

Occupational Hazards

("Non – exotic")

Presented to Maui County Health Volunteers
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Non-Infectious Accidents/injury

- falls (slips)
- low back (lift with legs)
- cuts/abrasions (contamination, MRSA)
- punctures (tetanus)
- eye, ear, head (chain saw helmet)
- burns



Non-Infectious

Heat Injury

- Heat cramps (leg cramping)
- Heat Exhaustion (exhausted, warm & clammy skin)
- Heat Stroke (hot dry skin, unless "discoupled" from core temp)



DRINK BEYOND THIRST

Non-Infectious

General Risk Factors

- sleep deprivation/jet lag
- medications/alcohol
- dehydration
- lacks protective gear (gloves, shoes, masks)
- poor physical condition
- environment (darkness, terrain, noise, rain, etc.)
- tetanus booster



Only 28 percent of us get eight or more hours of sleep per night.



"DUST"

molds, asbestos, particles, fumes?



Infectious

(Target Organ or Route of Transmission?)

- **Gastrointestinal**
 - Food poisoning
 - Germs
- **Cuts Scrapes**
 - Germs from skin, germs from environ
- **Respiratory**
 - Germs from others (sick/non-sick)
- **Insects**
 - Mechanical vs. amplifier



Please take a look at your "definitions" handout.

Definitions (infectious disease-related)

WHO (got sick) **Host:** Organism that is capable of being infected by a specific agent (e.g., a person infected by contaminated food or a horse infected by West Nile Virus).

SOURCE **Reservoir:** Any person, animal, arthropod, plant, soil, or substance wherein an infectious agent lives and multiplies. The natural habitat of the infectious agent. The pathogen does not sicken or kill the reservoir. The reservoir is the source from which other individuals can be infected. (e.g. the white-footed mouse is the reservoir of Lyme Disease.)

WHAT **Agent:** A microorganism, chemical substance, or form of radiation whose presence, excessive presence, or (in deficiency diseases) relative absence is essential for the occurrence of disease.

HOW **Vector:** An insect or any living carrier that transports an infectious agent from an

Infectious

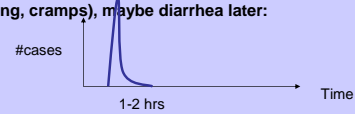
Gastrointestinal

– **Poisonings: Germs Products heat stable**

- » staph (creams and sauces),
- » clostridia (meats, gravies)
- » b. Cereus (starches)
- » botulism (soil, anaerobic)

Food got inoculated then incubated (40-~~4~~hrs<140 F)

Symptoms rapid, uniform onset (1-2 hours), upper GI Sx (vomiting, cramps), maybe diarrhea later:

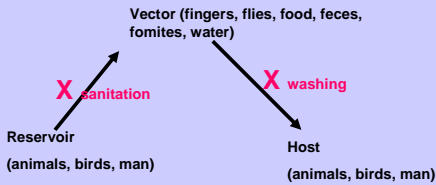


Infectious

Gastrointestinal

– **Germs:** Salmonella, E Coli, Hepatitis A, Shigella, Norwalk, other viruses

We get inoculated and incubates (2-7 days) within us.



Norovirus



- Virus causing sudden onset nausea, vomiting, cramps then diarrhea
- Easy to spread (in vomit and diarrhea) - aerosolized during vomiting. Floor to ceiling. Survival 2-21 (AC) days in environment. Gets into mouth (hands/food/toothbrush/etc) causing illness.
- Isolate cases, disinfect area (esp bathrooms)

Infectious

Cuts and scrapes

Germs (reservoirs ?): strep (incl. flesh eating), staph (incl MRSA), tetanus (deep wounds), **Leptospirosis (systemic)**

We get inoculated and incubates (2-7 days) within us.



Infected? (red, hot, swelling, painful)

Infectious

Cuts and Scrapes (cont'd.)

We get **inoculated** and incubates (2-7 days) within us.



Infectious

Respiratory (mode)

– **Germ**s: influenza (avian flu), meningitis, TB, SARS, cold viruses, measles

Usually **man** is host and reservoir (except zoonotics)
Incubation variable

Infectious

- Blood/body fluid-borne
- Insect-borne
 - Mechanical ~~X~~ transmission?
 - Amplifier?

Infectious

Blood/body fluid-borne

– Germ: Hepatitis B, Hepatitis C, HIV

Direct Indirect

Infectious

Mosquito-borne (amplified)

– Germ: Dengue virus, West Nile virus

- Dengue: mild flu like with fever to severe bleeding and shock
- West Nile: none to mild flu like with fever maybe rash to encephalitis (brain infection)

Infectious

- Flea-borne (amplified)
 - Germ: Typhus (flu-like symptoms, treat with antibiotic)

Man Rodent Flea Cat

Specific Recommendations

- Hot foods hot and cold foods cold (4 hour rule).
- Handwashing, general sanitation.
- No sharing of razors, towels, etc.
- Spacing (sleep head to foot).
- Ventilation (avoid AC).
- Wash, topical antibiotic and cover wounds.
- Vigilance and report clusters of illnesses.