

Trust Guideline for the Assessment of Vision in Children with Down's Syndrome

A Clinical Guideline recommended

For use in:	The Community and Ophthalmology Unit
By:	Orthoptists, Health Visitors, GPs and Ophthalmologists
For:	Children Diagnosed with Down's Syndrome
Division responsible for document:	Surgical
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Name of document author:	Fiona Grady
Job title of document author:	Head Orthoptist
Name of document author's Line Manager:	Heidi Cate
Job title of author's Line Manager:	Operational Manager
Supported by:	Mr Narman Puvanachandra, Paediatric Ophthalmologist Mrs Aseema Misra, Clinical Director Ophthalmology
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If Yes - does the strategy/policy deviate from the recommendations of NICE? If so why?	N/A

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The Trust's guidelines are made publicly available as part of the collective endeavour to continuously improve the quality of healthcare through sharing medical experience and knowledge. The Trust accepts no responsibility for any misunderstanding or misapplication of this document.

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Version and Document Control:

Version Number	Date of Update	Change Description	Author
5	19/01/2021	Addition of Plusoptix Autorefractor to Broad Recommendations and Referral Criteria and removal of MTI photo screener	Fiona Grady

This is a Controlled Document

Printed copies of this document may not be up to date. Please check the hospital intranet for the latest version and destroy all previous versions.

Quick reference guideline/s

- Children with Down's Syndrome should be notified at diagnosis to the Orthoptic Department, Norfolk and Norwich University Hospital.
- Visual Assessment takes place between 18 and 24 months.
- Abnormalities are referred to the Paediatric Eye Clinic for further assessment and treatment. Children who are referred to the Paediatric Eye Clinic then go on to be reviewed at intervals appropriate to the visual difficulty and development of the child.
- Children passing this assessment will be called up again at 4½ years for a routine Orthoptic/Ophthalmological Eye Test.

Objective of Guideline

To ensure all children with Down's Syndrome have an orthoptic eye examination at 18-24 months of age, and an assessment aged 4½ years, to enable us to diagnose and treat significant eye problems during the visual development period.

Rationale for the recommendations

Hypermetropia, myopia and astigmatism are more prevalent in children with Down's syndrome. Also, refractive errors in children with Down's Syndrome are much more likely to increase as they get older.

Children with Down's Syndrome have a higher prevalence of oculomotor problems such as strabismus and nystagmus.

Recent studies have also highlighted that most (over 70%) children with Down's Syndrome under-accommodate by quite a large amount, even with their refractive error corrected. Studies have also shown that under accommodation can be helped with the prescribing of bifocals. *The Hall 4 Report "Health for All Children" (p.242)* – states that all children with Down's should undergo a specialist eye examination, and guidelines from the RCOphth suggest that children with Down's should be referred for Orthoptic Assessment and refraction at 18-24 months of age.

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Broad recommendations

All children diagnosed with Down's Syndrome should be registered with the Orthoptic Department, Norfolk and Norwich University Hospital in the first 18 months after their birth. This policy will need to be circulated to all health visitors, GPs and Paediatricians to ensure that all staff are aware of the need to refer. The assessment clinics would run as follows: The children will be sent an appointment to attend the orthoptic clinic when aged 18-24 months, for the following assessments:

- Functional Assessment of Vision.
 - Age and ability appropriate tests to assess the level of vision present in each eye.
- Orthoptic assessment.
 - Assessment for squints and eye muscle abnormalities.
- Plusoptix Autorefractor.
 - To detect any refractive error
- Referral to Sensory Support (Teachers for the Visually Impaired) 01603 224787.
 - If not already known to Sensory Support, to provide future support with educational needs.

Referral to Paediatric Eye Clinic

Referral Criteria

- Reduced vision in one or both eyes.
- Presence of squint or muscle abnormality, ptosis or other ophthalmologic problem.
- Positive evidence of refractive error on the plusoptix autorefractor.

Children meeting any of the above criteria will be referred to the Paediatric Eye Clinic at the NNUH, for a full cycloplegic refraction and fundus examination.

Further Assessment

Children not requiring referral at 18 months will be re-assessed in the Eye Clinic at age 4½ years, for orthoptic assessment and/or ophthalmic check.

Clinical Audit Standards derived from guideline

All children with Down's Syndrome should have an eye examination at 18-24 months, then again at aged 4½ years.

Children with Down's Syndrome are referred to the appropriate services for ongoing management.

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Summary of development and consultation process undertaken before registration and dissemination

The authors listed above on behalf of a guideline development group, which has agreed the final content, drafted the guideline. During its development it was/has been circulated for comment to: Mr. Narman Puvanachandra, Consultant Ophthalmologist, Sarah Steel, Community Paediatrician, Irene Struthers, Team Leader Visual Impairment Sensory Support.

Distribution list / dissemination method

General Practitioners, Community Paediatricians, Health Visitors.
For display on hospital Intranet.

References / source documents

The Hall 4 Report "Health for All Children" David M.B. Hall and David Elliman December 2002

DSA Journal Issue 106 Autumn 2004

RCOph Guidelines: www.rcophth.ac.uk