

 COLUMBIA UNIVERSITY
ENVIRONMENTAL HEALTH AND SAFETY
Post Exposure *PRINT&GO* Sheet

Mycobacterium marinum post-exposure guidance

Created: 8/26/2024

<https://research.columbia.edu/sites/default/files/content/EHS/Homepage/mycobacterium.pdf>

What are print and go sheets?

Following an occupational exposure to the agent identified above, this information sheet identifies the immediate “first aid” actions that should be taken. A medical evaluation should be sought immediately following the exposure. The guidance sheet provides information that medical personnel can reference but does not provide individualized medical care or treatment. This sheet should be printed and taken to the medical provider. Also, display your Columbia University ID card while visiting the medical provider.

Organism and exposure:

Mycobacterium marinum is a non-motile, non-spore-forming, gram-positive, acid-fast bacillus. Skin infections with *M. marinum* in humans are relatively uncommon. Most infections occur following skin exposure to the bacteria through a small cut or skin scrape either in the laboratory setting or in aqueous environments contaminated with *M. marinum*. Signs of infection with *M. marinum* include a reddish or tan skin bump called a granuloma, and/or a non-healing ulcer. Less commonly, a string or batch of small reddish bumps crops up on the exposed body area in a classic pattern called sporotrichosis lymphangitis. Disseminated infection can occur in immunocompromised patients.

Post-exposure Medical Surveillance:

Employees from CUIMC, Morningside and Manhattanville campuses go to the Workforce Health and Safety (WHS) clinic located at Harkness Pavilion 1 South 176 Fort Washington Ave (646-697-9470) if exposure occurs during the hours the clinic is in operation (see below). CUIMC students go to Student Health Services at 60 Haven Avenue (212-305-3400). Morningside students go to Columbia Health in the John Jay Building (212-854-7426). For after-hours exposure, personnel should go to the New York Presbyterian Hospital or Mount Sinai St. Luke's Hospital (212-523-3335) Emergency Room (ER). Give this sheet to the physician so they understand that you may have just been exposed.

1. **Verify that first aid was performed** – Ensure skin was washed with soap and water for 5 minutes and mucus membranes or eyes with plain water for 10 minutes. Confirm that the area of injury is not squeezed and chemicals like bleach are not used as they are not known to be beneficial and may break down the barrier function of the skin.
2. **Document and understand the exposure** – Confirm if exposure was mucocutaneous or percutaneous. Determine how large the exposure was (e.g. blood visible on injury device, deep stick with hollow bore needles versus scratch). Identify the type of sharp involved (e.g. Manufacturer/Model, whether it was an engineered sharp). Identify the task being performed when the exposure occurred. Contact the principal investigator (PI) if needed with the exposed individuals' permission, to fully understand the potential hazards.
3. **Medication** – The standard for the treatment of infection by *M. marinum* is oral antibiotics. Antibiotics are used to treat evident infections. They are not indicated for post-exposure prophylaxis. Only symptomatic individuals should receive treatment by an infectious disease specialist. Symptoms include skin lesions at the exposure site, a reddish to purple bump or nodule. The lesions can be crusted, wart-like, or ulcerated. A combination therapy is recommended. Clarithromycin with ethambutol is currently the preferred antibiotic regimen. Rifampin is typically added to the regimen if a deeper infection is present, such as a bone infection (osteomyelitis). Definitive antibiotic regimens are determined based on the final culture results and antibiotic susceptibility data.

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4. **Testing and Follow-up** – In patients with immunocompetent status the prognosis is excellent with a proper full course of oral antibiotics and medical follow-up with your physician. However, the tuberculin skin test and Quantiferon-TB Gold may be positive after *M. marinum* infections but are unhelpful for diagnosis.

Next steps:

If evaluated at the ER, follow up with respective campus provider next business day. Complete an Accident Report Form there. Notify supervisor of incident. Per NIH Guidelines, accidents which result in overt exposures to materials containing recombinant or synthetic nucleic acid molecules such as fluorescent reporter genes must be immediately reported to the Institutional Biosafety Committee and National Institutes of Health Office of Science Policy (NIH-OSP). This reporting requirement is accomplished by investigators by notifying an EH&S Biosafety Officers who will take care of any subsequent reporting.

Contact information:

Environmental Health & Safety (EH&S) - Ask for a Biosafety Officer. Mon. - Fri: 9 am - 5 pm. Medical Center - (212) 305-6780

Public Safety can contact a Biosafety Officer after business hours. Medical Center - (212) 305-7979. Morningside - (212) 854-5555. Manhattanville - (212) 853-3333

CUIMC Office of Workforce Health and Safety –

(212) 305-7590

Mon. - Fri. 7:30 am - 4:00 pm