

# Rheumatic Fever

CHAPTER

17

Rheumatic fever is a serious illness with **joint pain** and **fever**. It usually lasts about 6 weeks but may last up to 6 months (or rarely more). Then the joint pain usually goes away completely. But **heart damage**, if it has occurred, may be permanent or become **disabling** (shortness of breath; sickly child).

## CAUSES

Rheumatic fever usually results **after a sore throat** caused by bacteria called 'streptococcus'. (The rheumatic fever is somewhat like an allergic reaction.) A 'strep throat' often starts suddenly with throat pain and fever and **without** signs of a cold. Rheumatic fever is most common where epidemics of strep throat are common—in **crowded communities with poor hygiene**.

## PREVENTION

Rheumatic fever can often be prevented by giving penicillin to children who have signs of a strep throat. Keep giving penicillin for at least 3 days after all signs disappear. Long-term prevention involves improving hygiene and living conditions (a fairer society).

**CAUTION:** Most sore throats in children are not 'strep', but are caused by the common cold; these should **not** be treated with penicillin, or any other antibiotic and never injections (see p. 18). Typically, a **strep throat is quite painful and starts suddenly, with high fever, and without** a stuffy nose or other signs of a cold.

### SIGNS OF THE TYPICAL CASE

- Child between the ages 5 to 15
- Began 1–3 weeks after the child had a severe sore throat
- **High fever**—child quite sick
- **Joint pain.** Pain often starts in one or more of the larger joints (especially wrists and ankles). Then it changes to other joints, often knees and elbows. The painful joints may swell and become red and hot.



- Child gets well in about 6 weeks to 3 months, but **may get the same illness again after another sore throat.**

### OTHER SIGNS (not always present)

- **Reddish curved lines or rash** on skin
- **Lumps** (the size of peas) under the skin over or near the joints
- **Heart problems.** You may hear a 'murmur' if you put your ear over the child's chest. Instead of the typical 'lub-dub . . . lub-dub' of the heartbeat, you will hear a soft, long 'whoosh' for one of the sounds: 'whoosh-dub ... whoosh-dub . . . whoosh-dub'. The 'whoosh' sound means a valve to the heart has been damaged so that it does not close completely. In extreme cases this can lead to heart failure (see *Where There Is No Doctor*, p. 325).
- Nosebleed, belly pain, chest pain, or signs of pneumonia occur in only a few cases.

## Treatment

- If you think a child might have rheumatic fever, get medical advice quickly. Early treatment may help prevent heart damage. (After fever and joint pain have begun, treatment does not seem to shorten the length of the illness.)
- Give penicillin V by mouth for 10 days; or give a single injection of benzathine benzylpenicillin into the buttock muscles (one-half in each buttock); or inject procaine penicillin daily for 10 days. For children allergic to penicillin, use erythromycin. See box for doses. (For cautions in the use of penicillin, see *Where There Is No Doctor*, p. 351.)
- Give aspirin or ibuprofen in high dosage. See INFORMATION SHEET on page 134. Continue giving the medicines until a few days after all signs are gone.
- Apply heat or cold packs to painful joints to help reduce pain and swelling (see p. 132).
- Do full range-of-motion exercises of painful joints gently every day (see Chapter 42).
- Do 'exercises without motion' to maintain strength (see p. 140).
- The child should stay in bed or rest quietly most of the time until all signs are gone (about 6 weeks). Then he can begin activities little by little.

ANTIBIOTIC TREATMENT OF RHEUMATIC FEVER			
NAME OF MEDICINE	AGE OR WEIGHT	DOSE	HOW TO TAKE
<b>Penicillin V</b> (by mouth)	up to 1 year .....	62.5 mg.	4 times a day for 10 days, by mouth
	1 to 5 years .....	125 mg.	
	6 to 12 years .....	250 mg.	
	over 12 years .....	500 mg.	
OR			
<b>Benzathine benzylpenicillin</b> (by injection)	up to 30 kg. ....	450 to 675 mg. (600,000 to 900,000 units)	single deep injection into the muscle, once every 3 to 4 weeks (give one-half into each buttock)
	over 30 kg. ....	900 mg. (1,200,000 units)	
OR			
<b>Procaine penicillin G</b> (by injection)	all children .....	50 mg./kg./day or 50,000 units/kg./day up to a maximum of 1,200,000 units	daily, for 10 days, by deep injection into the muscle (give one-half into each buttock)
OR for persons allergic to penicillin:			
<b>Erythromycin tablets</b> (by mouth)	up to 2 years .....	125 mg.	4 times a day for 10 days, by mouth
	2 to 8 years .....	250 mg.	
	over 8 years .....	250 to 500 mg.	

**NOTE:** It is safer to give children medicines by mouth rather than by injection whenever possible. For precautions in giving medicines to children, see p. 236.

## PREVENTION of repeat attacks

Persons who have once had rheumatic fever have a risk of getting it again. For these persons, take care to treat any sore throat quickly with penicillin. If the person shows signs of heart damage (murmur) with the first attack, there is a high risk of further damage with repeat attacks. These persons would be wise to take a preventive dose of penicillin regularly for at least one attack-free year or until they are 17 years old (after which the risk of strep throat is lower). **Long-term prevention is especially important in persons who already have serious rheumatic heart damage.**

### PREVENTIVE DOSAGES:

- or 1 injection of 1.2 million units of benzathine penicillin G, once a month,
- or 1 tablet of 500 mg. of sulfadiazine 2 times a day,
- or 1 tablet of 250 mg. of penicillin V, 2 times a day with an empty stomach.
- For children allergic to penicillin, give 1 tablet of 250 mg. of erythromycin, 2 times a day.

Before using these medicines, read the precautions. See the GREEN PAGES of *Where There Is No Doctor*.