Rheumatic fever

Rheumatic fever is an inflammatory disease which may develop after a Group A streptococcal infection (such as strep throat or scarlet fever) and can involve the heart, joints, skin, and brain. It commonly appears in children ages 5 through 15.

Pathophysiology
Rheumatic fever is a systemic disease affecting the peri-arteriolar connective tissue and can occur after an untreated Group A streptococcal pharyngeal infection. It is believed to be caused by antibody cross-reactivity.
Major criteria

Joints (Migratory polyarthritis): a temporary migrating inflammation of the large joints, usually starting in the legs and migrating upwards.

O [imagine heart-shaped O] (Carditis): inflammation of the heart muscle which can manifest as congestive heart failure with shortness of breath, pericarditis with a rub, or a new heart murmur.

Nodules (subcutaneous nodules - a form of Aschoff bodies): painless, firm collections of collagen fibers on the back of the wrist, the outside elbow, and the front of the knees. These now occur infrequently.

Erythema marginatum: a long lasting rash that begins on the trunk or arms as macules and spread outward to form a snakelike ring while clearing in the middle. This rash never starts on the face and is made worse with heat.

Sydenham's chorea (St. Vitus' dance): a characteristic series of rapid movements without purpose of the face and arms. This can occur very late in the disease.
Minor criteria

**Fever**: temperature elevation

**Arthralgia**: Joint pain without swelling

**Laboratory abnormalities**: increased *Erythrocyte sedimentation rate*, increased *C reactive protein*, *leukocytosis*

**Electrocardiogram** abnormalities: a prolonged PR interval

**Evidence of Group A Strep infection**: positive culture for Group A Strep, elevated or rising *Antistreptolysin O titre*

**Previous rheumatic fever or inactive heart disease**
1. The management of acute rheumatic fever is geared toward the reduction of inflammation with anti-inflammatory medications such as aspirin or corticosteroids.

2. Individuals with positive cultures for strep throat should also be treated with antibiotics.

3. Another important cornerstone in treating rheumatic fever includes the continual use of low dose antibiotics (such as penicillin, sulfadiazine, or erythromycin) to prevent recurrence.