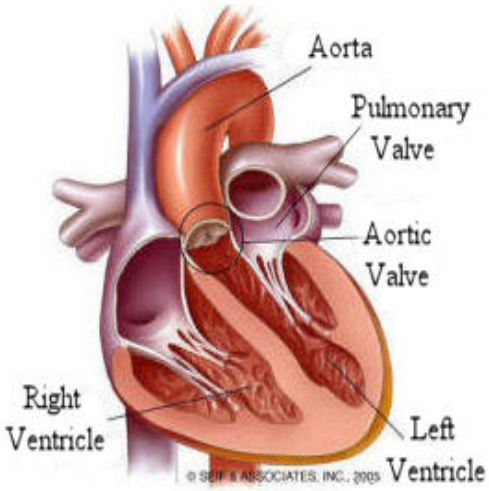
# Aortic Insufficiency (AI)
## (Aortic Regurgitation)

Aortic insufficiency (*AI*) is a condition where the valve between the heart and the *aorta* (the big vessel that pumps blood to the entire body*)* does not close well enough. This means the heart has to work harder to pump the same amount of blood than it would if the valve closed tightly. Every time the heart beats, some of the blood leaks back into the heart. This would be like bailing out a boat with a leaky bucket. Over time, this condition leads to high blood pressure and eventually causes the heart to fail.




### CAUSES

Anything that weakens the aortic valve can cause AI. Examples include:

- Rheumatic fever.
- Congenital (present at birth) valve abnormalities.
- Aortic aneurysm (a ballooning of a weak spot in the vessel wall).
- Syphilis.
- Some collagen diseases and genetic problems.

AI also can be caused by infection or injury or can develop following the repair of aortic stenosis (a narrowing of the valve that does not let enough blood through).

### SYMPTOMS

- Weakness and fatigue.
- Shortness of breath.
- Needing to sleep on 2 or more pillows at night to breathe better.
- Chest discomfort.
- Head bobbing.

### DIAGNOSIS

The diagnosis of AI can usually be made with a physical exam and an *echocardiogram*. An echocardiogram is a test that uses ultrasound to examine the heart. Other tests may also be done to confirm the diagnosis.

### TREATMENT

- If there are mild to no symptoms, only observation may be needed. With severe problems, hospitalization may be necessary.
- Medications may be used to prevent an infection forming on the valves, to keep problems (*symptoms*) from getting worse and/or to delay surgery for 2 or 3 years. Some medications commonly used for AI help the heart work better.
- Surgery to repair or replace the valve is usually reserved for last. Surgery results in better outcomes if not delayed too long.
- Sudden onset of AI may require urgent surgery to replace the valve.

### HOME CARE INSTRUCTIONS

- Echocardiograms (a sound wave picture of the heart and great vessels) are done periodically to monitor treatment.
- Notify the health care provider or dentist about any history of heart valve disease before treatment for any condition. Any dental work, including cleaning, and any invasive procedure can introduce germs (*bacteria*) into the bloodstream. Germs can infect a weakened valve causing endocarditis.
- Take any medications as prescribed.

### SEEK MEDICAL CARE IF YOU DEVELOP:

- Any chest or breathing problems that get worse.
- Irregular heartbeats.
- Unexplained fevers.

## SEEK IMMEDIATE MEDICAL CARE IF:

- New or severe shortness of breath.
- Lightheadedness.
- New or severe chest pains.
- Rapid or irregular heartbeats related to the above symptoms.

## MAKE SURE YOU:

- Understand these instructions.
- Will watch your condition.
- Will get help right away if you are not doing well or get worse.

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