

Health and Safety Concerns for Graduate Students

Thinking About and Ensuring Your Safety and Well-being While Completing Your Degree



Are You Ready and Adequately Prepared for What Lies Ahead?

- In the rush to get the research project moving forward, many students (and often their advisors) overlook things that may have potentially serious consequences
- Inevitably, students confront real and significant personal hazards while completing their degree

How Well-prepared Are You ?

How would you honestly rate . . .

- Your understanding of basic personal safety and survival skills?
- Your awareness of imminent dangers in your workplace?
- Your knowledge of infectious or transmissible disease?

Personal Safety / Protection

Do you have up-to-date certification in ...

- basic first aid (e.g., American Red Cross)
- CPR (cardiopulmonary respiration)
- wilderness first aid/survival

If not, consider taking a necessary course; classes are available on campus or in the Blacksburg area

Personal Safety / Protection

Immunizations

All VT students are required to document having received a basic suite of immunizations (<http://www.healthcenter.vt.edu/immunizreq.htm>)

Special needs:

- rabies vaccination
- tetanus booster
- international travel

(<http://www.vdh.virginia.gov/LHD/newriver/Montgomery/>)

Personal Safety / Protection

If your research involves time “on the water” (e.g., boating), are you trained/certified via...

- swimming proficiency & lifesaving skills programs
- US Coast Guard Boating Safety Program
- new VDGIF boating education requirement (see <http://www.dgif.virginia.gov/boating/education/boating-safety-education-requirement.asp>)

As a field team leader, **you** are responsible for your crew ... are you ready?

Personal Safety / Protection

Do you practice the “buddy system”?

- field work or travel in remote areas - never go alone or, if you must, always leave someone a detailed itinerary of where you are and when you get back

For women in particular:

- traveling at night across campus or in-town
- poorly lit parking lots (e.g., outlying commuter lots, places where Department vehicles are parked)

University Police provide on-campus escort (just call 1-SAFE)

http://www.police.vt.edu/VTPD_v2.1/personal.html

Personal Safety / Protection

For women:

- Self defense training (VT RAD) (http://www.police.vt.edu/VTPD_v2.1/selfdefense.html)
- Women's Center @ VT (<http://www.womenscenter.vt.edu/>)

Vehicle Use and Preparedness

Do you ...

- monitor the condition of the vehicle you plan to use (personal, department, Motor Pool, rental)
 - general maintenance and inspect equipment (i.e., lights, wipers, gas/oil/fluids, window scraper, brakes, tire condition, spare tire & jack, tire iron, tow hitch security pin/electrical connections) ?
- know how/who to call for help, if needed?
- know how to change a flat tire?
- know how to engage and use 4-wheel drive?

Field situations in which students often find themselves with vehicles

Would you know what to do?



Field Trip Preparedness

- do you routinely check anticipated weather conditions before you leave?
 - is it going to snow/ice up, hurricane
 - do you have survival essentials with you (e.g., extra clothes, food/snacks, water)
- if you get stranded, do you know how to take care of yourself until you can get out?

Workplace Dangers

All students face the possibility of encountering potentially injurious conditions while working on their research, but some face greater danger than others

Do you know where danger lurks?

Workplace Dangers

Aquaculture/Mussel facility:

- electric shock (wires in/near water)
- slipping or falling on damp surfaces
- stray voltage
- chemical fumes
- clothing/hair caught in rotating circulators

Workplace Dangers

Bear Pens facility:

- animal escape or confrontation
- slipping or falling on damp surfaces, feces
- stray voltage/electrocution
- other animal encounters (e.g., stealing food, contaminating food, fecal build-up)
- immobilization drug exposure

Workplace Dangers

Boat Shed/Storage facility:

- animal confrontation
- falling objects
- strains, cuts, punctures
- disease exposure (current rodent problem)

Workplace Dangers

Cheatham/Latham/Fralin lab facilities:

- slipping or falling on damp surfaces
- electrocution/stray voltage
- chemical exposure/fumes (e.g., 107 lab)
- falling objects
- animal escape

Workplace Dangers

“In-the-Field” (in general):

- slipping, falling, sprains/breaks
- vehicle accidents
- animal encounter (e.g., venomous snake, rabid or dangerous animal)
- chemical exposure (e.g., immobilization)
- falling objects (e.g., windthrown tree limbs)

Workplace Dangers

“In-the-Field”:

- Electroshocking

**NEVER
GO
ALONE !**



Disease Exposure

How much do you know about the potential exposure you face from transmissible disease while working with wildlife?

What are the most likely threats?

How serious is the threat?

Disease Exposure

Concerns in Aquatic Realms:

- salmonella (reptiles:
<http://www.cdc.gov/Features/ReptilesSalmonella/>)
- pfiesteria (algal toxin)
- hepatitis
- parasites

Reference source: (

<http://www.oie.int/boutique/index.php?page=cat&pg=2§ion=1&lang=en>)

Disease Exposure

Terrestrial Concerns:

- rabies
- tick-borne complex (e.g., Lyme, ehrlichiosis [HGE], Rocky Mountain spotted fever)
- Giardia
- Psittacosis
- Tularemia
- Baylisascaris procyonosis
- Hanta virus

Reference source:

[Emerging Infectious Diseases Journal Homepage | CDC EID](#)

Disease Exposure

Other Common Concerns:

- Tetanus (is your titer up-to-date?)
- Overseas travel
 - Hepatitis
 - Typhus
 - Meningitis
 - Dengue
 - Malaria

Reference:

<http://www.vdh.state.va.us/lhd/>

On-Campus Services

Virginia Tech Office of Environmental Health and Safety Services (<http://www.ehss.vt.edu/>)

- **Laboratory safety**
 - hazardous waste, chemical spills, fume hoods
- **Health and Safety Training**
 - respirators, first aid/CPR, air quality
- **Building Safety**
 - fire, building & construction standards
- **Hazardous Waste Disposal**

Wrap-Up

- think ahead, anticipate potential problems before having to face a serious situation
- become personally prepared (skills and training)
- response should be automatic, not panic constrained
 - Review the Department's "Emergency Action Plans" (http://fishwild.vt.edu/emg_action_plan.htm)

If you have questions - - ASK !!!

Now, go get the research done!

