

# CONGENITAL SYPHILIS (CS)

## Evaluation and treatment of infants (<30 days old) exposed to syphilis in utero\*

**Start**

**INFANTS AND BIRTHING PARENT (e.g., mother) SHOULD HAVE SERUM RPR OR VDRL TITER DRAWN AT DELIVERY**

### Infant Criteria:

- CS findings on physical exam
- Infant titer  $\geq 4$  fold higher than mother's titer
- + darkfield or PCR of placenta, cord lesion, or body fluid
- + silver stain of placenta or cord



No to all

### Maternal Criteria:

- Not treated
- Inadequately treated<sup>§</sup>
- Treatment undocumented
- Treated with a non-benzathine penicillin G regimen
- Initiated treatment <30 days before delivery



No to all

### Additional Maternal Criteria:

- Adequately treated with benzathine penicillin G appropriate for stage, initiated  $\geq 30$  days before delivery
- AND
- No concern for reinfection or treatment failure



Yes to any

**Scenario 1:  
Proven or Highly  
Probable CS**

Yes to any

**Scenario 2:  
Possible CS<sup>||</sup>**

Yes to both

**Scenario 3:  
Less Likely CS**

### Infant Evaluation:

- CSF analysis<sup>†</sup>  
VDRL, cell count, and protein
- Complete blood count (CBC), differential and platelet count
- Long-bone radiographs
- Tests as clinically indicated by signs on physical exam.

### Infant Evaluation:

- CSF analysis<sup>†</sup>  
VDRL, cell count, and protein
- CBC, differential, and platelet count
- Long-bone radiographs

Any abnormalities,  
results not available,  
OR follow-up<sup>||</sup> uncertain

No abnormalities  
AND  
follow-up<sup>||</sup> certain

### Review Maternal Titers & Stage:

- $\geq 4$ -fold decrease in titer after treatment for early syphilis
- OR
- Stable titer for low-titer, latent syphilis (RPR < 1:4 or VDRL < 1:2)

No to both  
OR  
follow-up<sup>||</sup> uncertain

Yes to either  
AND  
follow-up<sup>||</sup> certain

### Infant Treatment:

#### Aqueous crystalline penicillin G<sup>‡</sup>

100,000–150,000 units/kg/day, administered as 50,000 units/kg/dose IV every 12 hours during the first 7 days of life and every 8 hours thereafter for a total of 10 days

### Infant Treatment:

#### Benzathine penicillin G

50,000 units/kg/dose IM in a single dose

### No treatment indicated

with close serologic follow-up of infant every 2-3 months for 6 months

\* Scenario 4 – in which an infant at delivery has a normal physical exam and titer < 4-fold mother's titer, AND the mother was adequately treated prior to becoming pregnant and sustains RPR titers <1:4 or VDRL < 1:2 throughout pregnancy – is not included.

† CSF test results obtained during the neonatal period can be difficult to interpret; normal values differ by gestational age and are higher in preterm infants.

‡ Alternative: Procaine penicillin G 50,000 units/kg/dose IM in a single daily dose for 10 days.

§ Benzathine Penicillin G (BPG or Bicillin-LA), administered according to stage of disease and initiated at least 30 days prior to delivery is the only adequate treatment for syphilis during pregnancy.

|| Evaluation is not necessary if a 10-day course of parenteral therapy is administered, although such evaluations might be useful. If the neonate's nontreponemal test is nonreactive and the mother's risk for untreated syphilis is low, a single IM dose of BPG can be considered without evaluation.

¶ All neonates with reactive nontreponemal tests should receive careful follow-up examinations and serologic testing (i.e., a nontreponemal test) every 2–3 months until the test becomes nonreactive. Neonates with a negative nontreponemal test at birth whose mothers were seroreactive at delivery should be retested at 3 months to rule out serologically negative incubating congenital syphilis at the time of birth.

FOR MORE INFORMATION ABOUT SCENARIO 4 MANAGEMENT, TREATMENT OF SYPHILIS IN PREGNANCY, NEONATAL CSF INTERPRETATION, AND CS INFANT FOLLOW-UP, PLEASE REFER TO THE CDC 2021 STI TREATMENT GUIDELINES.