

What are the benefits of using the *da Vinci*[®] Surgical System over traditional methods of open surgery?

Some of the major benefits experienced by surgeons using the *da Vinci*[®] Surgical System over traditional open methods of surgery have been greater surgical precision, increased range of motion, improved dexterity and enhanced 3D visualization. Benefits patients have experienced over open surgery include: shorter hospital stay, less pain, less risk of infection, less blood loss and transfusions, less scarring and faster recovery and return to normal daily activities. None of these benefits can be guaranteed, however, as surgery can be both patient and procedure specific.



This brochure is provided for general information purposes only and is meant to be just one part of your decision-making process. Consult your doctor or surgeon about whether robotic surgery may be appropriate for you and about the risks and benefits of all medical treatment options. Like any printed material, it may become out of date over time. If you have questions about the *da Vinci*[®] Surgical System or the Patient Brochure, please consult with your physician.

This brochure is not intended to render medical advice, diagnosis, treatment or other medical services, and thus is not a substitute for the advice of a doctor, or a recommendation for any particular treatment option. It is important that patients considering the option of robotic surgery rely on the advice of a doctor who, by exercising good clinical judgment and taking into consideration the medical history and circumstances of the patient, is best able to advise whether the *da Vinci*[®] Surgical System may be appropriate for an individual patient.

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For more information about *da Vinci*[®] Surgical System and Intuitive Surgical visit www.intuitivesurgical.com

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da Vinci[™]
ASD Repair



da Vinci[®]
Surgical System

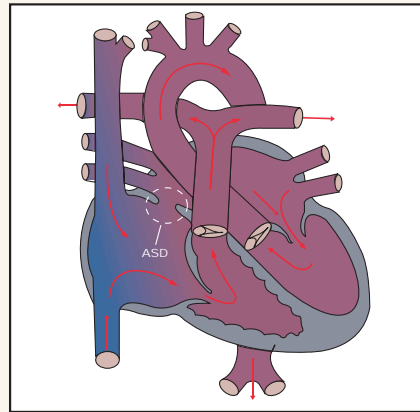
Changing the Experience of Surgery

da Vinci™ ASD Repair

An Atrial Septal Defect (ASD) is present in about 4 out of every 100,000 people. And is typically a congenital defect present from birth. When no other congenital defect coexists, symptoms may be absent, particularly in children, although symptoms often appear by age 30.

What is an Atrial Septal Defect (ASD)??

An ASD is a hole, or defect, in the wall of the atrium, the upper chamber of the heart where the wall between the right and left atria does not close completely during birth. It may be discovered during a routine physical, and confirmed with an echocardiogram. If left untreated, an ASD can result in heart failure or stroke.



What causes an Atrial Septal Defect?

ASD is a congenital heart defect. In fetal circulation an opening normally exists between the two atria (the upper chambers of the heart) to allow blood to bypass the lungs. This opening usually closes about the time a baby is born to allow it to begin to breathe and circulate oxygen-enriched blood. If the opening persists beyond birth, an ASD results and blood continues to flow from the left to the right atria. This is called a shunt.

Individuals with ASD are at an increased risk for developing a number of complications including: infective endocarditis (a bacterial infection of the heart), heart failure and an abnormally fast heart rhythm known as atrial fibrillation.

With a small-to-moderate atrial septal defect, a person may live a normal life span without symptoms. Larger defects may cause disability by middle age because of increased blood flow and shunting of blood back into the pulmonary circulation.

Many people with ASD have few, if any, symptoms. When symptoms are reported, they usually involve fatigue and shortness of breath. Other symptoms may include: frequent respiratory infections, difficulty breathing (dyspnea), shortness of breath with activity and the sensation of feeling heart beat (palpitations). Because most people are non-symptomatic, most ASD's are discovered incidentally during medical examinations. There is no known way to prevent the defect, but some of the complications can be prevented with early detection.

What are the available treatments for Atrial Septal Defect (ASD) Repair?

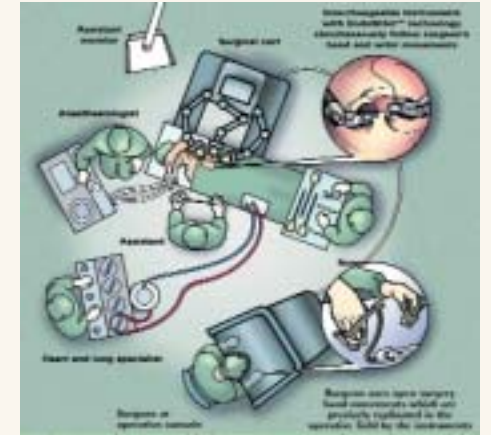
ASD repair may not require treatment if there are few or no symptoms, or if the defect is small. Surgical closure of the defect is recommended if the ASD is large or if symptoms occur.

There are several treatment options available for repairing the ASD, of which one is surgery. The most widely used surgical approach involves a median sternotomy incision. This requires the surgeon to open the chest by making a twelve-inch incision in the breastbone exposing the heart and its vessels. This is considered one of the most invasive and traumatic aspects of cardiac surgery.

Another, newer minimally invasive approach is known as the *da Vinci*™ Atrial Septal Defect Repair. This method involves incorporating the latest advancements in robotics, computer enhanced technology and surgeon skill. It allows your surgeon to perform this procedure in a manner never experienced before by operating through small ports or openings in the chest wall between the ribs. This new method involves many of the same steps as open-chest heart surgery but typically eliminates one of the most painful steps, the need to open the chest.

What is the *da Vinci*® Surgical System?

The *da Vinci*® Surgical System is a totally "intuitive" laparoscopic surgical robot. It's not a robot in the sense of one you would imagine but one that integrates the latest advancements in robotics, computer-enhanced technology and the surgeon's skill. The System consists of several components: a surgeon console, patient-side cart, instruments and an image processing equipment.



Will the *da Vinci*® System make my surgeon unnecessary?

On the contrary, it is designed to enable your surgeon to be more precise, to advance his/her technique and to enhance his/her capability to perform complex minimally invasive surgery. The System replicates your surgeon's movements in real time. It cannot be programmed, nor can it make decisions on its own to move in any way or perform any type of surgical maneuver without your surgeon's input.

