

*Identifying the cause of a child's obesity
can help both patients and their families.*

Early Onset Obesity (MC4R) Evaluation

Causes of Severe Early Onset Obesity:

- Most obesity in children is believed to be due to a sedentary lifestyle and poor nutritional habits.
- In 3-5% of severely obese children, obesity has been linked to mutations in the melanocortin-4 receptor (MC4R).¹
- Children with abnormalities in the gene for MC4R apparently do not experience a sense of satiety.

Why genetic testing?

Identifying children who are obese because of mutations in the MC4R gene is important because:

- Parents want to understand the basis of their child's obesity.
- Parents should know that their child may not experience satiety.
- Parents have to realize that a child with MC4R-related obesity will not "outgrow" his or her weight problems.
- Early treatment of pediatric obesity is essential to reduce medical and psychological sequelae.
- MC4R-related obesity may require more rigorous treatment regimens than other forms of obesity.
- Clinical trials are underway to evaluate the potential of MC4R agonists for treatment of MC4R-related obesity.²
- Genetic testing can identify obesity-related MC4R mutations in a patient's relatives before they become obese.

Indications for testing:

- Severe obesity with onset at or before 5 years
- Family history of MC4R-related early onset obesity

*For complete ordering information,
please see the reverse side.*

References: 1. Farooqi IS et al (2003) *N Engl J Med* 348:1085-95. 2. Korner J and Aronne L. (2003) *J Clin Invest* 111: 565-570.

For a brief review on Early Onset Obesity, please visit www.athenadiagnostics.com/DR



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Early Onset Obesity (*MC4R*) Evaluation

- Typical Presentation:** Severe obesity before age 3 or 4
- Synonyms:** MC4R gene-based obesity
- Indications for Testing:**
- Severe obesity with onset at or before age 5
 - Family history of MC4R-related early onset obesity

TEST DETAILS

- Test Code:** 640
- Test Turnaround:** 14-21 days

TECHNICAL INFORMATION

- Methodology:** Polymerase Chain Reaction (PCR), DNA sequencing of entire protein coding region of gene
- Patents:** United States Patent Nos: 5,622,860 and 5,703,220

SHIPPING CONSIDERATIONS

- Specimen Type:** Whole blood
- Volume:** 10 mL (pediatric minimum: 2 mL)
- Collection Tube:** Yellow or lavender top
- Stability:** Hemolysis may compromise DNA recovery and integrity after 48 hrs
- Storage Conditions:** For short periods (until shipped) at 4°C
- Shipping Conditions:** Overnight at room temperature (specimen arrival must be less than 24 hrs after collection); ship Monday through Thursday only

Call Athena Diagnostics' Customer Service Representatives to order the Early Onset Obesity (*MC4R*) Evaluation (Test #640) at:

800-394-4493 x2



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