

## A PATIENT'S GUIDE TO SALINE CONTRAST STUDY ("BUBBLE STUDY")

### *What is a "Bubble Study"?*

An ultrasound of the heart is called an "echocardiogram". It is done to get pictures of the heart and the areas around the heart. Better pictures are sometimes seen if a material called "contrast" is used during the ultrasound. One type of contrast is saline (sterile salt water). When saline is used it is called a "bubble study". During a bubble study the doctor or nurse will shake the salt water until it forms small bubbles. The bubbles are then injected into the vein through an intravenous line (IV). In a normal heart the bubbles are filtered by the lungs and are seen only on the right side of the heart. If the bubbles are seen on the left side, it shows that there is an opening between the two sides of the heart, which is abnormal. The abnormality can be an atrial-septal defect or a ventricular septal defect. The bubble study helps to identify those abnormalities.

### *Why would a bubble study be done?*

Your doctor may ask to have a bubble study when the echocardiogram test is ordered. Sometimes the person doing an echocardiogram thinks the bubble study would be helpful and decides to do it then. It can be especially helpful if someone has had a stroke or what is called a "TIA", transient ischemic attack.

### *What does a bubble study involve?*

The bubble study is a very simple and usually only adds a few minutes to the test. If an intravenous line (IV) is not in place, a doctor or nurse will place one. Sterile saline (salt water) is shaken in a syringe and then injected into the IV while the ultrasound is done.

### *Is a bubble study safe?*

The bubble study is extremely safe. In the past ten years of doing bubble studies at Brigham and Women's Hospital there have been no serious effects. There is a small risk of bruising or infection from the placement of the IV line.

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