



# Pseudomonas



## General Information

*Pseudomonas* [sodo-moh-nas] is a Gram-negative bacterium (bacillus) that can cause different types of healthcare-associated infections. The most common species, *Pseudomonas aeruginosa*, is commonly found in soil and ground water. It rarely affects healthy people and most community acquired infections are associated with prolonged contact with contaminated water. *P. aeruginosa* is increasingly important clinically as it is a major cause of both healthcare-associated infections and chronic lung infections in people with cystic fibrosis. Although *P. aeruginosa* is an opportunistic pathogen (i.e. more likely to infect those patients who are already very sick as opposed to healthy patients), it can cause a wide range of infections, particularly among immune-compromised people (HIV or cancer patients) and persons with severe burns, diabetes mellitus or cystic fibrosis. In hospitals the organism contaminates moist/wet reservoirs such as respiratory equipment and indwelling catheters and infections can occur in almost every body site but are particularly serious in the bloodstream (bacteremia).

## Transmission

In healthcare settings, *Pseudomonas* may spread through person-to-person contact primarily by the hands of the healthcare worker, through direct contact with contaminated environmental surfaces or equipment. Patients may be exposed to *Pseudomonas* when they are on ventilators, or have intravenous catheters, urinary catheters, or wounds that are caused by either injury or due to surgical procedures. These medical devices and conditions are associated with breaks in the skin or other mucous membranes, this may allow *Pseudomonas* to enter the body and cause infection. The effects of *P. aeruginosa* on people vary widely, ranging from no symptoms at all to serious respiratory infections, especially in patients with cystic fibrosis.

## Prevention

To prevent spreading *Pseudomonas* infections between patients, healthcare personnel must follow specific infection control precautions. Patients with multi – drug resistant pseudomonas are placed on “Precautions” in the hospital setting. These precautions include strict adherence



to hand hygiene, wearing gowns and gloves when they enter the patient's room. Healthcare facilities must also follow proper cleaning procedures to prevent the spread of *Pseudomonas*. Certain protocols should be followed to prevent device-associated infections, wound infections and SSIs. A breakdown in these protocols may lead to infections with *Pseudomonas* or other health-care pathogens.

### **Drug-resistant *Pseudomonas***

Most infections are susceptible to third generation cephalosporins. *P. aeruginosa* is one of the more common causes of healthcare-associated infections and is increasingly resistant to many antibiotics. *P. aeruginosa* is the second most common cause of pneumonia, the third most common cause of urinary tract infections and the eighth most frequently isolated pathogen from the bloodstream. Rates of resistance to antibiotics are on the rise. Multidrug-resistant (MDR) *Pseudomonas* is defined as resistance to at least three of four antibiotic classes.

### **Treatment**

*Pseudomonas* infections can be treated with antibiotics. Infections caused by MDR *Pseudomonas* can be very challenging. Therapeutic options are limited which may lead to prolonged hospitalization and even death.

### **Guidelines and Recommendations**





















There are no specific guidelines for this organism. Healthcare facilities must follow the general guidelines for hand hygiene, environmental hygiene, and guidelines for the prevention of device-associated infections and SSIs



## Cleaning and Disinfection

*Pseudomonas* is a Gram-negative bacillus which is susceptible to the following Diversey disinfectants:

1

Product	Oxivir® 1 RTU / Wipes	Oxivir® Tb RTU / Wipes	Oxivir® Five 16	Alpha® HP Multisurface Disinfectant Cleaner	Avert™ Sporicidal Disinfectant Cleaner/Wipes	Virex® II 256	Virex® Tb	Virex® Plus	Expose® II 256	MoonBeam®3 UV Disinfection
Contact Time (Min)	1	1	5	5	1	5	3	3	10	3
										
Product	Oxivir® Tb RTU / Wipes	Oxivir® Plus (Concentrate)	Virox® 5 Concentrate	Virox® 5 (RTU & Wipes)	Percept <sup>(TM)MC</sup> (Concentrate, RTU & Wipes)	Virex® II 256	Avert™ Disinfectant Cleaner	MoonBeam®3 UV Disinfection		
Contact Time (Min)	1	5	5	5	5	5	1	3		
										

### References:

1. [www.cdc.gov](http://www.cdc.gov)

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