Pathogenic Bacteria Associated with HAI Isolated within HVAC Evaporator Coils

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A recent study suggests that doctors may want to monitor the environmental condition of their air conditioners evaporator coil before surgery to help prevent the spread of bacterial infections. Dr. Rajiv Sahay, Laboratory Director at Environmental Diagnostics Laboratory (EDLab) and his colleagues sampled evaporator coils in healthcare air handling systems and isolated Pseudomonas aeruginosa a known healthcare-associated infection (HAI) pathogen. This bacterium is listed as fourth most common cause of nosocomial infection and accounting for 10.1% of all hospital acquired infections. According to an estimate by the CDC four patients out of every 1000 discharges gets infected by P. aeruginosa. P. aeruginosa is increasingly important clinically as it is a major cause of both healthcare-associated infections and chronic lung infections. Pseudomonas aeruginosa is an opportunistic pathogen, meaning that it exploits some break in the host defenses to initiate an infection. The bacterium almost never infects uncompromised tissues, yet there is hardly any tissue that it cannot infect if the tissue defenses are compromised in some manner. It also causes urinary tract infections, respiratory system infections, dermatitis, soft tissue infections, bacteremia, bone and joint infections, gastrointestinal infections and a variety of systemic infections, particularly in patients with severe burns, cancer and AIDS patients who are immunosuppressed. Specially, P. aeruginosa infection is a serious problem in patients hospitalized with cancer, cystic fibrosis, and burns etc. The case fatality rate in these patients is near 50 percent.

In the study, over 560,000 colony forming units (CFU)gram of Pseudomonas sp were isolated from deep within the evaporator coil system. With an average of 10 pounds of debris removed in a typical coil that would equate to over 2.5 trillion CFU in one typical 75 ton evaporator coil system. Potential aerosolization of these micro-organisms from the infested coil is immense due to a discharge of air stream with 6 miles/hours (commonly observed) across the evaporator coils.

Contact the Building Scientists at Pure Air Control Services for a professional evaluation of your buildings HVAC hygiene condition at 1-800-422-7873 ext 802 or a quote on deep cleansing and sterilization of your evaporator coils utilizing PURE-Steam coil cleaning call 1-800-422-7873 ext 307.

About Pure Air Control Services
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Pure Air Control Services is a national provider of the following IAQ services: Building Sciences Evaluation; Building Health Check, Environmental Diagnostics Laboratory (EDLab) an AHA accredited micro laboratory (USP 797 Lab analysis), DIY IAQ Green Check test kits, Environmental Project Management; HVAC System Cleaning, PURE- Steam Coil Cleaning and Mold Remediation Services among other indoor environmental services.

The company’s expanding client roster includes the General Services Administration (GSA); Federal Aviation Administration (FAA), Allstate Insurance; Carrier Air Conditioning; Naval Air Warfare Center, Orlando; and Naval Air Station - King’s Bay, Georgia, and many other Fortune 500 companies, school boards, and city, state, and county governments, making Pure Air the reliable industry leader.

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