



## Complete Summary

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### GUIDELINE TITLE

Screening for retinopathy in the pediatric patient with type 1 diabetes mellitus.

### BIBLIOGRAPHIC SOURCE(S)

Lueder GT, Silverstein J. Screening for retinopathy in the pediatric patient with type 1 diabetes mellitus. Pediatrics 2005 Jul;116(1):270-3. [31 references]

[PubMed](#)

### GUIDELINE STATUS

This is the current release of the guideline.

All clinical reports from the American Academy of Pediatrics expire 5 years after publication unless reaffirmed, revised, or retired at or before that time.

## COMPLETE SUMMARY CONTENT

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## SCOPE

### DISEASE/CONDITION(S)

- Type 1 diabetes mellitus
- Diabetic retinopathy (DR)

### GUIDELINE CATEGORY

Risk Assessment  
Screening

### CLINICAL SPECIALTY

Endocrinology  
Family Practice  
Ophthalmology  
Pediatrics

### **INTENDED USERS**

Physicians

### **GUIDELINE OBJECTIVE(S)**

- To provide recommendations on screening for retinopathy in the pediatric patient with type 1 diabetes mellitus
- To review the risk factors for the development of diabetic retinopathy (DR) and screening guidance for pediatric patients with type 1 diabetes mellitus

### **TARGET POPULATION**

Children with type 1 diabetes mellitus

### **INTERVENTIONS AND PRACTICES CONSIDERED**

#### **Ophthalmic Screening for Diabetic Retinopathy**

1. Initial examination 3 to 5 years after diagnosis if older than 9 years, with annual follow-ups thereafter
2. Patient and parent education regarding the benefits of optimal metabolic control

### **MAJOR OUTCOMES CONSIDERED**

Risk for and prevalence of diabetic retinopathy in children with type 1 diabetes mellitus

## **METHODOLOGY**

### **METHODS USED TO COLLECT/SELECT EVIDENCE**

Hand-searches of Published Literature (Primary Sources)

### **DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE**

Not stated

### **NUMBER OF SOURCE DOCUMENTS**

Not stated

**METHODS USED TO ASSESS THE QUALITY AND STRENGTH OF THE EVIDENCE**

Expert Consensus

**RATING SCHEME FOR THE STRENGTH OF THE EVIDENCE**

Not applicable

**METHODS USED TO ANALYZE THE EVIDENCE**

Review

**DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE**

Not stated

**METHODS USED TO FORMULATE THE RECOMMENDATIONS**

Expert Consensus

**DESCRIPTION OF METHODS USED TO FORMULATE THE RECOMMENDATIONS**

Not stated

**RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS**

Not applicable

**COST ANALYSIS**

A formal cost analysis was not performed and published cost analyses were not reviewed.

**METHOD OF GUIDELINE VALIDATION**

Peer Review

**DESCRIPTION OF METHOD OF GUIDELINE VALIDATION**

Not stated

**RECOMMENDATIONS**

**MAJOR RECOMMENDATIONS**

**Guidelines for Ophthalmic Screening for Diabetic Retinopathy (DR)**

Screening guidelines for diabetic retinopathy (DR) have been published previously by the American Academy of Pediatrics, the American Academy of Ophthalmology, and the American Diabetes Association. The recommendations regarding pediatric patients with type 1 diabetes mellitus are similar. The American Academy of Ophthalmology recommends annual screening beginning 5 years after the onset of diabetes. The guidelines from the American Diabetes Association include annual screening beginning 3 to 5 years after diagnosis of diabetes once the patient is 10 years or older. The American Academy of Pediatrics recommends an initial examination 3 to 5 years after diagnosis if older than 9 years, with annual follow-ups thereafter.

The recommendations reflect the fact that the incidence of DR in young children is negligibly small, and therefore children younger than 9 years do not require screening for DR. The incidence of retinopathy in young adolescents is also very low, particularly for proliferative DR. Although the risk of DR typically does not increase significantly until 8 to 10 years after diagnosis, the recommendation for annual screening beginning 3 to 5 years after diagnosis (in children who are older than 9 years) is reasonable, given that DR has been reported occasionally within this time.

Because children with type 1 diabetes mellitus are at a greatly increased risk of visual loss over the course of their lives, special attention should be given to identifying other causes of visual loss in these patients. Screening for potentially treatable visual disorders such as amblyopia is recommended for all children and should be performed with particular care in children with type 1 diabetes mellitus. Patient and parent education regarding the benefits of optimal metabolic control is also beneficial early in the course of the disease.

### **CLINICAL ALGORITHM(S)**

None provided

## **EVIDENCE SUPPORTING THE RECOMMENDATIONS**

### **TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS**

The type of evidence supporting the recommendations is not specifically stated.

## **BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS**

### **POTENTIAL BENEFITS**

Early identification and treatment of diabetic retinopathy (DR) can decrease the risk of vision loss in affected patients.

### **POTENTIAL HARMS**

Not stated

## IMPLEMENTATION OF THE GUIDELINE

### DESCRIPTION OF IMPLEMENTATION STRATEGY

An implementation strategy was not provided.

## INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES

### IOM CARE NEED

Living with Illness  
Staying Healthy

### IOM DOMAIN

Effectiveness  
Patient-centeredness

## IDENTIFYING INFORMATION AND AVAILABILITY

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Lueder GT, Silverstein J. Screening for retinopathy in the pediatric patient with type 1 diabetes mellitus. Pediatrics 2005 Jul;116(1):270-3. [31 references]  
[PubMed](#)

### ADAPTATION

Not applicable: The guideline was not adapted from another source.

### DATE RELEASED

2005 Jul

### GUIDELINE DEVELOPER(S)

American Academy of Pediatrics - Medical Specialty Society

### SOURCE(S) OF FUNDING

American Academy of Pediatrics

### GUIDELINE COMMITTEE

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Section on Endocrinology

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## **FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST**

Not stated

## **GUIDELINE STATUS**

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## **GUIDELINE AVAILABILITY**

Electronic copies: Available from the [American Academy of Pediatrics \(AAP\) Policy Web site](#).

Print copies: Available from American Academy of Pediatrics, 141 Northwest Point Blvd., P.O. Box 927, Elk Grove Village, IL 60009-0927.

## **AVAILABILITY OF COMPANION DOCUMENTS**

None available

## **PATIENT RESOURCES**

None available

## **NGC STATUS**

This NGC summary was completed by ECRI on July 27, 2005. The information was verified by the guideline developer on August 23, 2005.

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