



# Hospital humidification

Improving health with humidity control

40-60%rH =  
healthy environment

Maintaining 40-60% relative humidity (%rH) in healthcare environments is essential to patient health, staff comfort and the prevention of electrostatic damage to medical equipment.

A humidity lower than 40%rH will dry patients' nasal and respiratory passages, making them more vulnerable to infection from airborne viruses. Moisture is drawn from the skin causing dry patches and promoting itchiness and rashes.

These symptoms are damaging to healthy people but to the sick and infirm they can hinder recovery or promote further infection.

A low humidity will:

- Dry the nose & throat
- Promote airborne infection
- Cause itchy, dry skin
- Irritate the eyes
- Increase static build-up & dust
- Damage sensitive medical equipment

**Our clients include:**

**BMI Park Hospital • Nuffield Hospital • St Richards Hospital  
University College Hospital • Nottingham University Hospital  
BUPA Hospitals Ltd • Great Ormond Street Children's Hospital  
Leeds Teaching Hospital • The Princess Royal University Hospital  
Portland Hospital • Hinchingsbrooke Hospital • Prince Philip Hospital  
Broadmoor Hospital Authority • Maidstone Hospital • Solihull Hospital**

# Why humidify in healthcare environments?

A comfortable, healthy atmosphere is an essential element for rest and recovery. If a healthcare environment is too dry it will not only hinder patients' recovery but also encourage infection and further illness.

A healthcare environment should be maintained at around 50% relative humidity (rH). An atmosphere drier than 40%rH will have many damaging effects.

### Airborne infections

A dry atmosphere will cause the mucous membranes in the nose and throat to dry out. These are our bodies' natural defence against airborne infections so without them we are more vulnerable to colds, flu and other viruses.



### Sore eyes & throat

One of the first signs of exposure to a dry atmosphere is sore eyes and dry throat. Eyes are very susceptible as the thin layer of moisture on the cornea rapidly evaporates. A dry, sore throat is problematic for healthy people but for patients who are nil-by-mouth, this increases discomfort and further reduces the body's immune system.

### Increase static & dust

When humidity drops below 40%rH, the build-up of static electricity is encouraged. This is not only an uncomfortable annoyance for staff and patients, but in a situation where flammable gases are being used, like operating theatres, it can be highly dangerous. Static also damages sensitive electronic equipment and will cause dust to rise into an atmosphere. This can make hygiene control more difficult and exacerbate the condition of patients with respiratory problems.

By keeping the humidity at around 50%rH, static build-up is eliminated and dust is suppressed.

### Premature coagulation

An atmosphere of 55-65%rH is essential in operating theatres to prevent premature coagulation of wounds. Dry



air will suck moisture from all available sources in a room, including exposed wounds, leading to rapid scab formation. This is also of great concern in burns units and ITU's.

### The solution

Installing an appropriately designed humidification system, whether in-room or in-duct, will relieve symptoms of a dry atmosphere. This will help to provide a healthy environment to encourage patient health, protect medical equipment as well as creating a comfortable place for staff to work.

## Why JS Humidifiers?

JS Humidifiers offers a comprehensive service of humidification system design, installation and maintenance. Our range includes spray, steam and evaporative humidifiers and, with over 30 years experience of humidifying healthcare environments around the world, we are ideally placed to advise you on which type will be most suitable for your specific application.



[www.jshumidifiers.com](http://www.jshumidifiers.com)

JS has a policy of continually improving products and performance. Actual specifications might vary from those shown.

### JS Humidifiers plc

Member of the Walter Meier Group

Artex Avenue, Rustington, LITTLEHAMPTON,  
West Sussex, BN16 3LN, UK.

Tel: +44 (0)1903 850200 • Fax: +44 (0)1903 850345

Email: [sales@jshumidifiers.com](mailto:sales@jshumidifiers.com)



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