKE).
7	126 – 150	**Unhealthy for Sensitive Groups –** (SMOG), people with either lung disease or heart disease are at greater risk from exposure to particle pollution (SMOKE).
8	151 – 200	**Unhealthy – TEAMS SHOULD CANNOT BE DEPLOYED** Everyone may begin to experience health affects and members of sensitive groups may experience more serious health effects.
9	201 – 300	**Very Unhealthy – TEAMS CANNOT BE DEPLOYED** ***Health Alert!*** Everyone may experience more serious health effects.
10	301 +	**Hazardous – TEAMS CANNOT BE DEPLOYED** ***Emergency conditions!*** The entire population is likely to be affected.

Air Quality Index Tutorial

Air Quality Index (AQI)

The AQI is the U.S. Environmental Protection Agency's key tool for reporting daily *outdoor* air quality. It tells how clean or polluted the air is, and what associated health effects might be a concern. The EPA monitors thousands of sites across the country and calculates the AQI for five major air pollutants regulated by the Clean Air Act: ground-level ozone, particle pollution (also known as particulate matter), carbon monoxide, sulfur dioxide, and nitrogen dioxide.

Ground-level ozone and airborne particles are the two pollutants that pose the greatest threat to human health in this country.

Ozone

Ozone, or SMOG, is a gas composed of three atoms of oxygen. Ozone occurs both in the Earth's upper atmosphere and at ground level. Ozone can be good or bad, depending on where it is found:

- **Good Ozone.** Ozone occurs naturally in the Earth's upper atmosphere-6 to 30 miles above the Earth's surface-where it forms a protective layer that shields us from the sun's harmful ultraviolet rays.
- **Bad Ozone.** In the Earth's lower atmosphere, near ground level, ozone is formed when pollutants emitted by cars, power plants, industrial boilers, refineries, chemical plants, and other sources react chemically in the presence of sunlight. Ozone at ground level is a harmful air pollutant.
- **Ozone/Smog** levels often peak in the afternoon; carbon monoxide is usually a problem during morning or evening rush hours.

Particle Pollution

Particle pollution (also known as "particulate matter; *e.g. smoke*) in the air includes a mixture of solids and liquid droplets. Some particles are emitted directly; others are formed in the atmosphere when other pollutants react. Particles come in a wide range of sizes.
Those less than 10 micrometers in diameter are so small that they can get into the lungs, potentially causing serious health problems.

- **Fine particles.** Particles less than 2.5 micrometers in diameter are called "fine" particles. Sources of fine particles include all types of combustion, including motor vehicles, power plants, residential wood burning, forest fires, agricultural burning, and some industrial processes.
- **Coarse dust particles.** Particles between 2.5 and 10 micrometers in diameter are referred to as "coarse." Sources of coarse particles include crushing or grinding operations, and dust stirred up by vehicles traveling on roads. Particle pollution can be high at any time of day.

Air Quality Index Tutorial – continued

How Does the Air Quality Index Work?

Think of the AQI as a yardstick that runs from 0 to 500. The higher the AQI value, the greater the level of air pollution and the greater the health concern. For example, an AQI value of 50 represents good air quality with little potential to affect public health, while an AQI value over 300 represents hazardous air quality.

The Department of Environmental Quality issues Air Pollution Advisories when they expect pollution levels to climb above the moderate (yellow) AQI category and remain there for more than 48 hours.

An AQI value of 100 generally corresponds to the national air quality standard for the pollutant, which is the level EPA has set to protect public health. AQI values below 100 are generally thought of as satisfactory. When AQI values are above 100, air quality is considered to be unhealthy-at first for certain sensitive groups of people, then for everyone as AQI values get higher.

The purpose of the AQI is to help you understand what local air quality means to your health. To make it easier to understand, the AQI is divided into six categories:

Air Quality Index Levels of Health Concern	Numerical Value	Meaning
Good	0-50	Air quality is considered satisfactory, and air pollution poses little or no risk.
Moderate	51-100	Air quality is acceptable; however, for some pollutants there may be a moderate health concern for a very small number of people who are unusually sensitive to air pollution.
Unhealthy for Sensitive Groups	101-150	Members of sensitive groups may experience health effects. The general public is not likely to be affected.
Unhealthy	151-200	Everyone may begin to experience health effects; members of sensitive groups may experience more serious health effects.
Very Unhealthy	201-300	Health alert: everyone may experience more serious health effects.
Hazardous	> 300	Health warnings of emergency conditions. The entire population is more likely to be affected.

Air Quality Index Tutorial – continued

Each category corresponds to a different level of health concern. The six levels of health concern and what they mean are:

- **Good –** The AQI value for your community is between 0 and 50. Air quality is considered satisfactory, and air pollution poses little or no risk.
- **Moderate –** The AQI for your community is between 51 and 100. Air quality is acceptable; however, for some pollutants there may be a moderate health concern for a very small number of people. For example, people who are unusually sensitive to ozone may experience respiratory symptoms.
- **Unhealthy for Sensitive Groups –** When AQI values are between 101 and 150, members of sensitive groups may experience health effects. This means they are likely to be affected at lower levels than the general public. For example, people with lung disease are at greater risk from exposure to ozone, while people with either lung disease or heart disease are at greater risk from exposure to particle pollution. The general public is not likely to be affected when the AQI is in this range.
- **Unhealthy –** Everyone may begin to experience health effects when AQI values are between 151 and 200. Members of sensitive groups may experience more serious health effects.
- **Very Unhealthy –** AQI values between 201 and 300 trigger a health alert, meaning everyone may experience more serious health effects.
- **Hazardous –** AQI values over 300 trigger health warnings of emergency conditions. The air quality is likely to affect the entire population.

Resources:

- *http://airnow.gov A cross-agency U.S. Government web site with information, forecasts, and national and local current air quality conditions.*
- *The AQI is reported in local newspapers, on television and radio, on the Internet at www.epa.gov/airnow and on many state and local telephone hotline.*
- *Wikipedia*

Team Experience

Risk Value	Definition
1	A very experienced team participating at a public education event. This kind of response doesn't involve much stress.
2	A team with less than three responses is participating at a public education event. This kind of response doesn't involve much stress.
3	A very experienced team participating in an emergency response drill. There may be short periods of stress due to exposure to unfamiliar things, loud noises, lots of activities, and may be role-players expressing emotions. Third and subsequent call-out response involving work with first responders or relief workers.
4	A team with less than three responses participating in an emergency response drill. There may be short periods of stress due to exposure to unfamiliar things, loud noises, and lots of activities, and may be role-players expressing emotions.
5	First or second call-out response involving work with first responders or relief workers.
6	Third and subsequent call-out response to an evacuation shelter or similar place where people may express strong human emotions.
7	First or second call-out response to an evacuation shelter or similar place where people may express strong human emotions.
8	Third and subsequent call-out involving death(s) and/or life threatening injuries. Major property loss may be a factor to experiencing strong human emotions.
9	Second call-out response involving death(s) and/or life threatening injuries. Major property loss may be a factor to experiencing strong human emotions.
10	First call-out response involving death(s) and/or life threatening injuries. Major property loss may be a factor to experiencing strong human emotions.

Note: It may be difficult to determine what risk factors you are working under until after you arrive on scene. You and your dog may experience a different level of stress than what is indicated below.

Team Experience Tutorial

Introduction

Team experience is unlike all other factors affecting our dogs on a call-out. You *and* your dog will be affected differently to the stresses of a call-out. Some of *your* stress will be picked up by your dog and it may affect them. If your dog becomes stressed, you may become stressed in response. It can be said that the relationship you have with your dog while working is symbiotic. As you both gain experience, your stress levels may decrease somewhat. As your stress level decreases, your dog may experience the same effect and vice-versa.

It's important to note that the Risk Values for this category (Team Experience) were developed by considering past experiences on different types of call-outs and drills. Your first experiences on call-outs will likely be more stressful than after you gain experience. Each team will react differently to the same set of circumstances. If at any time during a call-out you feel overwhelmed, please take a break or even end your response if necessary.

Resources:

- *Per Team Welfare Guidelines Committee discussions and study of written reports.*
- *Dictionary.com*

K9 Physical Characteristics

Breed Type – Hot Weather Conditions

Risk Value	Breed Type	Coat Type
1	Small / Medium Breed	***Short Coat***
	Beagle, Dachshund, Foxhound, Jack Russell	
2	Medium Breed	***Short / Medium Coat***
	Border Collie, Australian Shepherd	
3	Large Breed	***Short Coat***
	****Doberman, Weimaraner, German Pointer, Rottweiler, *Boxer***	
4	Large Breed	***Medium Coat***
	Labrador, Portuguese Water Dog, Wheaten, Standard Poodle	
5	Small / Medium Breed	***Long Coat***
	Pomeranian, Shih Tzu, Yorkshire, Silky Terrier, King Charles	
6	Small / Medium Breed	***Short Coat***
	Chihuahua, *Pug, Boston Terrier, Miniature Pinscher, *Bulldog	
7	Large Breed	***Long Coat***
	Afghan, Golden Retriever, Collie, Setters, German Shepherd	
8	Medium Breed	***Long Coat***
	Keeshound, Springer Spaniel, Samoyed, Cocker Spaniel	
9	Giant Breed	***Short / Medium Coat***
	Great Dane, Mastiff	
10	Giant Breed	***Long Coat***
	****Newfoundland, Great Pyrenean, St. Bernard, Leonberger***	

Note: We recognize the breeds listed is not complete. The purpose of indicating certain breeds is to give examples of breed types, rather than be exhaustive. Users of this information should use their best judgment in selecting the breed that comes closest to their own dog.

**Add 2 points to the Risk Value for dogs with brachycepahlic skull structure.*

**Add 2 points to the Risk Value for dogs with short white fur and pink skin.*

**Add 2 points to the Risk Value for dogs with predominately dark fur.*

**Add 2 points to Risk Value for dogs over 7 years of age or if your dog is overweight.*

K9 Characteristics in Hot Weather – *continued*

Risk Value	*Definition*
1	**Small to Medium breed – short coat** - These hardy breeds with their shorter coats do well in hot to warm weather. Make sure they get plenty of cool water. *(e.g. Beagle, Dachshund, Foxhound, Jack Russell)*
2	**Medium breed – short to medium coat** – These breeds are hardy and can tolerate the hot weather for a limited time. Be aware that some of these breeds have double layered coats, so their time will be even shorter. *(e.g. Border Collie, Australian Shepherd, Welsh Corgi, Australian Cattle Dog)*
3	**Large breed – short coat** – Due to their short hair, these breeds do well in hot to warm weather. *(e.g. Doberman Pinscher, Weimaraner, German Pointer, *Rottweiler, *Boxer, Pharaoh Hound)*
4	**Large breed – medium coat** - These breeds do fairly well in warm weather. Limit their time outside if they have extremely short hair or if their coat is dark colored. *(e.g. Labrador retriever, Portuguese water dog, Wheaten terrier, Standard Poodle)*
5	**Small to medium breed – long coat** – Those with the thick fur can overheat easily, so limit their time in the heat. *(e.g. Pomeranian, German Spitze, Sheltie, Yorkshire Terrier, Shih Tzu, Silky Terrier, Cavalier King Charles Spaniel)*
6	**Small to medium breed – short coat** – The short coat of these breeds limits their exposure to the sun and heat. *(e.g. Chihuahua, *Pug, Boston Terrier, Miniature Pinscher)*
7	**Large breed – long coat** - Their long coats can make these breeds heat up quickly, so limit their time in the heat. *(e.g. Afghan, Golden Retriever, Bearded Collie, Setters, German Shepherd, Leonberger)*
8	**Medium breed – long coat** - Some of these breeds have a double layered coat, so they can overheat easily. Their time in the hot weather should be very limited. *(e.g. Keeshond, English Springer spaniel, Samoyed, English Cocker Spaniel)*
9	**Giant breed – short to medium coat** – Due to their large size, this breed's exposure to hot weather needs to be very limited *(e.g. Great Dane, Mastiff)*
10	**Giant breed - long coat** – These giant breeds with the thick long coats need to take many long breaks to avoid having them overheat. Their exposure to heat should be very limited. (e.g. *Newfoundland, Saint Bernard)

*Add 2 points to the Risk Value for dogs that are brachycepahlic (short-faced) such as Bulldogs, Boxers, Japanese Chins, and Pekingese. Theses dogs have an especially hard time in the heat because they do not pant as efficiently as longer-muzzled dogs. Keep your brachycepahlic dog inside with air-conditioning as much as possible.

*Add 2 points to the Risk Value for dogs with short, white fur and pink skin because they can sunburn easily. Limit your dog's exposure during the day and apply sun block to his or her ears and nose 30 minutes before going outside.

*Add 2 points to the Risk Value for dogs with predominately dark colored fur.

*Add 2 points to the Risk Value for dogs over 7 years of age or if your dog is overweight.

Guidelines for Hot Weather

- Always provide plenty of cool, fresh water.
- Take plenty of breaks and rest in the shade or in an air conditioned building.
- Avoid exposure to hot asphalt or sand. If you have to walk on those surfaces, check the surface temperature and if need be, put your dog's booties on, but only use them for a few minutes at a time, as booties can rapidly cause overheating or heatstroke. Dogs can only sweat through the pads on their paws and pant to cool themselves.
- Dogs will be overheated quickly if they are working on hot surfaces.
- Never leave your dog in a parked car, even with the windows open.
- Older dogs and overweight dogs are more affected by heat.
- Brachycepahlic dogs are more likely candidates for heat stroke.
- The color of your dog's coat can influence how quickly they can overheat.
- Depending on the geographic area that you are visiting, heat may bring out snakes, mosquitoes, or other animals that may be dangerous to your dog. Keep your eyes and ears alert.
- **The misuse of insect repellents that contain DEET can lead to neurological problems.**

Do not apply any sunscreen or insect repellent product to your pet that is not labeled specifically for use on animals. Ingestion of sunscreen products can result in drooling, diarrhea, excessive thirst and lethargy.

Resources:

- *The American Society for the Prevention of Cruelty to Animals* - http://www.aspca.org/hotweathertips
- *American Kennel Club* - www.akc.org
- *The Humane Society of the United States* - http://www.hsus.org/pets/pet_care/protect_your_pet_from_winters_woes.html
- *Dog and Kennel Magazine* - http://www.petpublishing.com/dogken/news/pfizer01.shtml

K9 Physical Characteristics

Breed Type - Cold Weather Conditions

Risk Value	Breed Type	Coat Type
1	Giant Breed	***Long Coat***
	Newfoundland, Great Pyrenean, St. Bernard, Leonberger	
2	Large Breed	***Medium / Long Coat***
	Bernese Mountain , Golden Retriever, German Shepherd	
3	Large Breed	***Short / Medium Coat***
	Labrador, Pointer, Standard Poodle	
4	Medium Breed	***Long Coat***
	Keeshound, Great Spitz, Samoyed	
5	Small / Medium Breed	***Medium Coat***
	Border Collie, Australian Shepherd, Corgi, Australian Cattle Dog	
6	Giant / Large Breed	***Short Coat***
	Dalmatian, Weimaraner, Rottweiler, Great Dane, Mastiff	
7	Small / Medium Breed	***Short Coat***
	Bulldog, Fox Terrier, Beagle	
8	Small / Medium Breed	***Long Coat***
	Cocker Spaniel, King Charles	
9	Small Breed	***Long Coat***
	Yorkshire Terrier, Shih Tzu, Lhasa Apso	
10	Small Breed	***Short Coat***
	Chihuahua, Boston Terrier, Pug, *Miniature Pinscher	

Note: We recognize the breeds listed is not complete. The purpose of indicating certain breeds is to give examples of breed types, rather than be exhaustive. Users of this information should use their best judgment in selecting the breed that comes closest to their own dog.

** Add 2 points to the Risk Value for dogs with short hair; erect, stand up ears.*

K9 Characteristics in Cold Weather – *continued*

Risk Value	*Definition*
1	**Giant breeds – long coat** - These breeds can handle the cold weather longer than most other breeds due to their heavy coats. Do remember to take breaks and clean their paws and underside often if they walk through snow or ice. *(e.g. Newfoundland, St. Bernard)*
2	**Large breed – medium to long** coat - These dogs are able to handle cold weather. If you walk through snow or ice, make sure the paws and underside are wiped down. *(e.g. Burmese Mountain, Golden Retriever, Leonberger, German Shepherd)*
3	**Large breed – short to medium coat** - The thicker coated breeds within this size range will do much better in cold weather than the short haired breeds. *(e.g. Labrador Retriever, Pointers, Standard Poodle, *Pharaoh Hound)*
4	**Medium breed – long coat** - These breeds, depending on their coat thickness, can tolerate cold for a limited time. Due to their long thick coats, remember to wipe their paws and underside often if walking through snow and ice. *(e.g. Keeshond, Great Spitz, Samoyed)*
5	**Small to medium breed – medium coat** - These breeds, due to their medium coat can tolerate cold for a limited time. *(e.g. Border Collie, Australian Shepherd, Welsh Corgi, Australian Cattle Dog)*
6	**Large to giant breed – short coat** - Due to their short hair, these breeds need to limit their exposure to cold weather. *(e.g. Dalmatian, Weimaraner, Rottweiler, *Great Dane, Mastiff, Greyhounds, Dobermans)*
7	**Short to medium breed – short coat** - Some breeds within this size can be hardier than others, but we still need to limit their time in the cold due to their shorter coat. *(e.g. Bulldog, Fox terrier, Beagle)*
8	**Small to medium – long thick coat** - Even though these breeds have a thick coat, their body mass is small. Their exposure to the cold weather must be limited to a short time. *(e.g. Cocker Spaniel, King Charles Spaniel)*
9	**Small breed – long thin coat** - Due to their size these breeds should only be exposed for a very short time to the cold weather. *(e.g. Yorkshire Terrier, Shih Tzu, Lhasa Apso)*
10	**Small breed – short coat** - Toy dogs have a higher metabolism and so dissipate body heat faster than larger dogs. Rapid dissipation of body heat is a distinct disadvantage in cool or cold weather. Therefore the small, short haired breeds should only be out in cold weather if well protected for a very short time. *(e.g. Chihuahua, Pug, Boston Terrier, Miniature Pinscher)*

*Add 2 points to Risk Value for dogs with short hair; erect, stand up ears.

Guidelines for Cold Weather

- Short or coarse haired dogs are more susceptible to the cold.
- Towel your dog dry if it gets wet from rain or snow. Remember to also dry and clean the paws. This helps avoid tiny cuts and cracked pads.
- If going outside in the ice or snow consider using *Paw Deicer* available from most online pet product suppliers.
- Provide plenty of fresh water. Your dog can get dehydrated in the winter. Snow is not a satisfactory substitute for water.
- Don't leave your dog in a car during cold weather. A car can act as a refrigerator in the winter, hold in the cold.
- Thoroughly wipe off your dog's legs and stomach when he comes in out of the sleet, snow or ice. He can ingest salt, antifreeze or other potentially dangerous chemicals while licking his paws.
- Dogs are susceptible to frostbite, typically on the tips of their ears and paws. They can suffer from hypothermia, a life threatening condition requiring emergency veterinary care. Shivering may be the earliest indication that a dog is too cold and needs cold weather care. Without proper care, he will become lethargic and weak as hypothermia progresses.
- Older dogs are more sensitive to cold weather.
- Never let your dog off the leash on snow or ice, especially during a snowstorm—dogs can lose their scent and easily become lost. More dogs are lost during the winter than during any other season, so make sure yours always wears ID tags.
- Chemical hand-warmers, such as those used by skiers can be temporarily held against ears, feet, etc. to provide warmth until such time as a heated shelter becomes available.

Resources:

- *Veterinary Medicine.com* - http://vetmedicine.about.com/gi/dynamic
- *American Kennel Club* - www.akc.org
- *The American Society for the Prevention of Cruelty to Animals* - www.aspca.org
- *Humane Society of the United States* - http://www.hsus.org/pets/pet_care/protect_your_pet_from_winters_woes.htm
- *Dog and Kennel Magazine* - http://www.petpublishing.com/dogken/news/pfizer01.shtml
- *Wikipedia* - http://en.wikipedia.org/wiki/Chihuahua (dog)
- *University of Minnesota* - http://www.extension.umn.edu/info-u/pets/BB496.html

Section 2

Talking Dog: Body Language

Understand what dogs are "saying"

By Stacy Braslau-Schneck, CPDT

It's important to understand what dogs are saying with their bodies, not only to know your own dog but to better predict what other dogs are doing.

To really read dog body language takes experience. I encourage you to watch your own dog(s) and others. Go to the dog park and watch dogs interacting. Watch different body parts (ears, tails, eyes, lips, hair, and overall posture) separately for a while. See if you can predict which body stances lead to which activities or outcomes.

Confidence/Fear

Signs of confidence: erect stance (standing tall), tail up, tail wagging in a slower sweep, ears pricked up or relaxed, direct look; relaxed, smaller pupils.

Signs of fear or concern: lowered stance, tail down or tucked under, tail wagging in a quick, frantic buzz; looking away or turning head away to look so that whites of eyes show ("whale eye"); dilated pupils. Dogs often bark out of fear, in an attempt to keep a distance between themselves and the Big Scary Thing, especially if they are cornered, fenced in, or on a leash.

Dogs that are aroused will often have their hair stand on end, usually the "hackles," the areas over the shoulders and just before the tail. This doesn't necessarily mean aggression. It may mean that they are just are on high alert. Some dogs get "raised hackles" more easily than others; it's like some people who get red in the face very easily.

Note: This section is used by permission of the author

Canine Body Language - *continued*

This little puppy is looking confidently at the camera. His tail is up (due to his breed it curls over his back); he looks directly at us with no whites showing in his eyes, and his ears, though a little hard to see, are pricked forward.

This dog is relaxed and confident, with her tail curled over her back, her ears relaxed, and comfortably lying down. Her ball is between her feet in a clear sign of possession.

This black lab pup is unsure about the plastic ducky (and maybe the water, too). Notice most of her body is still on shore while she stretches her neck out to sniff. She's not fearful, just uncertain.

Here she's a lot more confident looking! Her tail is straight up (starting to curl back), and her body is compacted and one foot is lifted - she's ready for the next move!

Canine Body Language - *continued*

This dog is fearful and lacking in confidence. His back is arched with his butt and head lowered, his legs are bent, his tail is down (though not tucked under his body). He's looking at the thing that's scaring him.

This puppy is clearly fearful and hiding under his person's legs. His head and back are lowered, his ears are down, and his pupils are dilated (showing red in the camera flash). I would not reach out to this puppy - I would expect him to back away, growl, and maybe even snap at such an invasion of his space. (Instead, I would use Calming Signals such as turning sideways, looking away, yawning, touching the ground in an imitation of dog sniffing, and if the dog seems to relax I might hold my hand out to a neutral space between us for him to sniff).

Dominance/Submission

Dominant body postures: Standing over another dog, standing tall, hooking the dominant dog's chin or paw over another dog's shoulders, calmly accepting other dogs licking at their lips; staring. Some confident, dominant dogs will roll on their backs, exposing their bellies, in an attempt to reassure a more shy or submissive dog, or to get that other dog to play. They will be relaxed when they do that, and usually still look the other dog in the eye. Sometimes mounting ("humping") another dog is a sign of dominance, but not always; this often-misunderstood gesture can also be used by a lower-ranking dog to try to demonstrate his allegiance with a higher-ranking animal.

This confident dog is standing tall. If another dog were sniffing this one, this one would definitely be giving signals that he considers himself to be a high-ranking animal.

Canine Body Language - *continued*

Submissive body postures: lowered head and body; allowing other dogs to stand over them or hook their heads over their shoulders; licking at other dogs' lips and mouth corners; looking away from the other dog; rolling on back and craning head away from other dog, while covering tucking their tail.

Note that among dogs, the hierarchies are usually maintained and demonstrated very casually and almost always by more submissive members of the pack. Very high-ranking animals very seldom demonstrate their rank, unless they lack confidence. Most demonstrations and almost all fights that occur over rank are done by the middle-ranking or unconfident members.

"Forcing the dog onto its back is the equivalent of an abusive parent beating a child to force it to say, 'I love you.' Although he or she may have forced the words out of the child's mouth, they cannot force the statement to be true.... Forcing a dog into a submissive position is the Doggish equivalent of this scenario. Even worse, this technique may actually anger the dog enough to provoke it to attack.

"Forcing a dog into an alpha roll, or shaking the dog, both constitute physical aggression. Physical aggression is not communication. If there is good communication, then such confrontations need not occur."

- Stanley Coren, "How to Speak Dog"

Play and Play Invitations

Since dog-dog play is very similar to serious things like fighting, hunting and reproducing, dogs have good ritualistic ways of demonstrating that their intentions are peaceful and fun-loving. Dog play is often initiated by a play invitation like a play bow or pawing the air (especially with puppies), and it seems to say, "None of the biting, stalking, or humping I'm about to do is serious, this is just fun, OK?"

Even when dogs play very roughly, they are usually fairly relaxed; their lips usually cover their teeth (not drawn back in a snarl). Dogs often bark in play; this will usually be higher-pitched than that same dog's fear-bark or warning-bark.

Sometimes dogs will mount each other in play. They are often excited, but not in a sexual way, and it seems to be a way to bond. It is occasionally a show of dominance, but not always. Some dogs appear to mount high-ranking dogs in an attempt to find their place in a group that is much more complicated than a straight-line hierarchy.

Canine Body Language - *continued*

The classic play bow is the dog's invitation to play. The dog's tail and butt is in the air, and the front legs are lowered. The dog's ears are up and forward, his mouth is open in a "grin", and his eyes are relaxed.

This dog is playing, probably chasing something that was just thrown in the water. Her ears are pricked forward with attention.

In this picture the dog is playing with a kitten. The whites of the dog's eyes may be showing (or it could just be the glare from the camera flash!), but his face is relaxed, and his lips are relaxed covering his teeth.

Canine Body Language - *continued*

Here's some rough play. In the photo to the left, one puppy is down on his back, and the other is still charging up on him. But note how relaxed the "down" puppy's legs are, and how neither of them are really showing their teeth (the corners of their mouths are relaxed, not pulled back). I imagine they'll start bite-wrestling in a moment, accompanied by furious-sounding but innocent growling, and stop after a few minutes to companionably drink some water!

If playing dogs get too aroused, you might want to intervene. If your dog is getting overwhelmed or is overwhelming someone else, invite them to take a short break. No punishment is necessary: it's just a breather, not a penalty.

Canine Body Language - *continued*

Body language: dogs

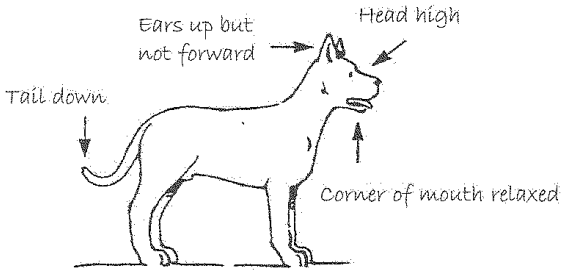
Dogs are very social animals. The ancestors of today's domestic dogs lived in packs. Communication among the members of a pack is necessary for the pack to cooperate to hunt, raise the young, and to get along. We can see pack behavior when watching two or more dogs together.

For the most part dogs communicate through body language, that is dogs use their bodies to explain their moods and thoughts. Dogs in a pack communicate easily with each other. It is important for every dog owner to learn to read these messages so we can adjust our training to how the dog is feeling.

A dog basically uses five parts of his body to communicate. These are the tail, ears, mouth and teeth, eyes and the fur along the dog's back (which are also called the hackles). A dog's posture, that is whether it is standing, crouched or lying down, is also very important.

BASELINE POSTURE

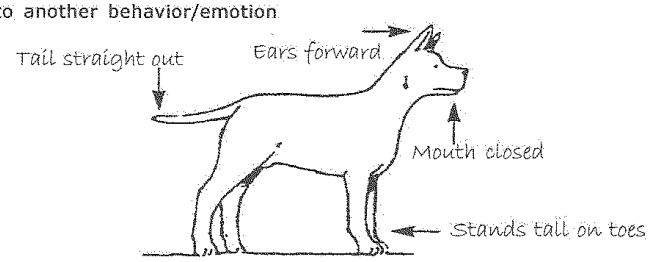
- normal posture for a dog when relaxed



ALERT/INTEREST: Dogs often simply show interest on meeting another animal for the first time. The dog has not yet decided if it needs to communicate submission play, aggression, or fear. This state usually lasts only a brief moment before the dog chooses to show another feeling.

ALERT POSTURE

- prelude to another behavior/emotion



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Canine Body Language - *continued*

Body language: dogs

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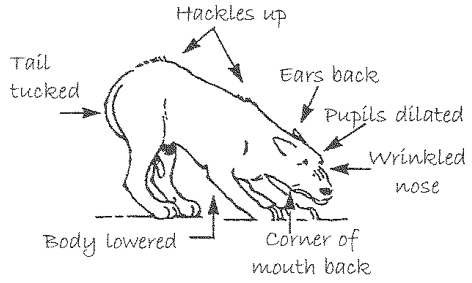
FEAR: A frightened dog can very easily become an aggressive dog, and many people have been bitten by dogs showing signs of fear.

DEFENSIVE THREAT POSTURE

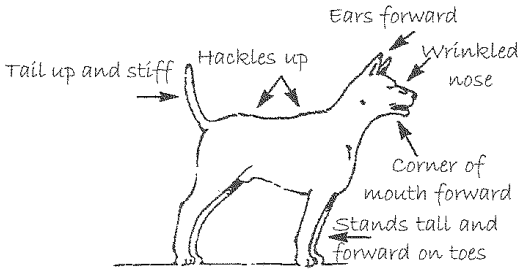
- fear-based posture
- may bite if cornered
- may be growling
- may urinate and/or express anal glands



AGGRESSION: This is the way a dog explains that he is the "boss", that he is more dominant than those around him.

OFFENSIVE THREAT POSTURE

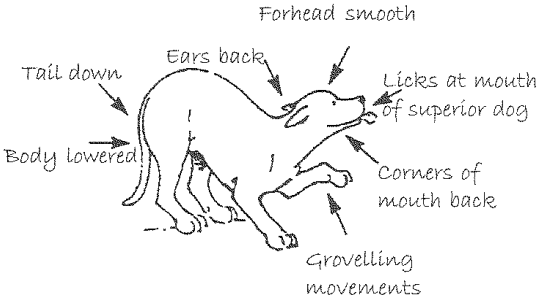
- dominant/confident posture
- dog is dangerous, may attack at any time
- may be growling/barking
- tail may be held high & stiff while wagging slowly



SUBMISSION: This is the way a dog explains that he is not the "boss", that he is less dominant than those around him. It is often used when a dog is afraid of punishment and is trying to appease his more dominant pack members.

ACTIVE SUBMISSION

- may urinate
- may be whining
- avoids eye contact
- tail may be wagging & held low OR
- tail may be tucked completely under body



PASSIVE SUBMISSION

- most submissive posture for a dog
- may urinate

Canine Body Language - *continued*

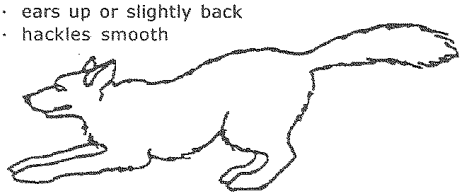
Body language: dogs

HUMANE SOCIETY SILICON VALLEY

PLAY: May look like submission in some aspects but the dog will be active and excited. It is the way he says "Play with me!"

PLAY BOW

- an invitation to play!
- front end lower than hind end
- tail up and wagging
- may bark & run in circles
- ears up or slightly back
- hackles smooth



STRESS: A dog who is showing signs of stress is telling the rest of the world that he is uptight and unsure about his situation. The more signs of stress a dog is showing, the more anxious he is becoming. Some stress in training is natural but a dog that is severely stressed can not learn. He needs to rest. If pushed much further in the current situation he may react with fearful aggression.

SIGNS OF STRESS

- sniffing
- licking lips
- scratching
- excessive blinking
- dilated pupils
- panting and salivating
- increased activity or pacing, restlessness, distraction, agitation
- whining, excessive vocalizing
- shaking
- hiding behind owner
- need for repeated commands when ordinarily responds to one command
- excessive shedding
- loss of appetite (will not eat treats ordinarily loves)
- "shutting down" by turning away or avoiding eye contact or freezing in place
- diarrhea
- sweating through the pads of feet

Section 3

STRESS SIGNALS

What is Stress?

(The following information is from a great book everyone in HOPE AACR should read: **Stress in Dogs** by Martina Scholz & Clarissa von Reinhardt)

Most definitions describe stress as a state in which an organism reacts to an endogenous or exogenous threat and focuses its energies on coping with a dangerous situation.

Stress Shows Itself:

- In behavior, for instance through aggression, agitation or restlessness.
- In perception, for instance in judging one's own state.
- Physiologically, for instance in outbreaks of sweating, palpitations, etc

Stress Symptoms

There are quite a few symptoms that indicate a dog might be stressed, and usually more than one of them occurs at the same time.

(Some of these types of behavior also appear when the dog is not stressed, such as panting, which may be due to a real hot day or extensive play. You must always consider the context for such behavior)

- ***Restlessness***
  This may appear as constant fidgeting. The dog can only relax with difficulty or not at all, is unable to calm down even in the places where he usually lies down and pays a lot of attention to any noise. Often such dogs also pull hard on the leash because they lunge forward as if they were being hunted.
- ***Nervousness***
  The dog is very easily startled, seems generally jumpy and nervous.
- ***Overreaction***
  The dog suddenly reacts in a restless, timid or aggressive manner to events or situations in which he would normally stay calm and relaxed.
- ***Defecation and urination***
  Both can be examples of stress symptoms. In the event of great fear or a sudden fright, the release of adrenaline and the activation of the sympathetic nervous system signal the rectum to defecate. Additionally, shifts in the water balance occur, resulting in a more frequent need to urinate.

Stress Signals - *continued*

- ***Destroying objects***
  This is often wrongly referred to as "destructive protest fury" especially if the dog shows this behavior when left alone. In fact, it is a sign of serious stress.
- ***Exaggerated noise making***
  Continuous barking, permanent shining and howling are also interpreted as protest behavior, but rather indicates that the dog is extremely overburdened and stressed. This may also be related to an approaching friend, human or another dog and interpreted as excitement. Otherwise, this unsolicited high pitch vocalization is a sign of stress.
- ***Disorders of the digestive system***
  Symptoms such as vomiting and diarrhea are among the most frequent and noticeable symptoms of stress. Look for dietary indiscretion. Some medications may cause diarrhea as a side effect. Diarrhea is never idiopathic; there is always a cause. Transportation in one form or another may cause stress. If your dog shows signs of dehydration with dry or tacky gums, seek immediate veterinary help.
- ***Appetite loss / Anorexia***
  Unable to eat, uninterested in treats, pica. May be caused by distraction, or simply lack of hunger, but more often is a sign of stress.
- ***Poor concentration / Avoidance***
  Dog ceases to obey, turns away, unresponsive to touch or petting. May be caused by distraction, but more often is a sign of stress. Avoids eye contact. He may be looking at something of interest or may be a sign of stress.
- ***Facial Wrinkles***
  Wrinkled forehead, brow ridges, wrinkles around the eyes. May be breed-specific, as with a Sharpei, but may be signs of stress in other dogs.
- ***Drooling or Frothing at the Mouth***
  Sudden onset may indicate illness or a foreign object in the mouth. Normal breed behavior known to occur in heavy jowled dogs such as Newfoundland, St. Bernard. Look for a possible mouth injury. Dogs with heatstroke will froth at the mouth. The anticipation of food or water may cause drooling. Frothing occurs when dogs are fearful, anxious or suffering motion sickness. Some dogs get frothed up during play. This may also be a sign of stress.
- ***Sudden Excessive Shedding***
  Extremely hot weather. Changes from cold weather conditions to instant warm conditions. Claustrophobia, high noise levels, the inability to escape and the constant pulling and tugging can cause the dog's stress levels to shoot up.
- ***Clinging to Handler, Leaning***
  Excessive attention-seeking, looking for reassurance. This is a sign of stress.
- ***Excessive Panting***
  Rapid and/or heavy breathing may be associated with extremely warm or hot weather, or following some physical exercise. If inapplicable, this can be a sign of stress.
- ***Tail Tucked***
  May be breed-specific. Tension, causing stiffness in tail and body movement; could may be viewed as a stress sign.

Stress Signals - *continued*

- ***Sweaty Paws***
  May be due to warm or hot weather, since dogs' sweat glands are found in the paws. A stressed dog sweats more.
- ***Red Eyes***
  Rule out any foreign object in the eye. Is your dog prone to allergies which may cause this problem? If none of the above applies, it may be stress.
- ***Drinking Excess Water***
  Could be dog or breed-specific. Could be related to a health or medical condition. Could be a side effect to certain medications or it may be stress.
- ***Biting the Leash***
  May be a bad habit. This may also be stress-related or play.
- ***Shaking himself***
  Shaking is an indicator that a dog finds a situation exhausting. As soon as he recognizes that the situation is no longer threatening or is over, he releases tension by shaking himself.
- ***Discomfort***
  Stress can also be caused by physical discomfort, such as hunger, thirst, cold, warmth, noise, the lack of possibilities to relieve themselves, etc.

Stress Signals - *continued*

Stress Reducing Solutions

The solutions are as various as the symptoms of the individual dogs themselves. There are a few points that can be generally followed in order to keep a dog's stress levels as low as possible.

- Make sure that your dog has sufficient periods of rest during the day and make sure he is not disturbed.
- Look at your dog's calming signals or behavior to see if anything is getting too much for him.
- Your dog should have the opportunity to use his instinctive behaviors, such as the ability to use his nose in a search exercise.
- Give your dog the time to find out about what is around him. This is particularly important when you visit a new place. Let him explore the new surroundings in peace. Let him look around, sniff and walk through the room. Only when he has got to know this new place will he feel safe and happy there. Offer him his familiar blanket to lie on.
- Your dog should have the chance to relieve himself when he needs to.
- Periods of excitement should be followed by periods of rest.
- When your dog is stressed because he is afraid of something, make sure that you keep a good distance between him and the creature or object that is causing the fear. Give your dog the opportunity to keep the scary "something" in his sights. Do not try and reassure your dog when they are showing signs of caution or fear, as this could reinforce the behavior.
- Create rituals that give your dog the security of knowing what is coming next.
- Make sure you hold the leash loosely. A tensed and short leash causes your dog additional stress. He doesn't just feel the unpleasant pull but has at the same time the feeling that he can't get away.
- Show your dog that YOU have the situation under control and will protect him where necessary. Give him the feeling that you are there for him. Help him out of situations that overwhelm him.
- Speak to your dog in a calm, gentle and friendly voice.
- The golden rule is : less is more.
- Soft touch – helps the production of stress-relieving chemicals such as serotonin, beta-endorphins and dopamine, and helps decrease in the stress hormone cortisol.

Stress Signals - *continued*

Indicators of Environmental Stress in Dogs

Calming signals are often shown by a dog if he feels insecure, stressed or overburdened.

Calming Signals: Canine Life Insurance **by Terry Ryan**

www.diamondsintheruff.com/**calming**signals.html

- **MOVING SLOWLY**
  A dog intending to use signals, upon seeing another dog in the distance, will start to move slowly. This exaggerated slow motion is a calming signal, and one which can be used early and effectively when meeting joggers, cars and bicycles may approach quickly and may appear as a threat.

  Example: Carl and his dog Sheena were walking down a narrow city sidewalk. A young boy ran along the sidewalk in the opposite direction. Sheena was worried about this quick motion and immediately attempted, as best she could while on a tight leash, to display calming signals with her body language. Sheena was ignored by the child who was intent other things. Sheena's signals were of no use, so she resorted to threats such as barking a "get away from me" warning.

- **MOVING IN AN ARC**
  Rarely upon first meetings will dogs approach each other nose to nose. Only dogs which are very sure of the outcome of a situation will attempt to meet head on. More frequently dogs approach each other in curving lines, walk beyond each other's nose to sniff rear ends while standing side to side. Perhaps Carl could have been more attentive, recognized a troublesome situation for his dog and helped Sheena by leading her in an arc past the oncoming child.

  This curving theory has been proven time and time again. Ask any grooming specialist or veterinarian. Most apprehensive dogs are more easily approached if not confronted head on. When approached from the side, one can gain the dog's confidence more readily. Unfortunately dogs are constantly put into situations where they must accept confrontation. It's wise to condition dogs to accept this eventuality gracefully.

- **SNIFFING THE GROUND**
  Dogs use their noses to explore their environment, but at times sniffing seems to have a different significance. Owners have attributed out of context sniffing to lack of concentration or stalling. Some say it's a displacement activity. Turid categorizes sniffing during times of stress as a calming signal. Example: You and your dog Spot are patiently waiting in the veterinarian's reception room. Spot is thinking,

  "Wow! that human in the long white coat keeps walking in and out. She looks and smells strangely. This is scary! I'd better sniff the floor of the waiting room now to show that I mean no harm and maybe she'll leave me alone." Granted, the floor of the waiting room probably has many intriguing smells, but it could be Spot's way to calm himself and others around him.

Stress Signals - *continued*

- **SITTING, LYING**
  These positions are probably the most graphic calming signals of all. You can see them being used in active play sessions. A dog will spontaneously drop when things get out of control. How many dogs, when receiving a reprimand from the owner will sit or lie down? Turid sees this as a signal that the dog is anxious and is trying to calm the owner down.

- **LIP LICKING**
  This quick little flick of the tongue is language which often goes unnoticed because it is shadowed by more overt signals. It is yet another way for a dog to convey the same message, for everybody to calm down. Go back through some photos of your dogs. Frequently lip licking can be seen in photographs. Posing for a photo can be a problem for some dogs. Many are worried about the camera which has a staring eye following their every move!
- **BLINKING, AVERTING EYES, TURNING AWAY**
  When a dog approaches another, it's a very interesting moment in time for those individuals. Why then, do we see dogs looking away, exaggerating an eye blink or turning their heads away from approaching dogs? Is it disinterest, distraction or a calming signal? People who work with dogs realize early in their careers that they can gain the confidence of a worried dog more quickly by avoiding direct eye contact, or even better, by turning away with their backs or sides to the dog.
- **YAWNING**
  Perhaps the most intriguing of all signals is yawning. Jane and her dog Fido are at the neighborhood barbecue. The volleyball players are smacking the ball with gusto, the music is playing with a resounding beat and people are animated and noisy. With all of this fun going on Fido still gives an occasional yawn. Can he be sleepy? Perhaps. Or is Fido yawning to reduce his stress and to calm down the others present. If Jane were to turn her own head away from the noisy people and yawn, would this reassure Fido?

DOES SIGNALING WORK FOR ALL DOGS?

Some dogs don't play by the rules. There are numerous reasons a dog might lose the inborn ability to use calming signals properly. Puppies learn valuable lessons from their environment. One must be very careful about the company a puppy keeps or the pup might learn that calming signals are of no use. If a pup, while displaying calming signals, encounters a dog lacking respect for appropriate body language, is attacked, much ground has been lost. This pup might learn to use threatening actions as a life insurance policy instead of calming signals. Luckily, with most dogs it takes more than one or two unfortunate incidents to extinguish signaling. Calming is a very dominant instinct in dogs. However it's a good idea to protect young dogs from interacting with unnatural, angry dogs. Safe, friendly dogs with good signals are the best teachers a young dog can have. Puppy classes are helpful in teaching these lessons, but can do more harm than good if inappropriate dogs are allowed to interact.

Some owners hamper a dog's attempt to communicate with other dogs or humans by inhibiting them with leashes. Yes, by all means dogs should be on leash. No, it is not safe to turn your dog loose to "communicate freely" with an unknown dog. But be aware that you could be helping your dog get into trouble by preventing appropriate body language. A more prudent plan is for you and your pet to keep your distance from an unknown entity.

Stress Signals - *continued*

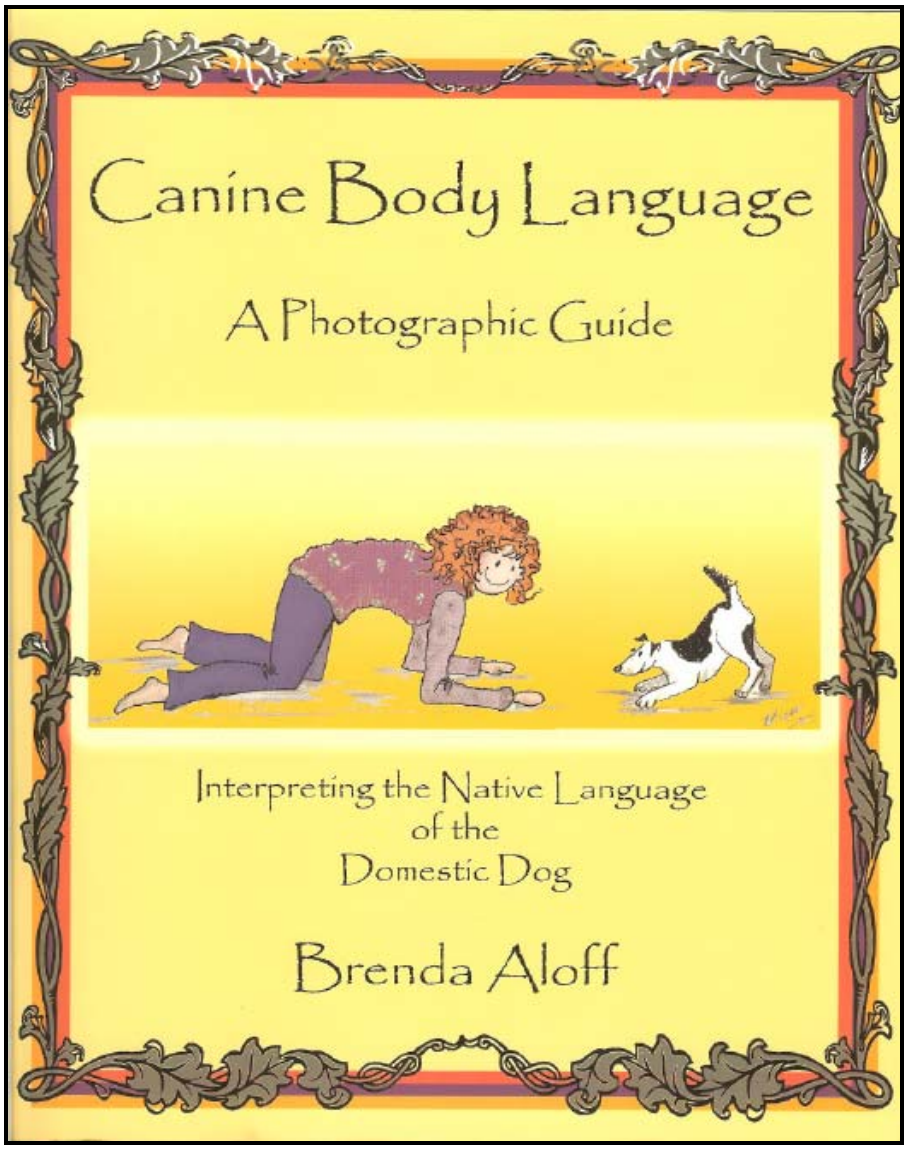
Whether on purpose or unintentionally, some dogs have been taught to ignore signals. Many responsible owners seek dog obedience classes as an opportunity to train their dogs. Here's a typical obedience class exercise: Owners command their dogs to Sit and Stay. Dogs happily comply. The class instructor now asks owners and dogs to take turns weaving among the sitting dogs. This is fine in an advanced class of dogs with well-know temperaments. But in a beginner's class a handler might be asked to prevent a fearful dog from signaling. For example, Brownie is trying her best to maintain the sit-stay while the other dogs in class weave around her. She may be a little worried about the next dog approaching, so she wants to use her calming signals and tries to lie down. She is prevented from breaking her sit-stay by her owner pulling up on the lead. Next she tries to slowly move away, another common calming signal. Brownie's owner forces her back into position. What about King, the approaching dog? King is made to stay in heel position and cannot move slowly either. Nor can King curve and certainly he is not allowed to sniff.

What about the enthusiastic trainer who gives overly sharp commands or pushes the dog too far to fast in an exercise? The dog may try to signal the owner to let up a little. Here we see yawning on the sit-stay, sniffing on the heeling, curving slowly on the recall, turning away on the sit in front.

Resources:

- **Stress in Dogs** by Martina Scholz & Clarissa von Reinhardt
- **Calming Signals: Canine Life Insurance** by Terry Ryan www.diamondsintheruff.com/**calming**signals.html

Stress Signals - *continued*



Note: This material is used by permission of the author

Stress Signals - *continued*

6 STRESS SIGNALS

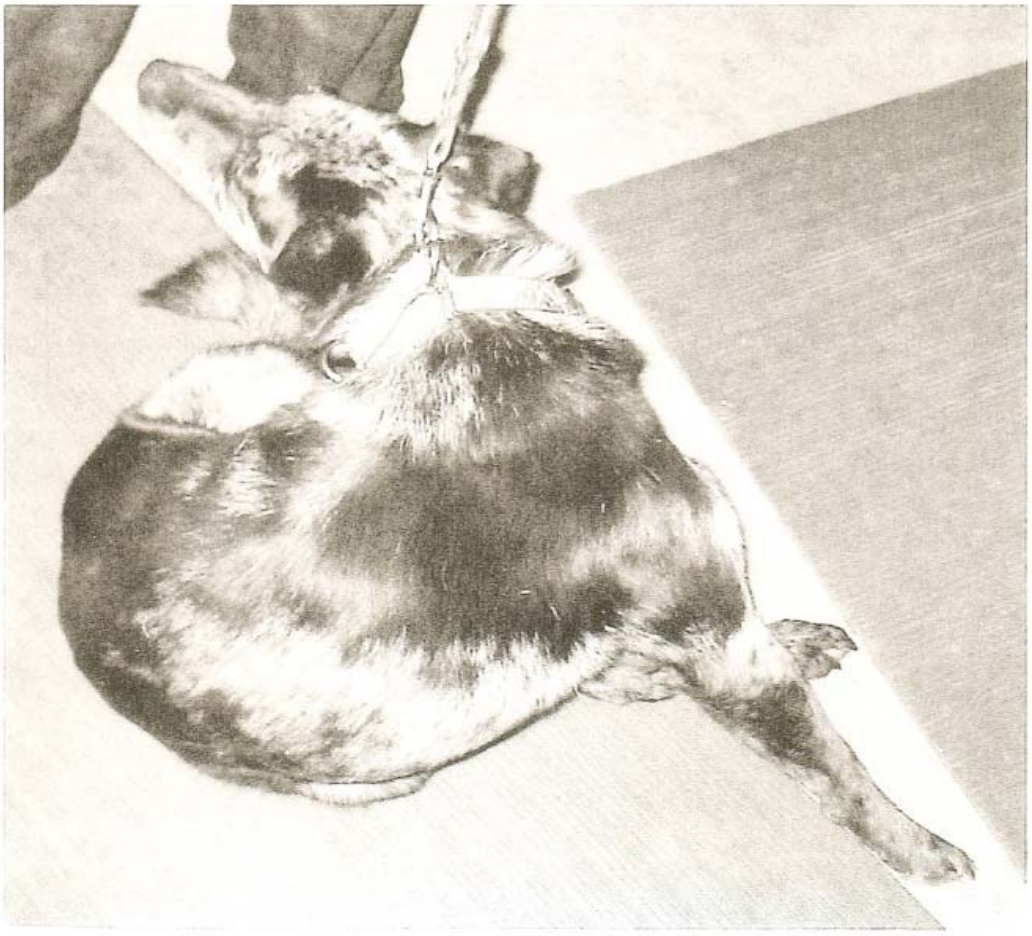
Merlin came to the Training Center for some help with problem behaviour. He was described as a very hyperactive dog. When I met him, I could see that he was not just really lively - he was predominantly anxious.

Within a few minutes he did all of these things: scratching, panting, shallow breathing, hair loss and exfoliation (dander), sniffing. The following photos capture about 10 minutes of observation when he first walked into the Training Center.

The behaviours displayed in this photo essay are typical of a dog who is under stress. Sometimes you will see only one or two of them, other times the dog will, like Merlin, exhibit several.

Any of these stress signals can be used as deliberate communication and also as displacement behaviour. It stands to reason that certain behaviours could be used for both purposes simultaneously. A behaviour used as a Signal can also be a comforting behaviour for a stressed dog.

#6.1: Scratching



Stress Signals - *continued*

#6.2: Stress Indicators

- ears held in tension
- dilated pupils
- slightly spatulate tongue
- tongue way out
- braced legs
- tail down
- panting

Expressions of Emotion:Stress 33

Stress Signals - *continued*

#6.3: Facial Tension

- tongue way out
- spatulate tongue
- ears drawn to the side and back
- lips drawn back
- tension ridges around the lips (see the arrow)
- Look Away of avoidance

#6.4: Tension Ridge By Eye

This photograph shows all of the same signals as in the photograph above. In addition, you can see the ridge indicating extreme facial tension above the eye (see the arrow). Merlin looks as if his skin is stretched tightly across his skull.

Stress Signals - *continued*

#6.5: Dander & Hair Loss

- sudden visible dander
- excessive and sudden loss of hair

#6.6: Sniffing

Expressions of Emotion:Stress 35

Stress Signals - *continued*

#6.7: Spatulate Tongue & Facial Tension

- shape of tongue, particularly at the end
- ridges around eyes and lips

Here is an example of the spatulate tongue. This dog's tongue is held up tensely. The curling at the end is typical. The tongue is very wide at the bottom due to muscular tension.

#6.8: Stress Signs

A stressed dog has a somewhat different appearance from a dog who is just hot and panting. In hot and panting dog, the tongue will be lolling out of the dogs mouth, sometimes even off to the side, and will be shaped more by gravity than by muscular effort.

Both photographs show the ridges around the eyes and lips very well. This dog is stressed and there is a lot of tension being held in her face. Notice the ridges below and to the sides of the eyes. Also note the way the lips are long, but, because of muscular tension, there is a forced look to the lips and they are puffed out around the edges. Legs are braced, topline is rounded.

Stress Signals - *continued*

Text for Photo #7.9 & #7.10:
Photo #7.9: You do not have to see small details to know that in this is a dog who is very stressed. Look at the silhouette alone. The tongue is spatulate and curled up tensely. Her topline is rounded and she has a "hunched over" look. Her tail is not tucked, but just down and hanging limply. Her legs are braced under the body. Her head and neck are lowered.

Looking more closely, you can also see pupil dilation. Her lips are long, but there are ridges around the lips and eyes.

Compare the Golden in Photo #7.9 to Photo #7.10, a Chessie who is just tired and happy. See the differences in the way the body and head are held? Note the difference in the silhouettes, and the shape of the tongue and how the tongue is held.

The Golden in Photo #7.9 is under emotional stress; the Chessie in Photo #7.10 is exhibiting physical stress & exertion.

#6.11: Hypersalivation

Hypersalivation is sudden and excessive salivation. Drool will coat the dog. Hypersalivation sometimes occurs with a dog who has separation anxiety so extremely that, when the owners come home, the dog is soaking wet and looks as if she had been sprayed with water.

You can see the evidence of hypersalivation from stress in the photo above. The dog doesn't otherwise look that stressed and wasn't acting horribly stressed. But this hypersalivation tells you that the dog was indeed under stress. If you look closely you can also see the ridge at the back of the lips that indicates tension.

Stress Signals - *continued*

#6.12: What Are You Doing?

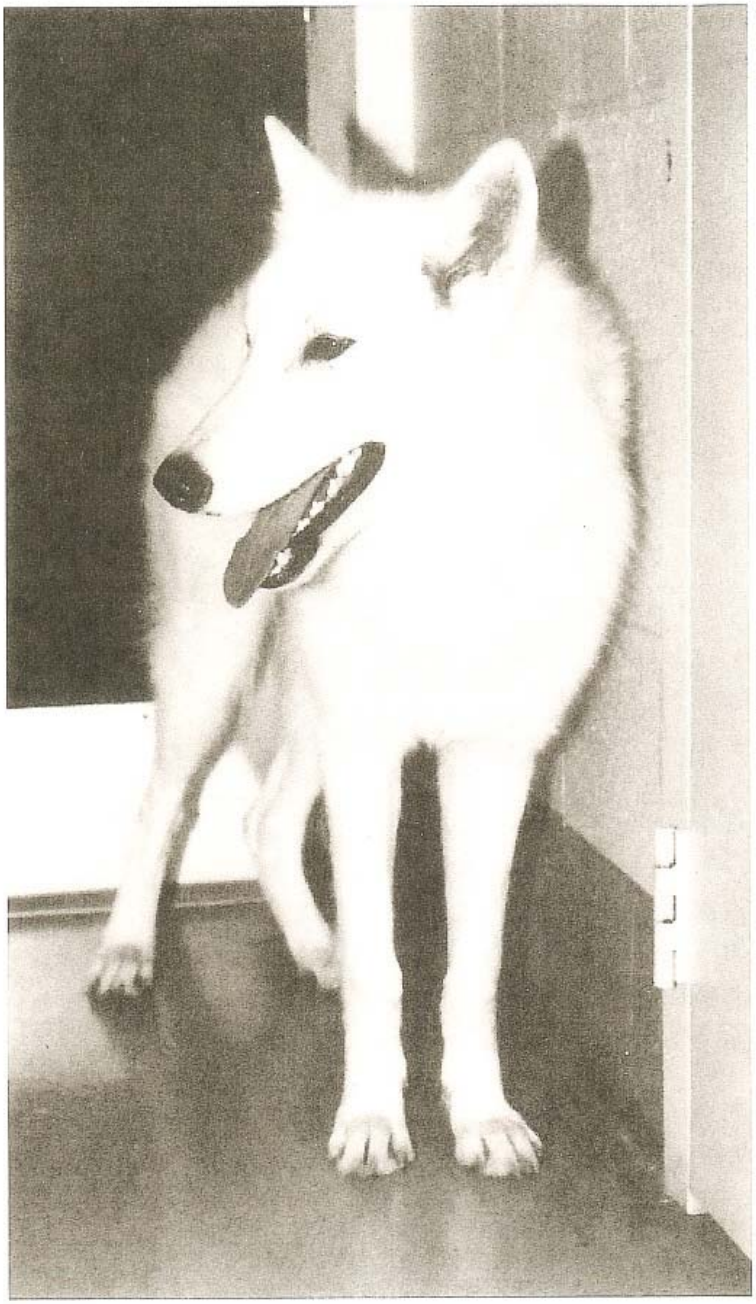
- dilated pupils
- Tongue Flick
- flattened ears

In this photograph, Buzz has extremely dilated pupils. She is also exhibiting very flattened ears. That's a pretty expressive fTongue Flick, too! And all this because she was told to Sit and then had a camera staring at her. We often underestimate what will cause a dog to feel extreme social pressure. It doesn't take much for many dogs - anything at all out of the ordinary will do it.

Photo Credits:
Photo #1, #2, #3, #4, #5 & #6: Brenda Aloff
Photo #7, #8 & #9: Cherish DeWitt
Photo #10: Joanne Weber
Photo #11, & #12: Cherish DeWitt
Photo #13: Rachel Plotinski

Stress Signals - *continued*

7
FEAR



#7.1: Fear & Avoidance

- body posture
- ears
- squinting eyes
- Look Away
- braced front legs
- squatting rear legs
- down tail

This animal is stressed: eyes averted, ears held out to the side, tail down. There is a rigidity about her that tells us these are not signs of neutrality, but of anxiety. The Look Away is one of avoidance, not approachability. What tips me off mostly is the braced rear legs. I bet there are sweaty paw prints on the floor, too.

Her lips are drawn back, and you get a feeling of stillness.

She has pressed herself into the wall. When animals are anxious they will often Move *Into* Pressure. It seems odd, but it is why animals run through fences, or hurt themselves when they get confined and are panicky. It makes sense from a survival standpoint in some instances - if an aggressor has you cornered, blasting through him might be your last chance to save yourself.

Stress Signals - *continued*

In the second photo of this sequence, the dog has backed further into the corner and gives definite "STOP your approach" signals.

In Photo #8.1, she says "I am anxious." Here, In Photo #8.2, upon closer approach, she went immediately into a defensive position. This is a posture of extreme fear. There are many Extreme expressions of body positions here. This "extreme-ness" indicates the strength of the dog's emotions.

When a dog gives you this kind of body language she is saying she feels trapped. This hallway presents an unfortunate circumstance which places her in a place of no options.

#7.2: Extreme Fear

- the extreme-ness of the body posture
- rounded topline
- ears flattened
- head lowered
- paw lift
- lips drawn way back
- tucked tail

Behaviour Tip: Fear makes an animal extremely unpredictable. If you reach in, the animal may fold, but very likely will explode into action when you ignore the demand to Stay Out Of My Bubble. For more examples of this, see Section 4: Space Invaders.

Stress Signals - *continued*

Other signals of fear are body tension and very wide open eyes, to the point where you can see the whites of the eyes. In this photograph, you can see Emma's Whale Eye. You can also see a lot of tension in her face, the ridge under her eye. Emma is a sweet and soft soul, and has a fair amount of caution. Here, Lori is just asking her to sit still for a moment. Emma's reaction is all out of proportion to what Lori is doing, but that is not our call. Emma has decided she is in some trauma. There is a lot of action going on around her - I have loose dogs running around the kennel and am standing there with a camera. This combination is enough to bother Em.

#7.3: Whale Eye

- wide open eyes
- whites of eyes visible almost all the way around the eye
- Paw Lift
- eyes oriented toward "concern," nose oriented away from

Photo Credits: Photo #1 & #2: Mary Wilmoth
Photo 3: Cherish DeWitt

Stress Signals - *continued*

8
CAUTION

#8.1: Cautious Approach

- orientation forwards & backwards (conflict)
- braced front legs
- lowered tail

This dog, even though reaching forward, has his hind legs far out behind, as though to keep as much of his body away from the strange human (as in stranger, not weird). His ears are held close to his head, his tail is lowered. But you wouldn't have to look at anything but the general silhouette to see that the dog is approaching something warily. Note that the dog's energy is actually travelling Backward. We can assume the person has a pretty good treat, or the dog might be too wary to approach her at all.

Stress Signals - *continued*

Rylie, on the left, does not care, even a little bit, about the fact that she is wearing a hat and scarf. She appears to be totally unaware of the photographer as well. The dog on the right, Doc, is worried and uneasy. His ears are back, his mouth is closed, and his body orientation is Backwards rather than Forward. That is, were he to move, you get the distinct feeling that he would move Backwards, away from the direction he is facing, rather than Forwards, into the social pressure he is feeling.

#8.2: Unbothered vs. Cautious

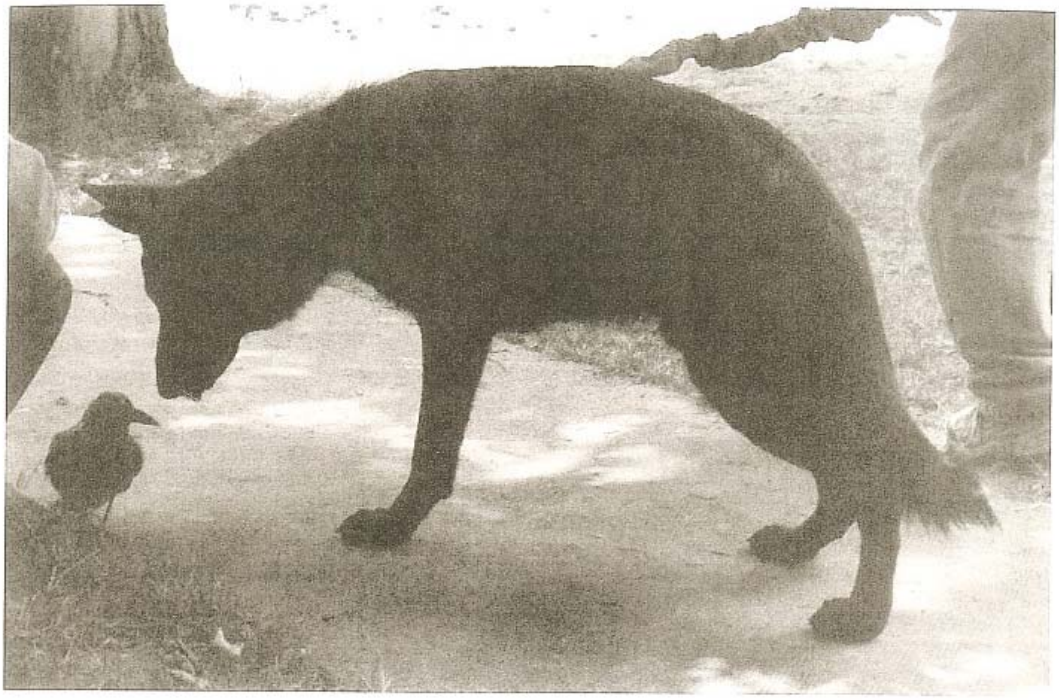
- body posture
- ears
- mouth
- orientation
- orientation of eyes and noses

Compare that with Rylie, who gives the impression she would move towards the direction she is facing. Rylie's mouth is wide open in a happy grin and she is looking directly at something. Her nose is pointed towards it and so are her eyes.

Doc's nose is pointing to the left but his eyes are directed in another direction entirely. The nose tells you the direction he would likely move in as soon as he got up.

It is always interesting to know the context, as this can help read the body language. In this case the dogs were placed in a Sit Stay. Rylie is staring at a tennis ball in my hand and Doc just wishes he were not dressed up and people weren't staring at him. Doc has played with Rylie many times and she usually takes the ball away from him when they do play. Because his eyes are looking at her, with his nose pointing away from her, she might be what is causing his concern. More likely it is the staring eye of the camera and Doc is glancing at Rylie to see what her reaction will be. So I am not certain exactly which things are bothering Doc, but it is clear he wishes he were somewhere else!

Stress Signals - *continued*



The stuffed bird is obviously an object of curiosity for this dog. Intense interest is evident by the dog's proximity and also in the orientation of the nose - towards the object - and forward-held ears. The dog has stopped moving and is standing still.

But the general impression is still one of caution. Notice the body has a feel of traveling Backward. This time it is not visible in the rear legs, as in the dog in Photo #9.1, but is instead evident in the braced front legs. There is a rounding of the back, as if the dog is ready to gather himself up to move quickly if need be.

Note also the tongue flick, indicating that the dog is Negotiating at this time, rather than using Predatory language. (For information about Negotiation see Section 2: Calming and Negotiation Signals).

Once the initial curiosity is satisfied, some dogs do a Curiosity Bite to test if there is prey potential.

#8.3: Caution

- orientation
- ears forward
- tongue flick
- rounded back

Stress Signals - *continued*

9
ANXIETY & AVOIDANCE

#9.1: Anxiety & Avoidance

- "hiding"
- silhouette
- proximity

This is a dog I worked with at a clinic. Feeling overwhelmed, and feeling vulnerable and anxious, she was Moving Into Pressure. Hiding her face is not the object for this animal. She is using Avoidance behaviours instead of confident coping behaviours. No one is threatening her in this context, she is uncomfortable with proximity alone, even in absence of threat.

Dogs may use this specific tactic in one of many ways. Hiding the face can be a form of not having to look at the environment. Although I see this as an extreme and dysfunctional (avoidance in absence of threat) Look Away, it is better than lunging and barking.

More, though, I see this as a way the dog effectively changes the subject. When she does not wish to follow through with a known cue, or if she feels the task is a bit unpleasant, she will use pushing into the handler as a distraction. This works really well, as it prevents the handler from moving forward. A dog will also use this strategy if she feels over-faced (no skill set for the current situation) or confused.

This behaviour demonstrates the tendency of many mammals to "Move Into Pressure" when they feel upset or panicky. It certainly indicates an animal that has just gone "Hind Brain" on you.

Another form of this behaviour is when the dog keeps repeatedly jumping and/or climbing on the handler.

Training Tip: As a training issue, I treat this like I treat all anxiety: I discourage it. Instead, I encourage my dogs to "stand on their own feet" and do not allow them to lean on me when they are anxious. I ask the dog to do a simple task she already knows how to do, and then reinforce her heavily for Thinking and Responding rather than Reacting, as this dog is doing.

By allowing the dog to remain in this position, you only validate her discomfort. It is just like cooing over the dog when she is afraid. What the human intends as reassurance, the dog takes as validation for the fear. "Oh, you like me to be silly and afraid and anxious."

Stress Signals - *continued*

#9.2: I Wish I Weren't Here

- Look Away
- ears held back
- white around the eyes
- lack of body tension

I had to chuckle when I saw this photo, as I have seen this expression on my own dogs' faces many a time! This is recognized by many dog owners as the "Nail Clipping" face.

I think of this dog's expression more as dismay than anxiety. It is clear that the dog is Quite Disappointed as regards the current status quo.

The owner is placing a small "mitten" on the dog's foot so he can paint a picture. The pulled-back ears, the Look Away (averted eyes), and the closed mouth tell us that this little terrier can hardly believe his fate. Yet there is still a lack of tension in the body, and the eyes remain soft. This little dog obviously trusts his young owner and has learned that humans just do weird stuff sometimes!

The real intent here is Avoidance. The dog Looks Away and does not engage or participate. "I'm Not Listening." If he were human he would have his little hands over his ears and he'd be chanting "I can't hear you, I can't hear you..."

Stress Signals - *continued*

Background: This person raised the Border Collie on the left, but got the one on the right as a rescue. The rescue dog is still fearful due to past experiences. Life has not been predictable for her until she moved into her lovely new home.

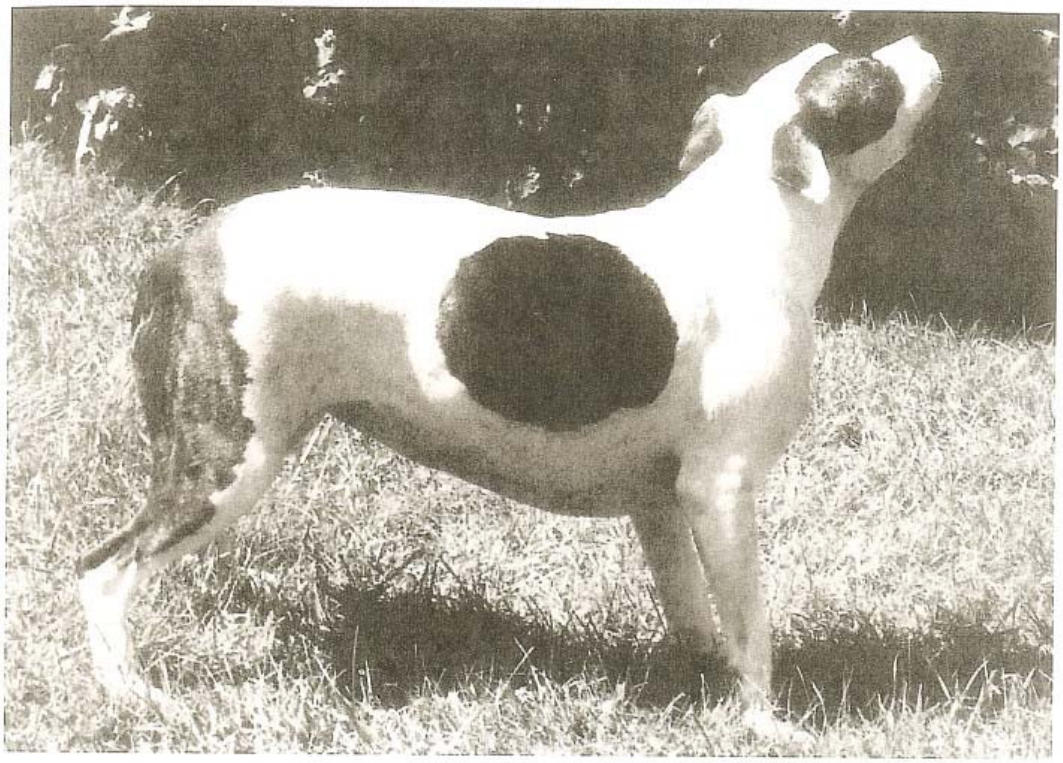
#9.3: Confidence vs. Uncertainty

- direction dog is looking
- compare body postures

Both dogs are interested in what the owner has. This photo shows the varied response of two dogs to the exact same stimuli. The dog on the left is very confident and self-assured.

The dog on the right is reticent about approaching and anxious, although there is no threat evident. You can tell this by the lowered body posture, the drawn back ears and the squinty eyes. She has that look of the dog who is in a classic Approach-Avoidance conflict: "I would like to come nearer, but I just can't see my way to it right now because 'something' internal is preventing me from approaching." Although her eyes and nose are oriented one way, her body is in conflict with that. You get the feeling that her body is going the opposite direction that her attention is going. When a dog is in conflict or uncertain, often his attention (nose & eyes) is focused one way, but his body orientation indicates Energy In The Opposite Direction. You get the feeling that if the person moved suddenly, the dog would move away from the person, not towards her.

Stress Signals - *continued*



#9.4: Anxiety to Avoidance to Retreat

- orientation backwards
- rounded topline
- tucked tail
- ears forced back
- long lips
- braced legs behind
- paw lift in front

Here, when owner, Amy, shows Blaze the nail clippers, Blaze immediately goes from happy, wagging dog into the first signs of anxiety. Her body orientation is Backwards even though she is still looking at Amy, that demon with the nail clippers. We can see the beginning of a paw lift on the right front. Her ears are down, her tail is tucked, but we don't even need these details - you can tell just by the silhouette of this dog that she is anxious and will probably go into some sort of avoidance behaviour.

And she does.

Expressions of Emotion:Anxiety & Avoidance 51

Stress Signals - *continued*

#9.5: Retreat

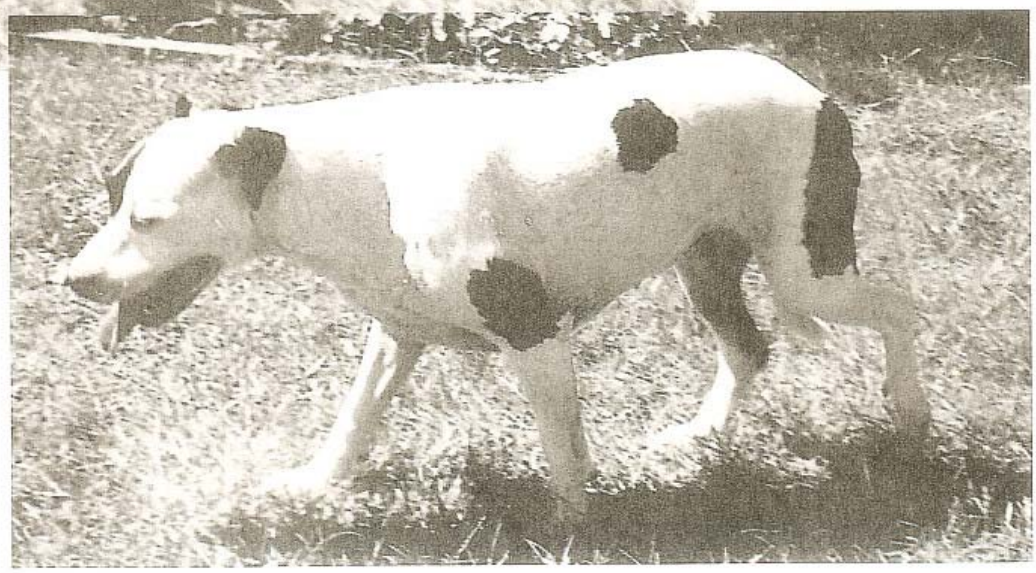
- ears drawn back
- tail down
- moving away from the "pressure"

Sure enough, when Amy said kindly, "Come here, Blaze," this is the view we got. Blaze moved away, just as her body language suggested she would.

Below is the sideways view of the retreat. Look at the lowered head, ears forced back and squinty eyes. The tail is tucked, and her rear quarters are tucked underneath her body, causing a rounded topline.

#9.6: Retreat

- held back ears
- tail tucked
- lowered head
- rounded hindquarters
- squinty eyes
- ridges of tension in face



Stress Signals - *continued*

#9.7: Avoidance

- body position
- rounded back
- tucked tail
- avoidance of eye contact

When Amy followed her and caught up to her, Blaze laid down. Notice that Blaze is refusing to look at Amy (who is right in front of the photographer), as well as her rounded back and tucked under rear quarters. Her tail is tucked between her legs. Her paw is curled under, which, in this case, is a lying down version of a paw lift. The lying down is a Calming Signal.

Observation Tip: Avoidance is often accompanied by moving away with a lowered body posture, even if the dog is looking toward you.

Avoidance is also expressed by looking away from whatever is the bothering factor. You are the bothering factor if you are, for instance, holding the nail clippers. The moving away or looking away will often be accompanied by Tongue Flicking or Lip Licking.

Photo Credits: Photo #1: Brenda Aloff's Camera Photo #2: Joanne Weber; Photo #3, 4, & 5: Brenda Aloff; Photo #6: Joanne Weber; Photo #7, 8, 9 & 10: Amy Morris

Section 4

BASIC ANIMAL FIELD CARE

1. Do not let your dog eat or drink anything you did not bring. Have plenty of cool, clean water. Bottled water is best.
2. Many dogs won't drink the water in their bowls if it's too warm, which often leads to dehydration.
3. Avoid walking your dog anywhere you suspect toxic chemicals were sprayed or spilled. Keep paws clean. Do not allow your dog to lick their paws. If necessary, use booties on your dog, keeping in mind they should only be used for a few minutes at a time. If dogs are exposed to contaminants, clean their paws thoroughly, and use a barrier *(e.g. space blanket)* during transport. Bathe your dog as soon as possible.
4. Check paws daily for fleas, ticks, fox tails, burrs, and swelling. Use Frontline and heartworm prevention medicine. Do not apply topical flea and tick treatments within two days of being deployed, your dog, or a client, may have an adverse reaction to it.

   NOTE: *Do not administer heartworm prevention medications without consulting a veterinarian first!*
5. Check your own waistband, bra line and sock line for ticks and other insects.
6. Dogs get hot long before we do. Watch for signs of heat exhaustion such as rapid panting and a bright red tongue. Older dogs are more sensitive to heat.
7. Early morning or evening is best for physical activity
8. Hot asphalt can raise your dog's body temperature quickly and may burn his/her pads. Put on booties on your dog, but only for a few minutes at a time. Booties can cause overheating and even heatstroke.
9. While on a call-out your dogs routines will be affected. Try and limit the effects by feeding their regular diet to avoid digestive disruption.
10. When in doubt, take them out.
11. Maintain awareness for potential disease transmission.
12. Follow hygiene procedures for client contact. Use antiseptic gel before and after interaction with people.

NOTE: All certified members of HOPE AACR are required to take Pet First Aid training.

Section 5

PET POISON SAFETY TIPS

The ingestion of most of these plants will make your pet sick, but a few of them can kill. If you suspect that your pet has ingested with any of these plants, call your veterinarian immediately!

Amaryllis	Andromeda	Arrow grass
Avocado (skin & Pit)	Azalea	Bittersweet
Boxwood	Buttercup	Caladium
Castor Bean	Cherry Pits	Chokeberry
Climbing Lilly	Crown of Thomas	Daffodil Bulb
Daphne	Dieffenbachia	Dumb Cane
Elephant Ear	English Ivy	Elderberry
English Yew	Foxglove	Grapes/Raisin Hemlock
Holly	Hydrangea	Hyacinth Bulb
Japanese Yew	Jasmine Berries	Jerusalem Cherry
Larkspur	Laurel	Marijuana
Mistletoe Berries	Monkshood	Mushrooms
Narcissus Bulb	Nettle	Nightshade
Oleander	Onion	Peach pit
Poison Ivy	Privet	Rhododendron Stinging
Snow on the Mountain	Spinach	Toadstool
Tobacco	Tomato Vine	Tulip Bulb
Wisteria		

BE AWARE OF THE PLANTS YOU HAVE IN YOUR HOME AND YARD *AND* BE AWARE OF THESE PLANTS WHILE AT A DISASTER SITE!

NOTE: **If you did not bring it, do not allow your dog to eat it or drink it! Do not allow your dog to drink from gutters. They may contain chemical spills or anti-freeze! In an emergency, when no vet is available, peroxide can be used to induce vomiting. Dose = 5 ml (one tsp.) by mouth. Repeat as needed until vomiting occurs. This may not be applicable to all poisons. Check with Poison Control Hotline *before* administering.**

ASPCA Poison Control Hotline – 888-426-4435*

* A $60 consultation fee may be applied to your credit card.

http://www.aspca.org/site/PageServer?pagename=pro_apcc

Pet Poison Safety Tips - *continued*

Top 10 Human Medications That Poison Our Pets

Although pet parents are well aware of poisons lurking around their home, many don't realize that some of the biggest culprits are sitting right on their own nightstands. In 2007, the ASPCA Animal Poison Control Center received 89,000 calls related to pets ingesting over-the-counter and prescription medications. To help you prevent an accident from happening, our experts have created a list of the top 10 human medications that most often poison our furry friends.

If you suspect your pet has ingested any of the following items, please call your veterinarian or the ASPCA Animal Poison Control Center's 24-hour hotline at (888) 426-4435. And remember to keep all medications tucked away in bathroom cabinets—and far from curious cats and dogs.

- **NSAIDs**
  NSAIDs (non-steroidal anti-inflammatory drugs) like ibuprofen or naproxen are the most common cause of pet poisoning in small animals, and can cause serious problems even in minimal doses. Pets are extremely sensitive to their effects, and may experience stomach and intestinal ulcers and—in the case of cats—kidney damage.

- **Antidepressants**
  Antidepressants can cause vomiting and lethargy and certain types can lead to serotonin syndrome—a condition marked by agitation, elevated body temperature, heart rate and blood pressure, disorientation, vocalization, tremors and seizures.

- **Acetaminophen**
  Cats are especially sensitive to acetaminophen, which can damage red blood cells and interfere with their ability to transport oxygen. In dogs, it can cause liver damage and, at higher doses, red blood cell damage.

- **Methylphenidate (for ADHD)**
  Medications used to treat ADHD (Attention Deficit Hyperactivity Disorder) in people act as stimulants in pets and can dangerously elevate heart rates, blood pressure and body temperature, as well as cause seizures.

- **Fluorouracil**
  Fluorouracil—an anti-cancer drug—is used topically to treat minor skin cancers and solar keratosis in humans. It has proven to be rapidly fatal to dogs, causing severe vomiting, seizures and cardiac arrest even in those who've chewed on discarded cotton swabs used to apply the medication.

- **Isoniazid**
  Often the first line of defense against tuberculosis, Isoniazid is particularly toxic for dogs because they don't metabolize it as well as other species. It can cause a rapid onset of severe seizures that may ultimately result in death.

- **Pseudoephedrine**
  Pseudoephedrine is a popular decongestant in many cold and sinus products, and acts like a stimulant if accidentally ingested by pets. In cats and dogs, it causes elevated heart rates, blood pressure and body temperature as well as seizures.

Pet Poison Safety Tips - *continued*

- **Anti-diabetics**
  Many oral diabetes treatments—including Glipizide and Glyburide—can cause a major drop in blood sugar levels of affected pets. Clinical signs of ingestion include disorientation, lack of coordination and seizures.

- **Vitamin D derivatives**
  Even small exposures to Vitamin D analogues like Calcipotriene and Calcitriol can cause life-threatening spikes in blood calcium levels in pets. Clinical signs of exposure—including vomiting, loss of appetite, increased urination and thirst due to kidney failure—often don't occur for more than 24 hours after ingestion.

- **Baclofen**
  Baclofen is a muscle relaxant that can impair the central nervous systems of cats and dogs. Some symptoms of ingestion include significant depression, disorientation, vocalization, seizures and coma, which can lead to death.

Reference:

- Wikipedia
- ASPCA - *American Society for the Prevention of Cruelty to Animals*
- ASPCA Poison Control Hotline – 888-426-4435 *(may charge a fee)*
- Poison Control Hotline Kansas State University Veterinary Teaching Hospital - 785-532-5679
  Call as soon as possible and have any product labels available for answers
  (no fees or charges apply)
  K-State Pet Poison Control Hotline is available during normal 8-5 business hours. Voice messages received after hours will be answered first thing in the morning of the following business day. In the event of an emergency, contact your local veterinarian or the ASPCA Animal Poisoning Hotline at 888-426-4435.

SECTION 6

HAZARDOUS MATERIALS

Definition of Hazard

This type of hazard includes the production, use, storage, transportation and disposal of hazardous substance and wastes that place the public, property and environment at significant risk. Illegal drug labs and dumping present yet another concern. Recent history shows an increased threat from terrorists in connection with hazardous materials.

Hazardous substances are any materials that pose a threat to human health and/or the environment, and any substance designated by the Environmental Protection Agency (EPA) to be reported if a designated quantity of the substance is spilled into the waters of the United States or is otherwise released into the environment.

Hazardous wastes are by-products of society that can pose a substantial or potential hazard to human health or the environment when improperly managed, that possess at least one of five characteristics (flammable, explosive, corrosive, toxic, or radioactive), or that appear on the EPA lists.

A hazardous chemical is any hazardous material requiring an MSDS (Material Safety Data Sheet) under OSHA's Hazard Communication Standard. Such substances are capable of producing fires and explosions or adverse health effects such as cancer, burns, or dermatitis. Hazardous materials are subject to regulation by a variety of local, state and federal agencies through an assortment of labor, building, environmental, and transportation laws, and their amount and location are also subject to regulations.

What Is Hazardous Material?

A hazardous material is any item or agent (biological, chemical, physical) which has the potential to cause harm to humans, animals, or the environment, either by itself or through interaction with other factors. Hazardous materials professionals are responsible for and properly qualified to manage such materials. This includes managing and/or advising other managers on such items at any point in their life-cycle, from process planning and development of new products; through manufacture, distribution and use; to disposal, cleanup and remediation.

Hazardous materials are defined and regulated in the United States primarily by laws and regulations administered by the U.S. Environmental Protection Agency (EPA), the U.S. Occupational Safety and Health Administration (OSHA), the U.S. Department of Transportation (DOT), and the U.S. Nuclear Regulatory Commission (NRC). Each has its own definition of a "hazardous material."

Hazardous Materials - *continued*

OSHA's definition includes any substance or chemical which is a "health hazard" or "physical hazard," including: chemicals which are carcinogens, toxic agents, irritants, corrosives, sensitizers; agents which act on the hematopoietic system; agents which damage the lungs, skin, eyes, or mucous membranes; chemicals which are combustible, explosive, flammable, oxidizers, pyrophorics, unstable-reactive or water-reactive; and chemicals which in the course of normal handling, use, or storage may produce or release dusts, gases, fumes, vapors, mists or smoke which may have any of the previously mentioned characteristics. (Full definitions can be found in the Code of Federal Regulations, Title 29 (CFR) 1910.1200.)

EPA incorporates the OSHA definition, and adds any item or chemical which can cause harm to people, plants, or animals when released by spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping or disposing into the environment. (40 CFR 355 contains a list of over 350 hazardous and extremely hazardous substances.)

DOT defines a hazardous material as any item or chemical which, when being transported or moved, is a risk to public safety or the environment, and is regulated as such under the: Hazardous Materials Regulations (49 CFR 100-180); International Maritime Dangerous Goods Code; Dangerous Goods Regulations of the International Air Transport Association; Technical Instructions of the International Civil Aviation Organization; U.S. Air Force Joint Manual, Preparing Hazardous Materials for Military Air Shipments.

NRC regulates items or chemicals which are "special nuclear source" or by-product materials or radioactive substances. (See 10 CFR 20). The incident commander may have to make critical protection decisions based on weather conditions and forecasts. Weather conditions that allow increased downwind travel distance are found on a cool, overcast nights with gentle winds. Unstable weather conditions with strong sunlight, clear skies and high levels of turbulence are conditions that promote rapid mixing and dispersal of the contaminants, thereby reducing downwind travel. High humidity and warm air can force vapors toward the ground. During an atmospheric inversion, contamination will travel further downwind than with any other weather conditions. Whichever option the incident commander chooses, constant evaluation of the plan, procedures and results must be performed. Weather conditions may change rapidly, requiring a revision of actions to protect the public.

Site Security and Control

The incident management system (IMS) maintains site security and control, preventing community members or other bystanders form entering the contaminated area and becoming unnecessarily exposed or injured. Site control involves assuring that no one enters an area without reason and that proper equipment and training are provided. The emergency area must be cleared of employees not involved in the response and all entry points must be controlled. Work zones are used to control the site.

Hazardous Materials - *continued*

Emergency Public Information System

The Emergency Public Information System includes Public Information Officers from cities and counties, the Office of Emergency Services (OES) and its regions, other state agencies, federal agencies, and private organizations. The OES Public Information Officer, as the lead state PIO, would be in charge of the Emergency Public Information System in support of local government during a major disaster. The objectives of the Emergency Public Information System are to provide the general public with information and emergency instructions

The Role of the PIO/PAO

City and County PIO/PAOs will release Emergency Public Information locally and will provide status information to PIO/PAOs at the next higher level of government. They should coordinate in advance with the public information representatives of local private agencies such as the American Red Cross, Salvation Army, and utility companies, so that mutual needs may be fulfilled during emergencies.

Because a hazardous material incident can result in extreme responses (of concern) from the general public, the PIO should be prepared to address inquiries of all types, particularly regarding health and safety issues.

Conclusions

Any incident in which hazardous materials are involved has the potential for escalation from a minor incident into a full scale disaster. The hazardous properties of chemicals, fuels, radioactive substances and other potentially dangerous materials range from explosive to highly flammable to poisonous. They have the ability to contaminate the air, water and other areas of the environment, and are harmful to human, animal and plant life.

The following information was received at a lecture for HOPE AACR on Sept 9, 2006 by Art Saenz from the Ventura County Fire Department, Hazardous Material Specialist.

Corrosive is a term that applies to Hazardous Materials

A "corrosive" material is a substance that causes visible damage or permanent changes in human skin tissue at the site of contact or is corrosive to steel. It wears away (corrodes) or destroys.

- Ignitable - can burst into flames *(e.g. gasoline)*
- Reactive - can explode or create a poisonous gas
- Toxic - can poison causing illness or even death *(e.g. household cleaners)*

Acids and bases are corrosive materials and are hazardous materials. They are found in our everyday environment and can even be used as weapons in terrorist attacks. Be aware that they can not only be used to cause immediate death, but additional deaths following an incident. If assist in the aftermath of a terrorist attack, you may be exposed and suffer from exposure. From breathing in material, those who were near or helped at the 9-11 tragedy, are today showing signs of lung disease and death from that initial exposure, even years later.

Hazardous Materials - *continued*

Acids and Bases

An "*acid*" is a chemical compound that when dissolved in water gives a pH of 0-7. Acids donate a hydrogen atom (H+) to another compound. The release of hydrogen into water may create acidity.

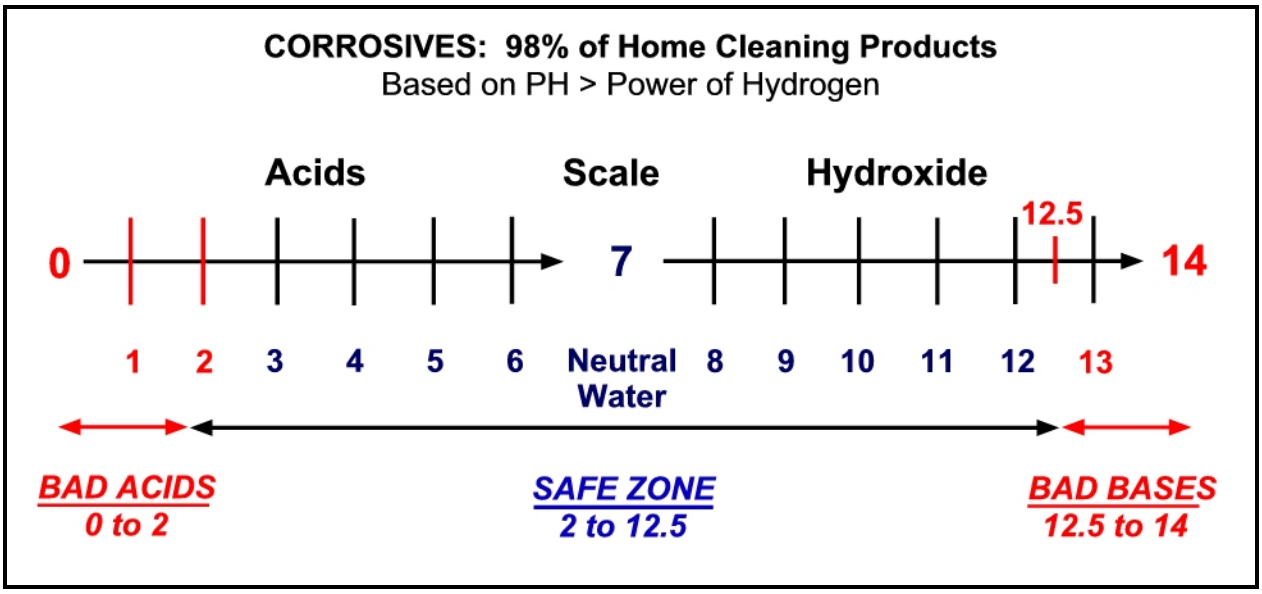
A "*base*" is a chemical compound that when dissolved in water gives a pH of 7-14. Bases donate a hydroxide atom (OH-) when dissolved in water. The release of OH- into water may create alkalinity.

Acids and bases counteract each other. When added together in equal amounts they produce a pH of 7 which is neutral - neither acidic nor alkaline. The pH of water is 7 - that is "*neutral*".

Acids and base reactions are affected by heat. Heat speeds up a reaction rate. Acids are more forgiving. They can be diluted with water and the resulting reaction process slowed down and stopped. Bases are not forgiving as their reaction may not be stopped.

Acids of pH 0-2 are DANGEROUS / TOXIC! They will cause permanent and irreversible damage to humans and dogs. Bases of pH 12.2-15 are DANGEROUS / TOXIC! They will cause permanent and irreversible damage to humans and dogs!

"Environmentally safe" means only that a substance is in the safe acid-base range (pH2 to pH12). This would also be in the "Dog Safe Zone" of exposure to corrosives.



Hazardous Materials - *continued*

Haz Mat Issues on Call-outs

Toxic acids and bases affect the liver, heart, kidneys, brain and the lungs. The damage is permanent and irreversible. When called out to a site and the air quality or ground surface is questionable, do the following *before* working:

1. Find the Incident Command post and speak to the Public Information Officer (PIO).
2. Ask if there is a hazard and what type it is:
   A. Fire?
   B. Health?
   C. Corrosive?
3. Ask what the "pH" is of any spills. If the answer is:
   A. Acid (a pH of 0 to 2) - **STAY AWAY!**
   B. A pH of 3 to 7 is acceptable.
   C. Base (a pH of 12.5 to14 - **STAY AWAY!**
   D. A pH of 7 to 12 is acceptable.

Odors are sometimes added to acids to cover their smell. Usually a citrus smell, like in household cleaners is used. If you smell citrus you may surmise that an acid is present. *(e.g. lemon pledge, etc.)*

Ultimately, you must do all you can to protect yourself and your dog.

DO NOT WORK IN A HAZARDOUS AREA!!

Hazardous Materials - *continued*

Abbreviations

TLV	***THRESHOLD LIMIT VALUE*** - measured in *parts per million* (PPM) tells you how much of a substance is present, i.e. how concentrated it is. A number assigned to indicate the percentage of chance of damage to the lungs that may be suffered upon exposure and how long you can be exposed at that level before damage is irreversible. The TLV analysis is based upon an exposure time of eight hours.
PPM	***PARTS PER MILLION***
REL	***RECOMMENDED EXPOSURE LIMIT***
PEL	***PERMISSIBLE EXPOSURE LIMIT***
STEL	***SHORT TERM EXPOSURE LIMIT***
IDLH	***IMMEDIATE DANGER TO LIFE AND HEALTH***
MLD	***MINIMUM LETHAL DOSE***
LD	***LETHAL DOSE***
LC	***LETHAL CONCENTRATION***
LEL	***LOWER EXPLOSIVE LIMIT***
UEL	***UPPER EXPLOSIVE LIMIT***
EPA	***ENVIRONMENTAL PROTECTION AGENCY***
NFPA	***NATIONAL FIRE PROTECTION ASSOCIATION***
pH	***POWER OF THE HYDROXIDE***
PIO	***PUBLIC INFORMATION OFFICER***
MSDS	***MATERIAL SAFETY DATA SHEET***

When in doubt, put your dog's booties on him or her, but only for a few minutes at a time. *Dawn* detergent is great to wash ashes off your dog's paws and coat.

Resources:

- *HSEM – Homeland Security and Emergency Management*
- *Art Saenz from the Ventura County Fire Department, Hazardous Material Specialist.*

SECTION 7

ZOONOTICS & INFECTIOUS DISEASES

** Zoonotics are diseases that can be transmitted between humans and dogs*

➢ PARASITES (Internal)

- **Ascarids** *(Roundworms)* – Fecal transmission. Occurs when worm eggs found in soil and feces are ingested. The eggs can be transmitted from contaminated food, drink, or soil.
- **Toxocara canis** *(Roundworms)* – Fecal transmission. Contracted by eating grass or mouthing toys, rocks, etc. in infected areas.
- **Cutaneous larva migrans** *(Hookworm)* – Fecal transmission. Contracted by simply walking through an infected area (larva can burrow into a dog's footpads)
- **Dipylidium caninum** *(Tapeworm)* – Fecal transmission. Primarily carried by fleas. As a precaution, dogs should be wormed after a flea infestation. Other tapeworms can be transmitted by the ingestion of fish or rabbit entrails.
- **Echinococcus Granulosus** *(Hyper Tapeworm)* – Fecal transmission. If you should see something that looks like worms in your dog's feces, do not visit until the dog has been checked by a vet. This is more common in areas with sheep.
- **Dirofilariasis** *(Heartworm)* – Carried by mosquitoes, astonishingly high occurrence in certain areas of the country. Dogs can be put on a once-a-month preventative by a vet. Use preventatives that also eliminate other worms.
- **Giardiasis** *(Giadaria)* – Fecal transmission. It causes moderate to severe diarrhea in both dogs and humans. May be present in both still and moving water.
- **Cryptosporidiosis** *(Cryptosporidia)* – Fecal transmission. Causes diarrhea and fever.

➢ ECTOPARASITES (External)

- **Rocky Mountain Spotted Fever** *(Tick Born Bacteria)* - is the most lethal and most frequently reported rickettsial illness in the United States. Dog will be feverish and disoriented, with an area of swelling near where the tick attaches.
- **Plague** *(Flea Born)* - Dog will be feverish and lethargic. Plague is carried by flea but may also be contracted by contact with an infected rodent.
- **Typhus** *(Flea Born)* - Infective rat or mice fleas contaminate fresh skin wounds or the flea bite site.
- **Tularemia** – Very rare blood bacteria
- **Lyme Disease** *(Tick Born Bacteria)* - Symptoms may include swollen joints, difficulty in moving and fever and general malaise.

Zoonotics & Infectious Diseases - *continued*

- **Q-Fever** *(Tick Born Bacteria)* - Most commonly spread by means of inhalation or ingestion.
- **Scabies** *(Mange)* – Microscopic insect that infects the skin, often around the eyes and/or ears. Often causes hair loss around the eyes that makes the dog look like he is wearing spectacles. Very parasitic! Humans may get lesions under elastic of undergarments.

Note: Dogs also can develop a skin outbreak by a related parasite called demodectic mange that does NOT infect humans. Demodectic mange is to dogs as dust mites are to humans – always present but only cause skin infections in very young, very old, or immune-compromised animals. Only scabes is a true external parasite. Other diseases listed here are spread by external parasites.

➢ *BACTERIAL (Infections)*

- **Brucellosis** – Sexually transmitted between animals. Humans are exposed via bodily secretions or untreated milk products.
- **Leptospirosis** – Vaccination available through your veterinarian.
- **Salmonellosis** (Salmonella) – Fecal transmission. Acquired by ingesting contaminated food.
- **Campylobacteriosis** – Acquired by exposure to contaminated urine.
- **Escherichia coli** (commonly E. coli) – is a bacterium commonly found in the lower intestine of warm-blooded animals. Most strains are harmless, but some can cause medical conditions in humans and dogs. E. coli infections usually occur in other parts of the body. Fecal transmission.

➢ *MYCOTIC Diseases (Fungus)*

- **Dermatomycoses** (Ringworm) – Skin infection that is caused by a fungus, not a worm. Hair loss and itching. Small, crusty itching lesions in humans.
- **Sporotrichosis** – Fungus infecting open wounds.

➢ *VIRUSES*

- **Rabies** – Vaccination available through your veterinarian for your dog. Humans at high risk to exposure can also be vaccinated.
- **West Nile** – Transmitted by a mosquito intermediate host. Flu like symptoms
- **Chlamydophila** **or** **Psittacosis** (Parrot Fever) – Infectious disease transmitted from infected birds by excreting the bacteria in the feces. Humans become infected by breathing in the organism dispersed in the air as very fine droplets or dust particles.

Zoonotics & Infectious Diseases - *continued*

➢ *MRSA Infection*

- **MRSA** infection is caused by Staphylococcus aureus bacteria — often called "staph." MRSA stands for methicillin-resistant Staphylococcus aureus. It's a strain of staph that's resistant to the broad-spectrum antibiotics commonly used to treat it. MRSA can be fatal. Most MRSA infections occur in hospitals or other health care settings, such as nursing homes and dialysis centers. It's known as health care-associated MRSA, or HA-MRSA. Older adults and people with weakened immune systems are at most risk of HA-MRSA. More recently, another type of MRSA has occurred among otherwise healthy people in the wider community.

  This form, **community-associated MRSA, or CA-MRSA,** is responsible for serious skin and soft tissue infections and for a serious form of pneumonia.

  Staph bacteria are normally found on the skin or in the nose of about one-third of the population. Staph bacteria are generally harmless unless they enter the body through a cut or other wound, and even then they often cause only minor skin problems in healthy people. However, staph infections can cause serious illness. This most often happens in older adults and people who have weakened immune systems, usually in hospitals and long term care facilities.

Resources:

- *University of Washington Transplant Information Center*
- *www.mayoclinic.com/health/mrsa*
- *Wikipedia*

SECTION 8

BACKPACK & FIRST AID KIT

BACKPACK

Dog vest
ID Badge and Certification Letter
Harness or martingale and leash
Food, water and bowls (two-day supply)
Treats, snacks
Poop bags
Pet wipes
T/P and tissues
Bug spray (for you and your dog)
Towel or pad for your dog's rest period
12' of ¼" nylon rope for play time [4]
Grooming tools
Note pad and pen
Money – coins and folding money
Booties
Glow sticks and head lamp
Small light for pack and for K9 **(no flashers)** [5]
Muzzle
Small roll of duct tape
Dog toys
Brochures, business cards, dog cards
Photo release copies
First Aid Kit
HOPE contact phone number list
Emergency Contact Phone Numbers
SOS Card

FIRST AID KIT

K-9 Partner medications [1]
Band-Aids
Iodine with flushing syringe
Eye rinse solution [1]
Bactine cleansing spray
Alcohol pads
Emergency space blanket [2]
Round tip scissors [3]
Bandage tape
Vet Wrap
Surgical Gloves
Sterile Gauze
Tweezers [3]
Electronic Thermometer with lubricant
Styptic powder
Neosporin cream
Safety razor
Pet First Aid reference guide
Shot records
Poison Control number
Small bottle anti-bacterial shampoo
Benadryl [6]
Personal medications [1]

1 - Please be aware of expiration dates & replace supplies as they are used.
2 - Can be used as a biological surface barrier during transport
3 - When traveling by plane carry in checked luggage.
4 - Check with local regulations as legal lead length may vary.
5 – In epileptic dogs, flashing lights may induce seizures.
6 - Benadryl is 2mg per kg (2.2 lbs) by mouth. This will not be enough for a severe allergic reaction. Consult a veterinarian.

SECTION 9

DISASTER PREPAREDNESS

Print this section and keep it handy with other emergency supplies.

HOPE Teams should plan ahead on how to best provide for themselves and their dogs should a disaster, such as a fire, flood or even earthquake, occur.

Emergency Preparation

Along with the family's emergency supplies, store at least a two week supply of canned or dry dog food for each dog (be sure to check dated shelf life). Remember that under normal conditions, a 40-pound dog needs a minimum of a gallon of water a day, larger dogs need more, and cats require about a quart. Of course, for other types of dogs, follow the same logic in meeting their basic food and water needs.

- ***Dog Supplies***
  1. Can opener
  2. A twin size heavy blanket
  3. A set of water and feed bowls
  4. An extra collar and leash
  5. A grooming brush
  6. A pooper scooper

- ***Documents***
  1. Copies of dog licenses
  2. Rabies vaccination certificate
  3. Other dog records
  4. Photos taken within the past year

- ***Medical***
  1. For dogs that are on special medication, keep an extra two week supply in storage. Follow the vet's instruction regarding storing medicine.
  2. If your dog is exceptionally high strung, ask your veterinarian about keeping a small supply of tranquilizers on hand.
  3. Keep your dog's vaccinations up to date. During a disaster, dogs may stray and become exposed to infectious diseases. Consult your DVM regarding different vaccines that may be needed if traveling to unfamiliar areas.

Write your vet's number here: _____

Disaster Preparedness - *continued*

- ***First Aid for Dogs***
  All HOPE members are required to take pet first aid. The information below is provided only as a reminder and *does not* substitute for pet first aid training!

  1. Use caution when handling injured dogs. All animals may bite when in pain or afraid.
  2. A rolled gauze bandage can be used as an emergency muzzle. Cut off a lengthy strip. Wrap it around the dog's muzzle several times, and then tie it behind the ears. Do not make this too tight!
  3. Treat minor cuts or abrasions as you would your own. Consult a veterinarian for specific instructions.
  4. Use direct pressure to stop severe bleeding. If a tourniquet is needed, do not allow it to impede the normal blood flow.
  5. Learn what is normal for your dog in terms of temperature. Normal temperatures for dogs range from 100.2° to 102.8°. Check your dog's temperature with a rectal thermometer. Lightly coat the thermometer with KY Jelly. Leave it inside the rectum for one to two minutes. Record your dogs "normal" temperature when they are well. A slight increase may be due to excitability. A more severe increase could mean a fever or hyperthermia. Temperatures above 104° and below 100° are dangerous.
  6. A decrease in the normal body temperature usually indicates shock. In suspected shock cases, try to keep your dog calm and quiet. Wrap your dog in blankets or towels to maintain the proper body temperature.
  7. **Seek professional veterinary help as soon as possible for serious injuries.**

- ***Three Very Important Tips***
  1. When dogs are suddenly scared they often run away and become confused and lost. Make sure your dogs wear a current license and personal I.D. tag that includes the dog's name, address and phone number. ***For added safety, have your dog microchipped.***
  2. Contact several relatives or close friends who will be willing to house and care for your dogs in the event of an emergency.
  3. Know the name, address and phone number of the local animal control agencies and humane societies.

- ***After an Emergency***
  1. Examine your dog for injuries.
  2. Do not allow your dog to roam. Secure your dog in undamaged structures, rooms, cages, or on tie lines.
  3. If your dog is missing, contact your local animal shelter as soon as possible.
  4. Submit a fecal sample to your vet three weeks after your return.

Write your Local Animal Shelter Number Here: _____

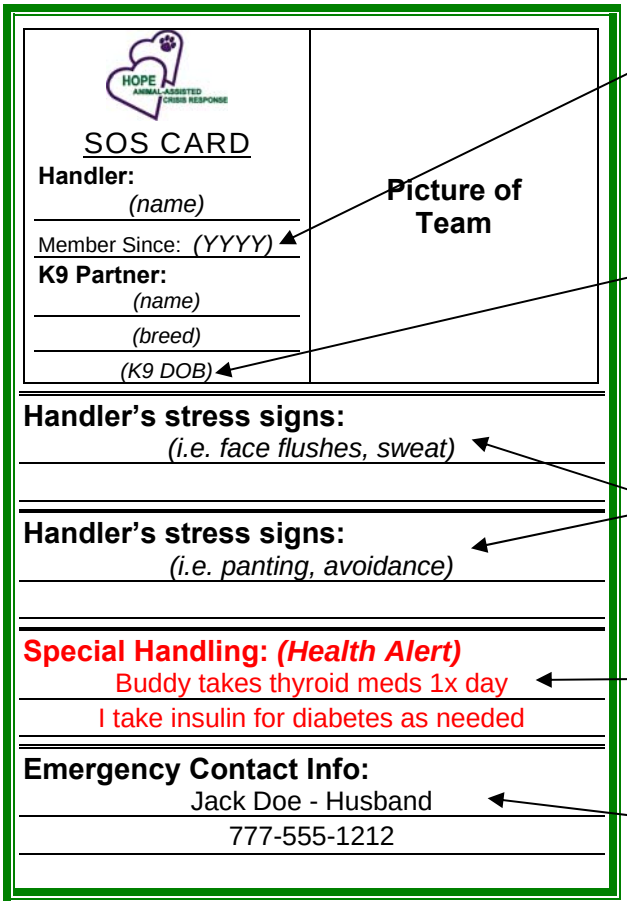
SECTION 10

SOS CARDS

During a callout, we are expected to be ready and able to meet the challenge presented by any disaster situation. Whether it is a one-on-one encounter with the loss of a loved one during a tragic event, or a catastrophic loss of life.

One thing we know is that we will be surrounded by increased emotions on many different levels. We are willingly entering into a heightened state of stress. This stress will, indeed, affect us and this is why the SOS Card was created. SOS cards are approximately 3" X 5"

The SOS card has important information regarding you and your K9 partner that Team Leaders can access in an instant to be able to quickly familiarize themselves with their teams. These cards should be given to the designated Team Leader when on a callout for that purpose. The Team Leader will better know the stress signals of human and K9 team members alike. This will allow them to better manage the health and welfare of each team on a callout.



"Member since " allows team leaders to assess the experience of the handler.

"K9 DOB" allows team leaders to see the age of your dog.

Lists all stress signs for both handler and K9 partner. Consider updating annually.

Area used for listing physical / emotional limitations, medic alerts, allergies, medications, etc., for both handler and K9 partner: (e.g. K9 near retirement, any limitations, allergies, etc.)

Emergency Contact Information

SOS Card – *continued*

Variables Check List

Travel
Living Conditions
Predictability (on Scene)
Temp – Hot Weather
Temp – Cold Weather
Noise Exposure
Congestion
Air Quality Index
Team Experience
K9 Characteristics
in Hot Weather
in Cold Weather

****

I.C.E. will K9 crate? Y ☐ N ☐

Back Side of SOS Card

This card will be laminated, with a hole at top center to attach to a clip inside the pack and presented only to the Team Leader when appropriate. After the assignment the Team Leader returns the card to the owner. This card was designed to increase efficiency during call-outs for team leaders to quickly assess their teams, providing them with easy reference information, increasing their ability to support and measure the well-being of their teams, handler and K9.

As dedicated human beings and animal advocates, we would be remiss if we did not recognize the limitations brought on by stress and fatigue to both K9 partners and humans.

Note: HOPE is not a "covered entity" under HIPAA privacy standards.
Please know that the information requested in the ***Special Handling*** section can be provided voluntarily.

SOS Card – *continued*

Does Your Dog Crate?

As a HOPE AACR Team member, you may wonder why this question is asked. Experience has taught that there may be times, while on a call-out, that crating your dog may become necessary. There are many reasons, but the most important involves a situation we hope never happens, and that is in the event you become incapacitated. If this should occur, someone will have to care for your dog. Being able to crate your dog could be one way we care for your dog.

Some people have a very negative view of crating. For whatever reason, some believe crating is inhumane. Most applied animal behaviorists and humane societies understand crating to be a safe and effective way of keeping your dog safe. You may think that putting your pet in a crate is mean or inhumane and might cause your pet to resent you or to be psychologically damaged. However, dogs view the world very differently than people.

As your dog sees it, the crate can be a room of his very own - a "security blanket". The crate helps to satisfy the "den instinct" inherited from his den-dwelling ancestors and relatives. Your dog will feel secure, not frustrated once accustomed to their crate.

The Advantages of Using a Crate

With the help of a crate:

- You can enjoy peace of mind when leaving your dog alone, knowing that nothing can be soiled or destroyed and that he is comfortable, safe, and not developing bad habits.
- You can housebreak your pet more quickly by using the close confinement to motivate your pet to wait until taken outside, since canines naturally avoid soiling their den.
- You can travel with your pet without a risk of the dog getting loose and becoming lost or interfering with safe driving.
- Your dog can enjoy the security and privacy of den of his own to which he can retreat when tired or stressed.
- Your dog can avoid much of the fear and confusion caused by your reaction to problem behavior.
- Since he can more easily adapt to staying in unfamiliar places as long as he has his familiar "security blanket" along, your pet can be included in family outings, instead of being left behind alone.
- When on a call-out, your dog can safely be taken care of by one of your team mates in the event of a personal injury.

Crate Training

There are many helps available for teaching your dog to crate. Here's two links for articles about crate training:

Dumb Friends League

ASPCA Article on Crate Training

SECTION 11

LESSONS LEARNED

6-1-2008 Revision

What to Pack

1. Keep a current list of HOPE members phone numbers and email addresses with you at all times. As for phone numbers of contacts for the deployment site. Before deploying look up emergency veterinary numbers near the deployment site.
2. Carry dog cards (baseball card style) for children and others. These are well received and bring a smile.
3. Carry maps or have a GPS when traveling to an unfamiliar area. This will reduce some of your stress when responding to an emergency. If you have internet on your cell phone, you may consider downloading "Google Maps".
4. Carry plenty of water in your pack for yourself and your dog. Keep extra water on ice in your car as a back-up supply. Hot weather tip: Insert cold gel packs into the pockets of your dog's vest or use "gel cool collars". Use extreme caution when working in hot weather.
5. Try to have pre-arranged contacts of responding agencies along with basic agendas and directions to the various sites you will respond to.
6. Research and record last-minute information about the emergency through a web site. *(e.g.* www.inciweb.org *for fire information).*
7. Always carry with you personal items and dog supplies, since you never know how long a call-out may last or where you'll end-up, especially when out-of-town and your hotel is hours away.
8. Always carry dog-safe insect repellent. Try Bounce dryer sheets in a pinch, (recommended by a fire fighter we met on a call-out).
9. Attach a light(s) to your dog's vest and on your backpack and jacket. Do not use flashers; they have been known to induce seizures in dogs.
10. Carry hand sanitizer *(e.g. Purel).* People appreciate this, especially if they are about to eat. Carry a small lint/pet hair roller for those who seem to be magnet for dog hair, it will bring a smile.
11. Always carry your HOPE jacket and/or vest; temperature variations can be drastic within your travel range.
12. Always carry two or more HOPE uniform shirts; one can be laundered while wearing the other. It's very important that we look professional, and there should be no doubt as to which organization we belong.
13. For some kinds of call-outs, wearing high-top utility boots will keep your feet safe. Be sure to break them in before your first deployment!
14. If you keep food in your backpack, make sure you change it frequently so it doesn't get stale, or spoiled.

Lessons Learned - *continued*

What to Practice

1. On some kinds of call-outs, drills, or events, you may want to carry small "walkie-talkies". Practice using these with other team members prior to deployment.
2. Practice crating your dog. Being able to crate your dog is a matter of safety should you become ill or injured. Also, do not leave your dog unattended in a hotel room! Your dog may bark at noises, and will become a nuisance. If necessary, leave a fellow teammate with your dogs when going out to dinner. Crating is a good way to give your dog rest while on assignment.
3. Train your dog to potty on concrete or a pee pad, since grass may not be available.
4. Your dog must have the "leave it" command mastered, since there may be things dropped on the ground, which may be bad for your dog. Also, people are given snacks and food in a shelter. You don't want your dog "begging" for this food!

At a School

1. When working in a school setting, seek out an administration official. They will be the key to successfully work within the school. Let them know that you are available to go into individual classrooms.
2. When visiting a classroom with small children and they are told to sit against the wall, be aware of the size of your dog. Kids may feel trapped and scared. Ask to regroup them in the middle of the room in a circle, or conduct the visit while the kids are standing.
3. When speaking with children, use terms they understand, such as, "Mr. or Mrs. ----- has died". They may not understand terms such as *'passed away'* or *'lost'*. You may be asked if your dog can help find the *lost* person!
4. Our interaction with children must be non-threatening; we provide a happy outlet in an otherwise somber environment, but *no counseling is involved.*
5. When talking to youngsters, introduce your dog as *'a feel good dog*'. This helps the kids smile. When describing our dogs' work to adults, refer to them as *'comfort dogs'*. This makes it easier for them to understand their benefits.
6. If you drop off your backpack in a room other than the one in which you are working, make sure you have access to it at all times, otherwise it may get locked up with your car keys, wallet, etc. *Bummer!*

At a Memorial Service

1. Arrive one hour before the start time. This allows you to introduce yourselves to the official in charge. ***Turn your cell phone off.*** Position yourself where people are arriving and departing; this allows you to talk to visitors and not get in the way. Have tissues handy!
2. When invited to an event where families and children will be, find out if the people being visited are aware of the presence of dogs. This will provide ample warning to anyone with allergies or a fear of dogs. They will be less likely to be scared by your animal's unexpected presence. If asked to work one-on-one with a child, get the parents' permission first and have an adult present.

Lessons Learned - *continued*

At a Shelter

1. Write down or get business cards of the shelter manager or mental health manager; having their names and phone numbers are essential to gain entry into shelters.
2. Bring a small blanket for you and your dog when visiting with kids. It will help everything feel cozier.
3. Be compliant when asked to fill out volunteer forms.
4. *Beware of other dogs!* HOPE dogs should never be allowed to make contact with non-HOPE dogs. Do not depend on someone saying there dog is friendly. Regardless of this, any kind of incident can destroy our reputation! We are not there to allow other dogs to "greet" our dogs.
5. Remember the 'In-Charge' rules of local responders. Example: At Red Cross shelters, we are there to support, not to control.
6. After responding with your dog, wipe your dog's coat and paws thoroughly with wipes. People that touched your dog may have sticky, dirty hands and the ground may be contaminated with ash or other substances.
7. When first arriving at a shelter for the purpose of contacting the shelter manager go in first *without your dog*! Be dressed in full uniform with your ID visible. Have plenty of HOPE brochures and business cards.
8. Ask security if there are any reasons for high security, such as sex offenders/people on probation from group homes, etc. who were among the evacuees.
9. Ask if any medical epidemics are present, such as a flu virus.
10. Dogs are not always the center of attention. The role we play at a call-out can vary widely. Be ready to keep kids interested with a book, a walk in the garden, or playing with dolls, etc. Always work with kids when other non-HOPE adults are present!

At a Base Camp or Large Evacuation Area

1. When working a fire base camp, introduce yourself to the medical support staff and develop a relationship with them. Should there be a medical emergency, let them know you may be helpful in providing comfort to others.
2. Represent HOPE to ICS management as fully self-contained and experienced by stating that you are a volunteer organization with your own insurance, and that you provide for your own food and shelter. This is an important message to the IC staff.
3. Be aware of impromptu meetings or of any informal debriefings among fire fighters. Do not interfere. Quietly leave the group and move on to another area. Be respectful of the work these responders are doing. If you are asked to be part of a debriefing, find out what you can about the situation beforehand so you have an idea of what is expected of you and your teammates. This may be a time when strong emotional stress surfaces.

Lessons Learned - *continued*

4. When working with multiple teams, arrange a meeting place and time regroup, take breaks, eat lunch, or de-brief. Communicate frequently with your teammates!
5. Stay hydrated when working a fire base camp or an evacuation shelter where you are exposed to smoke-laden air. Closely monitor yourself and your dog and be prepared to withdraw if ash and smoke are causing adverse reactions. (Refer to the Air Quality risk factor information.)
6. When visiting fire base camps, be sensitive to where sleeping tents are located. At any time of the day or night firefighters are occupying these tents. Keep your voices down to a whisper if you need to communicate at all. Do not allow your dogs to relieve themselves on or around the areas where tents are set up.
7. When working base camps, be careful not to provide identifying information when interacting with prisoners, since such information may be used inappropriately.
8. Stay out of dining areas, even if you are invited in. Because of health codes, we need to keep our dogs out of areas were food is present. A good place to work may be near information boards, outside the food tents, or near chow lines, but before the hand washing stations.

What to Say

1. Sometimes it is best to simply “listen” and allow individuals to talk. Don’t underestimate the comfort the dogs alone can provide.
2. Periodically, review what to say and what not to say; it will get easier with time. Read books and articles on emotional psychology. Refer to the books listed in our Recommended Reading on the last two pages of this section.
3. Remind people in charge that you will need to take several breaks (potty and otherwise) to provide down time for your dog.
4. Appoint a designated spokesperson to handle media interviews who is familiar with the goals and objectives of HOPE, and who knows which key points to cover. This will make us look as professional as possible.
5. Smile and say “Thank You” for all these first responders and other volunteers do.

Always Remember

1. Your First-Aid kits are for your *personal use* and for your dog’s use *only*. Do not dispense any kind of medication, ointment, or other medical products! Provide first aid *only* to save a life and only if other responders are not present.
2. When traveling with your dog, ask for bulkhead seats at check-in time for more room for your dog.
3. When going through airport screening, you may be asked to remove your dogs vest, collar, and leash. It’s ok to take off the vest, but TSA policies *DO NOT* require you to remove your dogs leash and collar. If necessary, ask the TSA screener to wand you rather than taking off these items. Be sure to put your dogs vest back on after the screening process is completed.

Lessons Learned - *continued*

4. If you need to relieve your dog while at an airport and you've already gone through security, ask to be escorted to a dog relief area, but do not approach or ask a K9 Officer. These dogs should not be disturbed.
5. Be flexible with your time and mobility - it will be greatly appreciated!
6. Cell phones may not work in remote areas. Allow additional time to arrive at destinations. Take your cell phone charger, especially one that plugs into a car lighter socket. Consider keeping a spare battery.
7. *Watch your gas gauge!* It's easy to overlook when you're worried, or when traveling long distances. There might be long stretches of road between service stations. *When in doubt, fill up!*
8. When inviting teams from other regions to help during a large incident, remember that driving on unknown freeways may be stressful for them (example: Small town driving versus Los Angeles freeways).

Monitoring your Dog

1. At the first signs of canine stress, cue your dog to perform a few basic commands, such as sit, down, or give me five. Provide treats to re-focus your dog's attention and to help pull them out of the early stages of a stress response.
2. Stay aware of hot asphalt at all times. If its hot, try and walk on grassy areas. If not, put your dog's booties on, BUT remember to use them for only a few minutes at a time. Remember that dogs cool themselves through their pads and by panting. Dogs can become overheated or be overcome with heatstroke while wearing booties. If need be, move your dog to an indoor area rather than working in hot weather.
3. In cold weather, have appropriate protection against the elements. Provide an insulated blanket for them to lie on. If need be, remove your dog to an indoor area.

After you are Finished

1. Verbalizing your reaction to a trauma helps you better deal with the feelings you experience during a crisis response. After a call-out, try keeping a journal; this will also assist you with stress.
2. Keep all of your HOPE related receipts. Some of your expenses may be tax deductible at the end of the year. Keep track of miles you drive. Keep track of the hours you spend on a call-out, including travel time. Speak with your accountant!
3. It is vital for you to debrief with your fellow teammates after a call-out. You may feel the need to talk with one of our HOPE mental health professionals. Debriefing is an important way of taking care of yourself.

HAVE YOU HUGGED YOUR DOG TODAY?

SECTION 12

Recommended Reading

1. **Dog Language - *An Encyclopedia of Canine Behavior;*** Abrantes, Roger (2001) Wakan Tanka Publisher
2. **Therapy Dogs Today: Their gifts, our obligation**; Butlet, Kris (2004) Funpuddle Publishing Associates
3. **Handbook on Animal Assisted Therapy** - Fine, Aubrey (2000) Academic Press
4. **How to talk to your dog** - George, Jean Craighead (2000) Harper Collins
5. **Trauma & Recovery - The aftermath of violence - from domestic abuse to political terror**; Herman, Judith, M.D. (1997) Basic Books
6. **On Death and Dying** - Kubler-Ross, Elizabeth M.D. (1981) Alfred A. Knopf
7. **On Children and Death** - Kubler-Ross, Elizabeth M.D. (1983) Macmillan
8. **The Culture Clash** - Donaldson, Jean (1996) James & Kenneth Publishers
9. **When Bad Things Happen To Good People** - Kushner, Harold S. (1981) Avon Books
10. **Scenes of Compassion - A responder's Guide for Dealing With Emergency Scene**; Timothy W. Dietz (2001)
11. **Stress Relief for Disasters Great and Small** - Georgia Witkin, Ph.D. (2002)
12. **Psychosocial Issues for Children and Adolescents in Disasters** - US. Department of Health and Human Services
13. **Psychosocial Issues for Older Adults in Disasters** - US. Department of Health and Human Services
14. **Field Manual for Mental Health and Human Service Workers in Major Disasters** - US. Department of Health and Human Services
15. **The Healing Power of Pets - Harnessing the amazing ability of pets to make people happy and healthy**; Dr. Marty Becker (2002)
16. **Animals In Translation - Using the Mysteries of Autism to Decode Animal Behavior**; Temple Grandin & Catherine Johnson (2005)
17. **The Other End Of The Leash** - Patricia B. McConnell, PhD (2002)
18. **The Hidden Life of Dogs** - This is a Book about Dog Consciousness; Elizabeth Marshall Thomas (1993)
19. **Stress in Dogs** - Lean how dogs show stress and what you can do to help; Martina Schulz & Clarissa von Reinhardt (2007), A Dogwise Manual
20. **On Talking Terms with Dogs** - Calming Signals; Turid Rugaas (1997)

Recommended Reading - *continued*

21. **Clicker Training for Obedience** - Shaping Top Performance-Positively; Morgan Spector
22. **Click to Calm** - Healing through meticulous management and clicker training; Emma Parsons
23. **Help for your Fearful Dog** - A Step-by-Step Guide to Helping Your Dog Conquer His Fears; Nicole Wilde
24. **Canine Body Language** - A Photographic Guide, Interpreting the Native Language of the Domestic Dog Brenda Aloff (2005)
25. **Unlocking the Animal Mind** - How Your Pet's Feelings Hold the Key to His Health and Happiness; Franklin D. McMillan
26. **Clicker Training for Dogs** - A positive reinforcement training system based on operant conditioning; Karen Pryor
27. **Don't shoot the Dog** - The new art of teaching and training; Karen Pryor
28. **Excel-erated Learning** - Explaining how dogs learn and how best to teach them; Pamela J. Reid, PhD
29. **How Dogs Learn** - The Definitive Book on Operant Conditioning for Dog Trainers; Mary R. Burch, PhD and Jon S. Bailey, PhD (Revised April 2008)