

#### **DISASTER PREPAREDNESS – EMERGENCY OPERATIONS PROGRAM**

"Preparing and Protecting our Community"

### **INFECTIOUS DISEASES**

Modern medicine and its technical marvels may have lulled us into a false sense of security about its ability to control deadly micro-organisms that have plagued mankind for years. Emerging diseases such as avian "bird" flu, H1N1 "swine" flu, severe acute respiratory syndrome (SARS), hantavirus pulmonary syndrome, and AIDS will produce sickness and death for millions of people around the world while medical researchers struggle to find cures.

Preparedness calls for us to examine infectious disease and how they are spread today. Crowded cities provide micro-organisms with transmission mechanisms such as buses, airports, trash, restaurants, food, shopping malls, and transportation centers. The ability of insects and pests to nest and proliferate in urban centers is another causal factor.

For example, remember the West Nile virus (WNV) in New York City? The virus was first identified in the city during 1999. Forty-five (45) people were infected and eventually four (4) died from it. To control the spread of WNV, local authorities began a controversial spay campaign that used a toxic pesticide called Fyfanon ULV to kill the disease carrying mosquitoes. Helicopters equipped for crop dusting patrolled the City and sprayed the pesticides of rooftops, streets, and people who either didn't or couldn't move out of the way in time. Since 1999, WNV has appeared in more than ten (10) other eastern states and it appears that WNV shows no signs of slowing down. As travel, trade, and migration increase between tropical areas and our cities, WNV could soon be joined by more dangerous diseases such as malaria, eastern equine encephalitis, hantavirus, and Chagas disease (urban yellow fever).

Common house pets are sources of contagion. Anywhere the animal sleeps or moves it leaves minute quantities of waste. If you walk your pet outside it will track small quantities of other animals' waste back inside. Animals also host disease-carriers such as ticks, fleas, and lice. Infants and the elderly are at especially high risk from infectious disease transmission by household pets. Puppies and kittens sometimes carry intestinal roundworms that are easily transmitted to infants. Even worse is potentially fatal cat-scratch infection. Zoonotic disease, those transmitted from animals to humans, poses a threat to public health especially where large numbers of animals and livestock live close to humans.

These combined dangers illustrate the need for a personal infectious disease protection program. Controlling the spread of infectious disease is a major concern for the heath departments of the world's largest cities and should also be individual's concern.

Zoonotic Diseases and Parasites	Animal Hosts
Plague	Rodents, cats (infected by rodents)
Roundworms (toxacariasis)	Cats, dogs
RVF (Rift Valley fever)	Dogs, cats
Psittacosis	Parrots, pigeons, parakeets, cockatiels
Toxoplasmosis	Cats
Cat scratch fever	Cats



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Lice (ex. scabies)	Humans, dogs, cats, cattle horses
Rabies	Dogs, cats, raccoons, bats, cattle, horses,
	beavers
Hookworm	Dogs
Hantavirus	Rodents
Q-Fever	Cats
Campylobacteriosis	Cats, dogs
Lyme disease	Wild rodents, deer
Ringworm (dermatophytosis)	Dogs, horses, cats
Systemic fungal disease	Dogs, cats, pigeons
Small roundworms (strongyloidasis)	Dogs, cats,
Giardia	Dogs,
Mange (mites)	Dogs, cats
Cryptosporidium	Cattle
Tapeworm (echinococcosis)	Dogs, horses

### How to Protect Yourself from Infectious Diseases in Urban Areas

The first step in any urban infectious disease protection program is controlling your levels of exposure. In a city, the areas of heist risk are:

- Large crowds in tight spaces with poor ventilation (i.e. house parties, offices, buses, etc.)
- ➤ Hospital emergency rooms
- > Crowded restaurants (transmission via food).
- > Supermarkets, shopping malls, movie cinemas, large stores
- ➤ Churches. The worst emergencies or disasters tend to cause people to go to churches, many of which are poorly ventilated therefore a hotbed for infectious diseases
- ➤ Garbage collection areas. The risk for infectious diseases rise as the frequency of collection decreases (i.e. strikes by garbage collectors)
- ➤ Workplace

#### To Reduce Risk of Disease

- ➤ Wash your hands. Carry a small pack of sanitary wipes for when you are not near a washroom. Maintaining clean hands is a simple and effective measure against communicable diseases.
- ➤ If you regularly handle items touched by many people (i.e. money, utensils, etc) wear latex or nitrile gloves.
- > Use protection during sexual contact.
- > Thoroughly wash all food, and use clean cutting boards and utensils.
- > Do not share cigarettes, straws, etc.
- ➤ When using public toilets, try not to touch the doorknobs or toilet flusher handle. Use a paper towel, your shirt, or some other barrier.

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- Make sure that any restaurant food you eat is prepared by workers wearing protective gloves.
- ➤ When riding crowded buses during flu season, consider wearing a 3M N95-100 respirator.
- Avoid vendors at unfamiliar restaurants and street carts who are not wearing plastic gloves. Stay away from questionable seafood and open buffets.
- ➤ If you are hospitalized and notice that a doctor or nurse fails to wash hands and wear gloves while preparing to change an IV or conduct another medical procedure, politely request that he or she do so. If they refuse to, request another doctor or nurse. Every hospital has a patient's bill of rights and you have the right to request another nurse or doctor if you feel jeopardized by carelessness.
- Wash or wipe the top of cans prior to opening them.
- ➤ Beware of public beaches and pools. Polluted water can transmit a variety of illnesses that endanger children, the elderly, and people with compromised immune systems. Swimmers in polluted water risk contracting hepatitis, E coli, respiratory illnesses, swimmer's ear, gastroenteritis, and several other dangerous diseases. The Natural Resources Defense Council estimates that over 40% of all American beaches are too polluted for safe swimming. Public beaches are also polluted with other hazards such as medical waste, human and other feces, and trash. Do not walk barefooted on the public beaches, always wear sandals or sneakers.
- ➤ If you eat in fast-food restaurants, do not let your food touch the trays. The trays are rarely cleaned thoroughly.
- At helath clubs, wipe gym machines clean before using them. Avoid public hot tubs, which can pass diseases such as staphylococcus, Legionnaire's disease, Pontiac fever, skin disease, and eye and ear infections.
- ➤ If you are a cyclist, carry the bicycle when you enter and leave your house instead of rolling the tires on the floor.
- > Remove your shoes when entering your home.
- ➤ Never share make up.

### **Pet Owners**

- Never let your pet roam freely outside. Pets that roam have a greater chance of being exposed to diseased animals.
- ➤ Do not allow small children to play with pets unsupervised. Children tend to allow pets near their faces, and to not wash their hands after handling animals. Dangerous diseases such as salmonella (from turtles) can be passed on by this behavior.
- Wash the area where your pet sleeps, eats, and leaves its waste.
- Make sure that your pet is vaccinated against rabies and other diseases. Kittens and puppies should be treated for intestinal worms.
- > Do not let your pet play near the trash.
- > Stay away from unfamiliar animals.
- ➤ Don't buy exotic pets that belong in their natural habitats and not in your home. When ill, exotic pets tend to transmit exotic diseases.



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- After walking a dog in the rain, wash his paws with mild soap and dry them before letting him roam around your home.
- Wash your hands as soon as possible after contact with any animal.
- ➤ Learn how to spot the symptoms of rabies. If your pet becomes skittish or aggressive and begins to drool, take it to a veterinarian or call and animal control officer. If a pet bites you, seek immediate medical attention.

#### **Insect Control**

Urban insect control requires integrated pest management systems and clean-up campaigns that clear out areas where mosquitoes and other pests lives and breed; junkyards, vacant lots, abandoned swimming pools, among others.

- Empty mini-pools in your backyards when they aren't being used.
- > Clear your rooftop's drains.
- Dispose of old tires that collect rainwater: mosquitoes use them as hatcheries.
- > Seal up your garbage before leaving it on the street.

### Combating the Flu

- Make your body as inhospitable to flu viruses as possible. Modify your diet to include as many flu-fighting foods and beverages as possible.
- ➤ Be alert-pay attention to all related news reports. If you hear about any suspicious illnesses in your building, neighborhood, or place of employment, inquire about the illness, and who was infected so you can avoid contact with them.
- ➤ During an outbreak, if you travel by train or bus to work or school, consider using a partial face respirator of the N-1000 class. Do not be embarrassed about looking strange, you will look worse if you catch the flu.
- ➤ Keep a large supple of non-perishable food items and water stocked away in your home during winter months. For a pandemic, you would need at least a month. This will cut back on the need for traveling to grocery store. In addition, this will also allow you to stay inside your home just in case your area becomes quarantined/
- ➤ If you use public Laundromats to wash your clothes, use a disinfectant (Lysol or an industrial strength brand) to clean out the washing machine. Detergent does not kill flu viruses.
- ➤ If you frequently use taxis, be sure to ride with the window down. If you want to be safe, use the partial face respirator as well while in the cab. When you leave the cab, make sure you use an antibacterial hand cleanser.
- > Do not sit on your bed sheets in your street clothes.
- > Take Vitamin C everyday.
- ➤ Wash hands frequently during an outbreak. This is one of the best methods to prevent infection.
- > Purchase a humidifier for your home and use it during flu season to keep your home from becoming too dry.



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- Avoid touching your eyes, nose, and mouth.
- Avoid restaurants, shopping malls, department stores, coffee shops, or any public gathering area until the outbreak is under control.
- > If you must use public bathrooms, clean your hands with sanitizer after touching any surface.