



YOU MIGHT BE SEEING HUNTER SYNDROME (MPS II) BEFORE ANYONE ELSE

Hunter syndrome (mucopolysaccharidosis II, MPS II) is a serious, progressive disorder that affects boys almost exclusively.¹ Symptoms generally appear between the ages of 2 and 4 years, and can vary widely among patients.¹

Some MPS II symptoms are head and neck conditions commonly seen in young children, including:

- Recurrent otitis media¹
- Chronic rhinorrhea²
- Enlarged tonsils and adenoids³

Be the first to suspect Hunter syndrome (MPS II).

When you see recurrent head and neck conditions, look for a larger cluster of signs and symptoms.

POTENTIAL SYMPTOM CLUSTER

- Large head (macrocephaly)²
- Recurrent otitis media¹
- Joints of fingers, arms, and legs held in partial flexion²
- Chronic rhinorrhea²
- Enlarged abdomen from hepatosplenomegaly²
- Coarse facial features²
 - Depressed nasal bridge
 - Thick nostrils and lips
 - Large tongue (macroglossia)
- Enlarged tonsils and adenoids³
- Possible developmental delays (speech and mobility)⁴
- Airway obstruction and obstructive sleep apnea²



1 year
• recurrent ear infections

3 years
• ear infection
• rhinorrhea

4 years
• ear infection
• rhinorrhea
• enlarged tonsils and adenoids

5 years
• tonsils removed

6 years—diagnosis
• Hunter syndrome (mucopolysaccharidosis II, MPS II)

Not all patients have characteristic facial features at a young age.

SEE THE FULL PICTURE

Early diagnosis is key

- Hunter syndrome (MPS II) is progressive and severe¹
- Over time, children may experience irreparable damage to many organs and systems³
- In severe cases, death can occur by the teens; in milder cases, patients can live into their 50s or 60s¹

Screening and diagnosis

- Screening methods include measuring urinary glycosaminoglycans (GAG)¹
- A geneticist will make a definitive diagnosis by measuring iduronate-2-sulfatase (I2S) activity in serum, white blood cells, or fibroblasts from skin biopsy¹

Refer appropriate children to a medical geneticist immediately for definitive diagnosis.

HunterPatients.com

References

1. Neufeld EF, Muenzer J. The mucopolysaccharidoses. In: Scriver CR, Beaudet AL, Sly WS, et al, eds. *The Metabolic and Molecular Bases of Inherited Disease*. 8th ed. New York, NY: McGraw-Hill; 2001:3421-3452. 2. Finlayson LA. Hunter syndrome (mucopolysaccharidosis II). *Pediatr Dermatol*. 1990;7:150-152. 3. National Institute of Neurological Disorders and Stroke. National Institutes of Health. Mucopolysaccharidoses fact sheet. http://www.ninds.nih.gov/disorders/mucopolysaccharidoses/detail_mucopolysaccharidoses.htm. Accessed June 19, 2007. 4. Wraith JE. Idursulfase for enzyme-replacement therapy in mucopolysaccharidosis II. *Therapy*. 2007;4:231-240.