

Newborn Screening ACT Sheet [Elevated TSH (Primary TSH test)] Congenital Hypothyroidism

Differential Diagnosis: Primary congenital hypothyroidism (CH); transient CH.

Condition Description: Lack of adequate thyroid hormone production..

YOU SHOULD TAKE THE FOLLOWING ACTIONS:

- Contact family to inform them of the newborn screening test result.
- Consult pediatric endocrinologist; refer to endocrinologist, if considered appropriate.
- Evaluate infant (see clinical considerations below).
- Initiate timely confirmatory/diagnostic testing as recommended by the specialist.
- Initiate treatment as recommended by consultant as soon as possible.
- Educate parents/caregivers that hormone replacement prevents mental retardation.
- Report findings to state newborn screening program.

Diagnostic Evaluation: Diagnostic tests should include serum free T4 and thyroid stimulating hormone (TSH); consultant may also recommend total T4 and T3 resin uptake. Test results include reduced free T4 and elevated TSH in primary hypothyroidism; if done, reduced total T4 and low or normal T3 resin uptake

Clinical Considerations: Most neonates are asymptomatic, though a few can manifest some clinical features, such as prolonged jaundice, puffy facies, large fontanels, macroglossia and umbilical hernia. Untreated congenital hypothyroidism results in developmental delay or mental retardation and poor growth.

Referral (local, state, regional and national):

Birmingham: Childrens
of Alabama Gail Mick,
MD Pediatric
Endocrinology Phone:
(205) 638-9107

Mobile:
University of South Alabama
Pediatric Endocrinology
Anne Marie Kaulfers, MD
Phone (251) 405-5147

Dothan:
Pediatric Endocrinology
Heather Choat, MD
Phone: (334) 699-3733

Huntsville:
Pediatric Endocrinology
Priscila Rodas, MD and Zeinab Zorkot, MD
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Pediatric Endocrinology
Chelsea Zimmerman, MD
Phone: (334) 528-7270

Alabama Laboratory Protocol for a Presumptive Positive TSH Result		
Result:	Criteria:	Action:
TSH ≥ 40	*Collected ≥ 24 hours of age * ≥ 2500 grams * ≥ 37 weeks gestation	*Contact and inform parent *Confirmatory testing (free T4 and TSH) *Assess for signs and symptoms *Refer to specialist (pediatric endocrinology above).
TSH ≥ 15	*Collected ≥ 7 days of age	
TSH ≥ 150	*Collected < 24 hours of age * < 2500 grams * < 37 weeks gestation	

Disclaimer: This guideline is designed primarily as an educational resource for clinicians to help them provide quality medical care. It should not be considered inclusive of all proper procedures and tests or exclusive of other procedures and tests that are reasonably directed to obtaining the same results. Adherence to this guideline does not necessarily ensure a successful medical outcome. In determining the propriety of any specific procedure or test, the clinician should apply his or her own professional judgment to the specific clinical circumstances presented by the individual patient or specimen. Clinicians are encouraged to document the reasons for the use of a particular procedure or test, whether or not it is in conformance with this guideline. Clinicians also are advised to take notice of the date this guideline was adopted, and to consider other medical and scientific information that become available after that date.

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