

Q Fever/*Coxiella burnetii* in Sheep, Goats and Cattle Control Policy

Description

OBJECTIVE

To protect University of Florida faculty, staff, students, volunteers, and visitors from exposure to the Q fever agent (*Coxiella burnetii*)

AUTHORITY

By authority delegated from the University President, the Vice-President for Business Affairs is responsible for the safety of all University facilities. Under this authority, policies are developed to provide a safe teaching, research, service, housing and recreational environment.

POLICY

Sheep and goats coming to UF for biomedical research purposes will have tested negative for Q fever within one month prior to the shipment. Sheep and goats coming to the UF for agricultural purposes will be held in an outdoor, isolated quarantine area until Q fever negative test results are obtained. Contact Environmental Health and Safety (EH&S) for guidance on Q fever testing. All newly arriving animals will be held in a quarantine area and segregated from other animals. Access to quarantined animals will be restricted to essential personnel. Sheep and goats will be required to have a second Q fever negative test prior to being housed indoors or used for biomedical research or invasive surgical procedures. Animals confirmed positive will be euthanized and disposed of as biohazardous material; no tissues may be collected from positive animals. All indoor housing, research, and/or procedure areas for sheep and goats will be confined to areas having no recirculation of air to other rooms. These rooms will be posted with a biohazard sign.

All rooms in the Animal Care Services vivarium housing sheep or goats shall be negative pressured relative to vivarium corridor(s).

Participation in the [Animal Contact Medical Monitoring Program](#) is required for all individuals working with, or in close proximity to, sheep and goats or for those entering indoor housing, research, and/or procedure rooms/areas. This program includes a risk assessment and a health questionnaire. Follow-up assessments are conducted on a periodic basis, as well as in the event of an exposure to a Q fever positive animal. Employees, students, or UF affiliates who develop a febrile illness while working with sheep and goats (or their tissues or fluids) will be directed to seek immediate medical care at UF's SHCC Occupational Medicine Service. Initial training is required for all individuals that will work with, and around, sheep and goats. The training will cover information about Q fever found in the [Animal Contact Program Handbook](#), and methods to reduce exposure, as described below. Appropriate personal protective equipment (PPE) will be required.

- Indoor housing, procedure, and research rooms/areas require disposable or on site-laundered jumpsuits or coveralls, booties or dedicated footwear, eye protection, surgical mask or HEPA-filtered/N95 respirator (recommended), and gloves.
- Obstetrical procedures or surgery/necropsy of pregnant animals conducted indoors will require the use of a HEPA-filtered/N95. Note that the use of a HEPA-filtered/N95 respirator requires enrollment in the [EH&S Respiratory Protection Program](#).
- IFAS or Veterinary Medical Center personnel contacting placental tissue or amniotic fluid (i.e. at parturition or abortion) should wear coveralls, boots, face mask or HEPA-filtered/N95 respirator (recommended), and gloves. Personnel must wash and change prior to leaving the facility.

Aborted fetuses should be removed immediately for disposal as biohazardous material and the ewe or doe retested for Q fever. EH&S Biosafety personnel shall perform periodic inspections of all sheep and goat facilities and practices. They will audit work practices, PPE, and engineering controls. Failure to comply with the policy will result in the rescinding of an investigator's animal use approval and ability to procure animals. This policy shall be reviewed and updated annually.

RESPONSIBILITIES

[su_spoiler style="fancy" icon="chevron" title=" Environmental Health & Safety "] Educational Program – Biosafety Inspections/Audits – Biosafety Medical Monitoring Program – Occupational Medicine Respirator Training and Fit Tests – Industrial Hygiene

[/su_spoiler] [su_spoiler style="fancy" icon="chevron" title=" Animal Care Services and IFAS "] Animal certification, testing, and quarantine

[/su_spoiler] [su_spoiler style="fancy" icon="chevron" title=" Animal Care Services and IACUC "] Rescinding animal use and procurement

[/su_spoiler] [su_spoiler style="fancy" icon="chevron" title=" Student Health Care Center "] Health Assessments – Medical Provider

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Medical Monitoring Program for Q fever

[su_spoiler style="fancy" icon="chevron" title=" Requirements "] All those who work with, or in close proximity to, sheep and goats or those entering sheep and goat indoor housing, research, and/or procedure areas shall be required to undergo a pre-placement or initial [Animal Contact Medical Monitoring Risk Assessment](#) . The risk assessment includes:

- a questionnaire about the location, frequency, and type of work you do with sheep and goats
- a medical history questionnaire

This work-related information will be evaluated by UF Occupational Medicine Physicians or Licensed Health Care Professionals at the Student Health Care Center (SHCC) to determine potential health risks to you and whether further clinical interaction or preventive steps may be necessary to protect your health. All individuals working with, or in close proximity to sheep and goats will be required to give a sample of blood for Q fever titer. This should be done at the OCCMED Clinic. To wear this type of respirator, you must be fit tested by EH&S Occupational Medicine. Fit tests are required on an annual basis. If a Q fever positive animal is identified in during the course of a research or teaching project or a clinical workup, all potentially exposed individuals shall undergo further medical evaluation that may include Q fever titer testing.

[/su_spoiler] [su_spoiler style="fancy" icon="chevron" title=" Persons with a high risk for developing Q fever "] Individuals identified by way of the risk assessment as being at an increased risk for developing Q fever shall be scheduled for a medical consultation/assessment at the OCCMED Clinic. They will be advised that it is not recommended that they work under conditions that may expose them to Q fever. The reasons for this will be thoroughly explained during the health consultation. The following conditions indicate an increased risk for developing Q fever or complications from Q fever:

- Valvular heart disease
- Pregnancy
- Prosthetic heart valves
- Liver disease
- Altered immune system

[/su_spoiler] [su_spoiler style="fancy" icon="chevron" title=" Requirements for Entry into Biomedical Research/Surgical Areas for Sheep and Goats & Participation in Biomedical Research/Surgical Procedures with Sheep and Goats "] Sheep and goats will be required to have a second Q fever negative test prior to being housed indoors or used for biomedical research or invasive surgical procedures. All indoor housing, research, and/or procedure rooms for sheep and goats will be confined to areas having no re-circulation of air to other rooms. These rooms will be posted with a biohazard sign.

All rooms in the Animal Care Services vivarium housing sheep or goats shall be negative pressured relative to vivarium corridor(s).

All individuals working with, or in proximity to, sheep and goats or for those entering indoor housing, research, and/or procedure rooms are required to have completed the Animal Contact Medical Monitoring Program requirements. Awareness training for Q fever, found in the [Animal Contact Program Handbook](#), and methods to reduce Q fever exposure must be completed before an individual is allowed to work with sheep and goats. The following personal protective equipment (PPE) will be required for access to indoor housing and research rooms for sheep and goats:

- Disposable or onsite-laundered coveralls
- Booties or dedicated footwear
- Gloves
- Safety glasses
- Disposable surgical mask or HEPA-filtered/N95 respirator (recommended)

The following PPE will be required for access to indoor housing and research rooms where **pregnant** sheep and goats and/or newborn animals are located:

- Onsite-laundered scrubs (must be autoclaved prior to laundering)
- Booties or dedicated footwear
- Gloves
- Safety glasses
- HEPA-filtered/N95 respirator
- Hair cover

The following PPE will be required for sheep and goat surgical/necropsy procedures:

- Onsite-laundered scrubs (must be autoclaved prior to laundering)
- Leak proof/moisture repellent surgical gown
- Booties or dedicated footwear
- Goggles
- Surgical mask or HEPA/N95 (HEPA/N95 respirator required for surgery on pregnant animals or obstetrical procedures)
- Hair cover

All disposable PPE shall be left onsite in biohazard bags. All reusable PPE or clothing shall be appropriately disinfected prior to laundering or reuse. Surgical scrubs, coveralls and gowns shall be autoclaved prior to laundering. Biosafety Level 2 practices will be followed for sheep and goat research, including research with sheep and goat tissues. Special care shall be taken to properly contain and inactivate materials or tissue having contact with amniotic fluid. Failure to comply with these requirements will result in the rescinding of an investigator's animal use approval and ability to procure animals.

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Disinfectants Appropriate for Sheep and Goat Work

[su_spoiler style="fancy" icon="chevron" title=" Surfaces in Surgical and Laboratory Areas "]

- Fresh-made 1:100 dilution household bleach
- Micro-Chem Plus™ (National Chemical Laboratories, Inc) diluted as specified by manufacturer
- 1% solution of Virkon-S concentrate (DuPont)

[/su_spoiler] [su_spoiler style="fancy" icon="chevron" title=" Large Contaminated Items that Cannot be Autoclaved "]

- Fresh-made 1:50 dilution of household bleach
- 1% solution of Virkon-S concentrate (DuPont)

- Micro-Chem Plus™ (National Chemical Laboratories, Inc) diluted as specified by manufacturer

[/su_spoiler] [su_spoiler style="fancy" icon="chevron" title=" Housing Facilities "]

- Fresh-made 1:10 – 1:50 dilution (depending on organic load) of household bleach
- 1% – 2% solution (depending on organic load) of DuPont Virkon-S concentrate
- Large scale decontamination of facilities with paraformaldehyde or vaporized hydrogen peroxide may be performed by a trained professional, after approval from the EH&S Biosafety Office.

[/su_spoiler] [su_spoiler style="fancy" icon="chevron" title=" The following are **NOT** Appropriate Disinfectants"]

- 70% Ethanol (evaporates too quickly to have adequate contact time)
- 1% phenol
- 1% formalin
- Quaternary ammonium compounds *other than* Micro-Chem Plus™
- Wexcide®
- Broadcide®
- Hydrogen peroxide solutions
- Peracetic acid solutions (also known as peroxyacetic acid, or PAA)

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