

Causes of Respiratory Distress

CAUSES OF RESPIRATORY DISTRESS	TYPE OF AGENT	MODE OF TRANSMISSION	GEOGRAPHIC LOCATION	SYMPTOMS	MAIN TARGET POPULATION	TREATMENT	NATURE OF IMMUNE RESPONSE	LOCATION IN BODY	METHOD OF DETECTION	PROGNOSIS
phosgene	chemical toxin; poison gas	aerosol as gas	worldwide	coughing; fluid filled lungs	all ages	NA*	NA*	blood; lungs; other tissues	mass spectral analysis**	damage to lungs
paraquat	chemical toxin; herbicide	ingestion of treated plants	South America; Central America	cough; congestion; fluid filled lungs	all ages	NA*	NA*	blood; lungs; renal and skeletal tissues	mass spectral analysis**	damage to lungs
influenza	virus	airborne; human to human	worldwide	fever; cough; muscle pain	all ages	bedrest; fluids	white blood cells; antibodies	inside a cell; lungs	antibody detection***	death in elderly and sickly; otherwise recovery
Ebola	virus	direct contact; human to human	Africa	internal bleeding; fluid loss	all ages	bedrest; fluids	white blood cells; antibodies	inside a cell; blood vessels	antibody detection***	80% death rate
hantavirus	virus	airborne; aerosol of mice feces	Asia; U.S.	congestion; fever; fluid filled lungs	all ages; especially adults between 20 and 60	bedrest; fluids	white blood cells; antibodies	inside a cell; blood vessels in lungs	antibody detection***	70% death rate
plague	bacteria (<i>Pasteurella pestis</i>)	fleas living in rodents	worldwide	fever; swollen lymphs; cough; pain	all ages	antibiotics	antibodies	lungs; blood; lymph glands	direct stain of blood smears; antibody detection***; culture****	generally fatal if untreated
Legionnaires' disease	bacteria (<i>Legionella</i>)	aerosol; "scum water" from appliances	U.S.	fever; muscle aches; congestion	all ages; older adults	antibiotics (often resistant)	antibodies	lungs; blood	direct stain of blood smears; antibody detection***; difficult to culture***	can be fatal if untreated

Causes of Respiratory Distress, continued

CAUSES OF RESPIRATORY DISTRESS	TYPE OF AGENT	MODE OF TRANSMISSION	GEOGRAPHIC LOCATION	SYMPTOMS	MAIN TARGET POPULATION	TREATMENT	NATURE OF IMMUNE RESPONSE	LOCATION IN BODY	METHOD OF DETECTION	PROGNOSIS
<i>Mycoplasma</i> Pneumonia	bacteria	airborne; human to human	worldwide	persistent cough; fever; congestion	all ages	antibiotics	white blood cells; antibodies	inside a cell; lungs	antibody detection***; difficult to culture****	generally complete recovery
bacterial pneumonia (<i>Streptococcus pneumoniae</i>)	bacteria	airborne; human to human	worldwide	cough; fever; ear ache	children	antibiotics (often resistant)	antibodies	connective tissue; lungs; ear canals	antibody detection***; culture****;	generally complete recovery; may persist
<i>Toxoplasma</i>	parasitic protozoan	cat feces; undercooked meat	worldwide	congestion; convulsion paralysis; heart disease	newborns; generally asymptomatic in adults	anti-protozoal drugs	white blood cells; antibodies	inside a cell; lungs	antibody detection***	eventual recovery; may cause birth defects
Pneumocystic pneumonia	parasitic protozoan	believed to be airborne; human to human	Europe; U.S.	high fever in adults; air sacs filled with foam	malnourished children; weakened adults	anti-protozoal drugs	white blood cells; antibodies	inside a cell; lungs	direct stain of sputum; antibody detection***	often fatal

* NA means that the information is not available.

** Mass spectral analysis is an assay for detecting chemical substances and heavy metals in blood and tissue.

*** Antibody detection is an assay in which the blood of victims is mixed with purified infectious agents. If antibodies specific to those organisms are present in the blood of victims, clumping will be seen in the sample, indicating that the antibody has bound to the added microorganism and that the person is most likely infected with that microorganism.

**** Culture is the growth of the organism in agar.