

Folliculitis

- Illness:** Folliculitis or “hot tub rash” is an inflammation of the hair follicles caused by infection or physical or chemical irritation. The most common form of superficial folliculitis is idiopathic. More serious forms of folliculitis involve the deep portion of the hair follicle and, usually, are more symptomatic and may cause scarring.
- Infectious agent:** *Pseudomonas aeruginosa* (other possibilities include: *Staphylococcus aureus*, *Klebsiella* spp., *Enterobacter* spp., *Proteus* spp., others)
- Incubation period:** 12-36 hours
- Duration of illness:** 3-7 days
- Symptoms:** Maculopapular rash (numerous red bumps that look like pimples), worse in areas that were previously covered by a swimsuit, pus-filled blisters around hair follicles, soreness in the armpits or breasts, headache, earache, sore nose, itchy skin, or fatigue. Fever and lymph node enlargement denote systemic infection, a rare complication.
- Infectious period:** No person-to-person transmission.
- Transmission route:** Swimming in poorly maintained hot tubs or pools, or contaminated lakes.
- Treatment:** Symptomatic.
Systemic illness may require antibiotic therapy (rare).

Information Needed for the Investigation

Verify the Diagnosis

- Is there a recent history of swimming in a hot tub, pool, or spa?
- Obtain culture of skin lesions.
- Environmental swabs.

Environmental Investigation

- Notify DEC.
- Obtain disinfection records for public pools/spas.
- Bather load history.
- If large outbreak, may request DEC to obtain environmental specimens.

Reporting Requirements

- FTR: Write up all outbreaks >5 persons.
- Fill out CDC waterborne outbreak form.
- Morbidity Database: None.



Folliculitis Fact Sheet

What is *Pseudomonas folliculitis*?

Pseudomonas folliculitis is an inflammation of the hair follicles caused by infection with the bacteria *P. aeruginosa*. It has been reported in persons using hot tubs, whirlpools, saunas, swimming pools, waterslides and physiotherapy pools.

Who gets *Pseudomonas folliculitis*?

Any person exposed to water contaminated with *P. aeruginosa* can get *Pseudomonas folliculitis*.

Where is *P. aeruginosa* found?

Pseudomonas aeruginosa thrives in warm and moist areas and is commonly found in soil, sinks and drains, shower-floors, carpeting and even tap water.

What are the symptoms of *Pseudomonas folliculitis*?

Pseudomonas folliculitis first appears as itchy bumps and develops into dark red tender nodules and/or small pus-filled pimples. The eruptions typically involve the trunk and upper parts of the arms and legs. The rash can be extensive and may affect all areas of the body except the palms of the hands and soles of the feet. Headache, nausea, vomiting, abdominal cramps, sore throat, rhinitis, sore eyes, and fever may accompany the rash.

How soon after exposures do symptoms of *Pseudomonas folliculitis* appear?

The incubation period for "*Pseudomonas folliculitis*" is usually 48 hours (range 8 hours to 5 days) after exposure to contaminated water.

How can *Pseudomonas folliculitis* be diagnosed?

Pseudomonas aeruginosa can often be cultured from pus-filled pustules on the skin.

What is the treatment for *Pseudomonas folliculitis*?

The rash associated with this infection will usually go away on its own and treatment may not be needed. "Anti-itch" medications may be used to control the itching.

How can *Pseudomonas folliculitis* be prevented?

Be aware that hot tubs and spas have warmer water than pools, so chlorine or other disinfectants evaporate faster. This leaves hot tubs and spas at risk for the spread of *Pseudomonas folliculitis*. Therefore, ask your pool manager about the bromine/chlorine and pH-testing program at your hot tub or pool. Ensuring frequent testing, control of bromine/chlorine levels, and pH control are likely to prevent the spread of dermatitis. Remove swimsuits and shower with soap after getting out of the water, clean swimsuits after getting out of the water.

Folliculitis Questionnaire

Name: _____ DOB: ___/___/____ Date: ___/___/____

Address: _____ Phone Number: _____

Have you noticed any rash, bumps or sores on your skin during the week of _____? Y N

Where was the rash located: _____

Describe what it looked like: _____

How big was it? _____

When did you first notice the rash? _____

Did you visit a clinic? Y N Phone #: _____

Was a culture taken? Y N Result: _____

Did you take any medicine? Y N Name: _____

Did you have any of the following symptoms?

Fever Y N Itchy skin Y N Nausea Y N

Vomiting Y N Muscle aches Y N Earache Y N

Chills Y N Soreness or swelling of armpits Y N

Fatigue Y N Frequent or painful urination Y N

For females only: Painful swelling of breasts Y N

Painful swelling of nipples Y N

What dates did you stay at the (HOTEL)? _____

Did you swim in the pool or hot tub at the (HOTEL)? Y N

If NO, stop here. If YES, continue.

Date of use	Time of use	Pool use	
		Duration (minutes)	Maximum # in pool
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Date of use	Time of use	Hot tub use	
		Duration (minutes)	Maximum # in hot tub
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Did you shower before using the hot tub/pool? Y N

Did you shower after using the hot tub/pool? Y N

Did you share a towel with anyone? Y N

Does anyone else in your family have a rash? Y N

Do you know anyone else with a rash? Y N

Did you use soap? Y N

Name: _____

Name/ph#: _____

How many other people stayed with you in your hotel room: _____

Did any of them go swimming or have a rash? Y N

Please fill out a form for all additional persons with a rash.