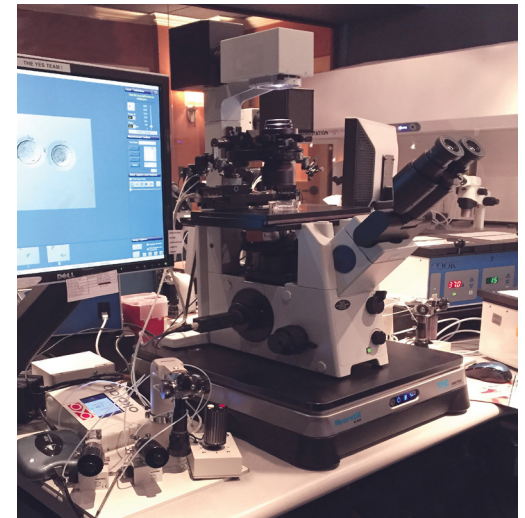


Everstill™ K-400
Active Vibration Cancellation Platform



- ▶ Low frequency vibration cancellation
- ▶ Easy installation, simple operation
- ▶ Hard-mount design, no air required
- ▶ Automatic leveling

Everstill™ Technology
Enables safe Micromanipulation

Application: Assisted Reproductive Technologies (ART)
Microscope: Olympus IX71

Introduction

In Vitro Fertilization (IVF) is a type of Assisted Reproductive Technology (ART). Originally developed in the late 1970s, modern equipment and technology have allowed for more advanced techniques, and more successful procedures.

Challenge

Vibration can cause serious damage to oocytes and embryos undergoing assisted reproductive technologies. Advanced IVF techniques such as Intracytoplasmic sperm injection (ICSI), Assisted Hatching (AHA), and other fertility procedures such as Preimplantation Genetic Screening (PGS) and Preimplantation Genetic Diagnosis (PGD) require precise movements and a vibration-free environment.

Discussion

Located roughly ½ mile from the Interstate, the CNY Fertility Center in Syracuse New York was impacted by vibration in the building. Possible sources of vibrations could also have been caused by various instruments such as benchtop incubators in close proximity and purging gas flow meters, as well as foot traffic within and around the laboratory and ambient building vibration. Regardless of the source, all vibrations posed serious potential for damage and disruption in the ART lab. Vibration cancellation units allow for safe micromanipulation techniques enabling a successful procedure.

Solution — TMC Everstill™ K-400

The Everstill K-400 provided excellent vibration cancellation allowing for a safe micromanipulation environment. The serial type active vibration control technology provided aggressive low frequency vibration isolation with a stable surface for the microscope. The installation was extremely easy and the unit self-leveled at the push of a button.

Summary

In this attached ICSI video, vibration in the environment is evident in the image of the oocyte. Although low in amplitude, this vibration coming up through the floor and the lab table would prevent a successful procedure. After approximately 35 seconds, the Everstill K-400 is powered on, the vibration is no longer evident, and the procedure continues. With the K-400 installed to support the microscope, the clinic is now able to perform all micromanipulation techniques safely and more efficiently.

