

Manageable Downtime

SIGNIFICANT RESULTS

Overview

Since 1991, physicians at The Fertility Center in Grand Rapids, MI, have utilized the latest advances in reproductive treatment to achieve success rates that have been consistently higher than the national average. When Dr. James Young heard about an innovative healthcare technology that would provide far greater protection of the human embryo within the in vitro culture environment, he contacted LifeAire Systems to learn more. Since the installation of the LifeAire system, Dr. Young's IVF program has achieved the highest success rates in its 24-year history.

From plan design to implementation, integration of the LifeAire system at The Fertility Center showcases how efficient the retrofit process can be. In fact, *it took only one week to install the entire system*, minimizing critical down time for the center's embryologists and laboratory technicians.

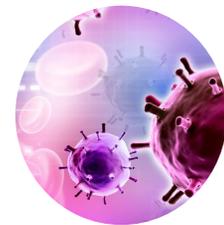
Completing an Entire Retrofit in One Week's Time

The Technology

LifeAire Systems offers a revolutionary and patented in-duct air purification system that provides comprehensive protection from all known biochemical families of volatile organic compounds, and viable and non-viable particulates.

Created by a leading embryologist, Kathryn C. WorriLOW, Ph.D., LifeAire Systems addresses the negative impact of ambient air surrounding the IVF process. Over a decade of research showed that external environmental events—even those outside of the immediate proximity of a lab—can greatly impact clinical outcomes. Seasonal changes, area construction projects, vehicle exhaust, paint, the presence of cleaning fluids, and resurfacing of roads, for example, are all common sources of embryotoxic airborne pathogens that have suppressed outcomes for years.

Working with a team of chemists, engineers and physicists, Dr. WorriLOW developed and designed multi-stage technology that is radically different from all other air purification systems. The LifeAire system has been measured both by third party air testing and substantiated clinical outcomes with statistically significant increases across numerous measures of patient outcomes.



LifeAire 
Creating Aire for Life

Unlike many LifeAire Systems installations that occur at the time of new construction, The Fertility Center was retrofitting an entirely new system into its current facility. The length of down time associated with removing the old system and replacing it with the LifeAire System was of major concern to Dr. Young and his colleagues. After meeting with LifeAire representatives and speaking with IVF practices utilizing a LifeAire system, they decided the potential to improve their clinical outcomes was worth any short down time.

“We were impressed by the data and felt compelled to investigate it further. Although we have enjoyed solid pregnancy rates, we believed they could be improved. Therefore, we opted to install the LifeAire system,” Dr. Young said.

The Process

The entire retrofit was completed in one week's time. The project began in June, 2014 when LifeAire Systems' Director of Business Development and Sales, Erik Marsh, conducted a site visit to the Grand Rapids laboratory facility in coordination with a local HVAC provider, Quality Air. In addition to assessing the exterior of the building, around the perimeter and on the roof, the group measured interior walls and ceilings and inspected overhead ductwork and ventilation systems.

LifeAire Systems' engineers worked hand in hand with Quality Air to design the system and coordinate logistics such as accessing building plans and applying for appropriate permits. Because Quality Air had design-build capabilities, LifeAire Systems was able to manage both aspects of the retrofit with the company.

Success Rates

In just six months following installation, Dr. Young reported that his IVF program had already experienced improvement in its pregnancy outcomes. “Over the past four months, our rates have been the highest we have seen. We believe the increase is in part, due to the LifeAire system.”

IVF laboratories throughout the country with LifeAire Systems have seen substantial increases in clinical pregnancy rates, with no difference between retrofit installations versus new construction. Data published in *Fertility and Sterility* show ongoing pregnancy* outcomes at facilities using LifeAire increasing by 14.8 percentage points, inclusive of all maternal ages, 1,245 cycles, 9,711 embryos and 2,808 embryos transferred. Compilation of further data reported by 14 facilities, as more LifeAire systems are installed, reveals an average increase in ongoing pregnancy rates of 19.7 percentage points. This increase is inclusive of all maternal ages, 3,535 cycles and 7,733 embryos transferred.

**Defined as positive fetal heartbeat per intrauterine sac.*

