Why humidify?
For hospitals & care facilities...

Humidification and Evaporative Cooling
Humidified air improves air quality for the health care industry

Correct humidity is essential to patient health, staff comfort and prevention of electrostatic damage to medical equipment.

For the medical industry, the goal is to treat the injured or ill in a safe and comfortable environment. Hospital staff must also have a comfortable environment, so they are at their best in order to perform proper diagnosis and treatment. Hospitals also have various rooms with various purposes. They range from waiting rooms to intensive care units, x-ray facilities and surgery rooms. All of these types of rooms require a degree of air quality which includes specific requirements for humidity.

A comfortable, healthy atmosphere is necessary for rest and recovery. If a health care environment is too dry it will not only hinder a patient’s recovery but will also encourage infection and further illness. Deviations from the mid-range of relative humidity (RH) of 40-60% can reduce air quality by causing an increased growth of bacteria, airborne infection, sore eyes, sore throat, increased static and dust, and premature coagulation.

**Airborne Infections**
Dry air will attempt to pull moisture from all possible sources in a room including mucous membranes. Mucous membranes are our bodies natural defense against airborne infections. If our membranes dry out we are more prone to colds, flus, and viruses.

**Dry Eyes and Sore Throat**
Having dry eyes or a sore throat can be one of the first signs of exposure to dry air. These symptoms can make the working environment for staff uncomfortable and can be problematic for those that have that a weak immune system.

**Dry Skin**
When a room is dry, the air will draw moisture from the skin causing dry patches, itchiness, rashes and discomfort.

**Maternity Wards**
Humidity levels in maternity and obstetric wards are critical to babies as they are particularly sensitive to dry air. Low relative humidity can also affect babies with existing respiratory problems.
Optimum Relative Humidity Ranges for Health

Insufficient data above 50% RH.

E.M. Sterling, Criteria for Human Exposure to Humidity in Occupied Buildings, 1985 ASHRAE.

The Sterling Chart – optimum RH for health

The Sterling Chart below illustrates how RH affects health and well being. Colds, flu, sore throat, dry eyes, itchy and cracked skin are all symptoms that are usually prevalent in the cold dry months of the winter when the indoor RH is at its lowest. The increase in bacteria, viruses and ozone production (caused by static electricity) in low RH levels all have an adverse affect on health.

Premature Coagulation
Correct humidity levels are essential in operating theaters. Low RH levels can cause premature drying and formation of scabs from coagulated blood. This is also a concern in burn units.

Static and Dust
When humidity drops below 40% RH, the build-up of static electricity is increased. Static damages sensitive electronic equipment and will cause dust to rise into the atmosphere. By maintaining proper RH levels, static build-up is eliminated and dust is suppressed.

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Optimum Relative Humidity Ranges for Health

- Bacteria
- Viruses
- Fungi
- Mites
- Allergic rhinitis and asthma
- Respiratory infections
- Chemical interactions
- Ozone production

% relative humidity

1Insufficient data above 50% RH.

When it comes to patient care, no one has more experience with humidity than Nortec.

In hospitals and care facilities, humidifiers are the workhorse for respiratory concerns, equipment operation and preventing the spread of bacteria and viruses. Whether it is localized humidity control for individual operating theaters or whole hospital humidification, Nortec has successfully done it all.

VA Fort Worth Outpatient Clinic, Texas  105,000 sq ft Campus  |  Patient care rooms
Community Memorial Hospital, Kansas  30,000 sq ft campus  |  Operating rooms  |  Patient care rooms
IUPUI Campus, Indiana  20,000 sq ft research Campus  |  Laboratory hospital research
UCSF Medical Center, San Francisco  787,000 sq ft campus  |  Patient care rooms  |  Operating rooms
The Children’s Hospital of Philadelphia  700,000 Sq ft research campus  |  Patient care rooms  |  Laboratory research rooms
University of Maryland Medical Center  380,000 Sq ft  |  Patient care rooms  |  Operating rooms
Johns Hopkins University Hospital  1,600,000 Sq ft  |  Patient care rooms  |  Laboratory research rooms
Walter Reed National Military Medical Center  880,000 Sq ft  |  Patient care rooms  |  Operating rooms
Fort Detrick Community Based Outpatient Clinic  15,000 Sq ft  |  Patient care rooms  |  Laboratory research rooms

As the leading manufacturer of commercial/industrial humidification systems for more than 40 years, Nortec has the technology and application expertise to meet the needs of any application.

Contact us today and ensure you have the best humidification solution for your hospital or care facility.