

**THE FINNISH REGISTER OF VISUAL IMPAIRMENT**

***ANNUAL STATISTICS 2018***

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TERVEYDEN JA  
HYVINVOINNIN LAITOS

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AND WELFARE (THL)**



Näkövammaisten  
liitto ry

**FINNISH FEDERATION  
OF THE VISUALLY IMPAIRED**

## What is the Finnish Register of Visual Impairment?

The purpose of the Finnish Register of Visual Impairment is to study the incidence of visual impairment in Finland. The Register serves as a basis for preventive measures and treatment of visual impairment, as well as for planning of rehabilitation and other special services for persons with visual impairment. In addition, the Register provides research material on ophthalmological diseases and visual impairment. It also aims to promote and support research in the field.

The Register is maintained by the Finnish Federation of The Visually Impaired and is subject to the National Institute for Health and Welfare (THL). The National Board of Health established the Register in 1983. The operation of the Register is regulated by the Act (556/89) and Decree (774/89) on National Personal Records kept under the Health Care System. Health care authorities, institutions and personnel are, under the above-mentioned Act, responsible to forward to the Register such information on persons with visual impairment as is specified in the Decree.

### *Notification of visual impairment*

Notification must be made by a specialist in ophthalmology or the ophthalmological unit of a hospital. Notification must be made if the corrected visual acuity is permanently less than 0.3 in the better eye of the patient, or if the person must for some other reason be considered comparable with a person with permanent visual impairment as described above.

### *Data on the Register*

A notification form is used to compile personal data of persons with visual impairment and to record information on the nature (diagnoses), severity (visual acuity and visual field) and aetiology of the impairment, on multiple impairments and on the patient's visual ability in relation to reading and moving about. In connection with the updating of records, the Central Population Records provide information on the mother tongue, marital status and possible date of death of persons with visual impairment. The Central Statistical Office reports the cause of death.

Information compiled in the Finnish Register of Visual Impairment is confidential. Information concerning an individual with a visual impairment is not released to an outsider without the approval of the National Research and Development Centre for Welfare and Health.

## **Activities**

### ***Maintenance of the Register***

A central goal of the Register is to compile as comprehensive as possible a data base on visual impairment in order to serve those interested. Special statistics are drawn up on the basis of records compiled in the Register. Central statistics illustrating the profile of visual impairment can be found in the statistical section of the annual report released by the Register.

### ***Promotion of research on visual impairment***

The Register promotes research on visual impairment by providing special statistics based on its records, and bibliographical references to researchers and students. In addition, the Register surveys study subjects related to visual impairment, maintains contacts with researchers in the field, takes part in joint research projects and international activities, and organizes research seminars.

## **Administration, personnel and contact addresses**

Register staff:

Hannu Uusitalo MD, PhD,  
professor of ophthalmology  
Chief Medical Officer  
[hannu.uusitalo@uta.fi](mailto:hannu.uusitalo@uta.fi)

Matti Ojamo (M.Soc.Sc.),  
Research Director  
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The Register operates on the premises of the Finnish Federation of the Visually Impaired in Helsinki.

### **Address:**

#### **THE FINNISH REGISTER OF VISUAL IMPAIRMENT**

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## ANNUAL STATISTICS 2018

The register has gathered information about the visually handicapped for 36 years (1.1.1983-). It is estimated that there are 50,000 - 60,000 visually impaired people in Finland (the population is 5,5 millions). The register contains information on 57,186 v.i. persons, of whom 18 172 are alive (31.12.2018). 1,800 - 2,000 new registrations are made annually. New entries received in the past few years have not changed the profile of visual impairment formed on the basis of the register. It can be assumed that the register contains a representative sample of those v.i.'s who have been using ophthalmological health care services in Finland since the year 1983.

Our register is not complete, we are on sample basis. Therefore the main distributions describing the registered persons are presented in the following tables as relative frequencies (%-distributions).

**TABLE 1 GENDER**

Registered visual impairment in Finland in 2018 (total and new registrations)

	Total %	New 2018 %
Female	60.2	64.6
Male	39.8	35.4
<b>Total</b>	<b>100.0</b>	<b>100.0</b>
<b>N</b>	<b>18 172</b>	<b>1 587</b>

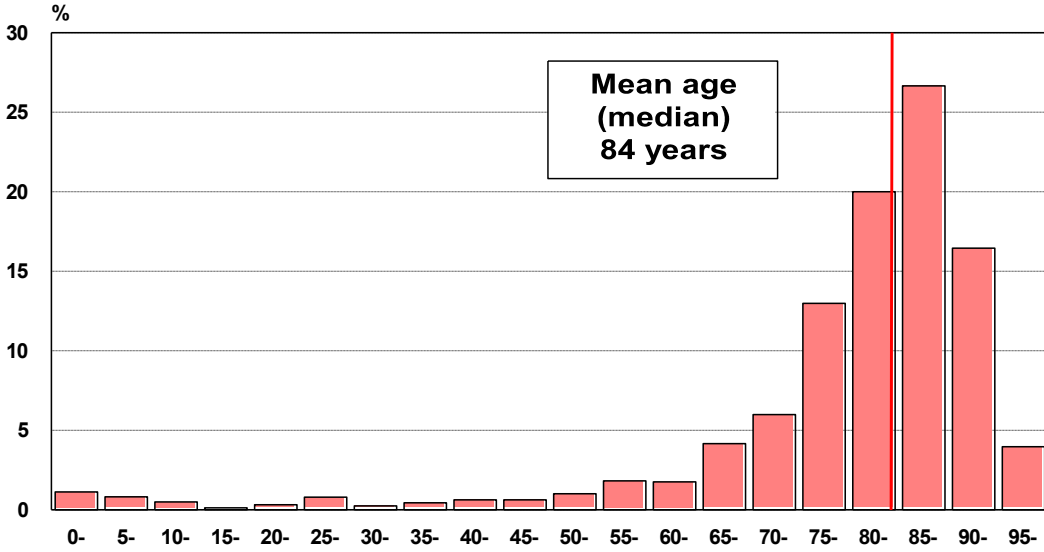
**TABLE 2 AGE GROUPS**

Registered visual impairment in Finland in 2018 (total and new registrations)

	Total %	New 2018 %
0 – 14	2.8	2.5
15 – 24	4.0	0.4
25 – 34	4.7	0.6
35 – 44	4.6	1.1
45 – 54	6.2	1.6
55 – 64	8.4	3.6
65 – 74	11.9	10.1
75 - 84	20.4	33.0
85 +	37.0	47.1
<b>Total</b>	<b>100.0</b>	<b>100.0</b>
<b>N</b>	<b>18 172</b>	<b>1 587</b>
0 - 17	3.8	2.5
18 - 39	10.0	1.4
40 - 64	17.0	5.9
65 - 84	32.3	43.1
85 +	37.0	47.1
Mean age	79	84

**FIGURE 1 AGE GROUPS**

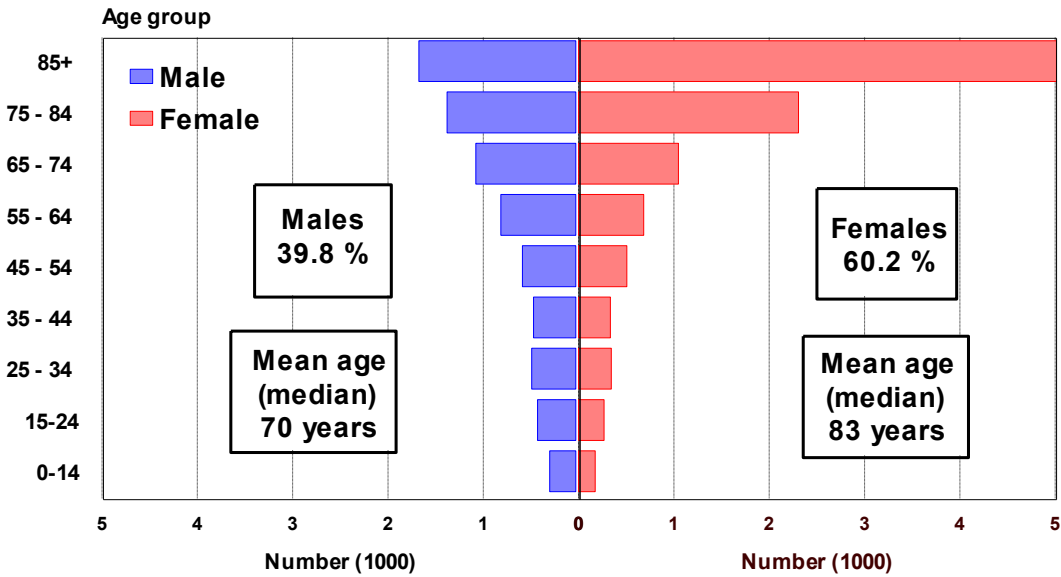
New registrants in Finland in 2018 (N = 1 587)



The Finnish Register of Visual Impairment 2018

**FIGURE 2 AGE AND GENDER**

Registered visual impairment in Finland in 2018 (N = 18 172)



The Finnish Register of Visual Impairment 2018

**TABLE 3 PRINCIPAL DIAGNOSES OF VISUAL IMPAIRMENT BY AGE GROUPS**

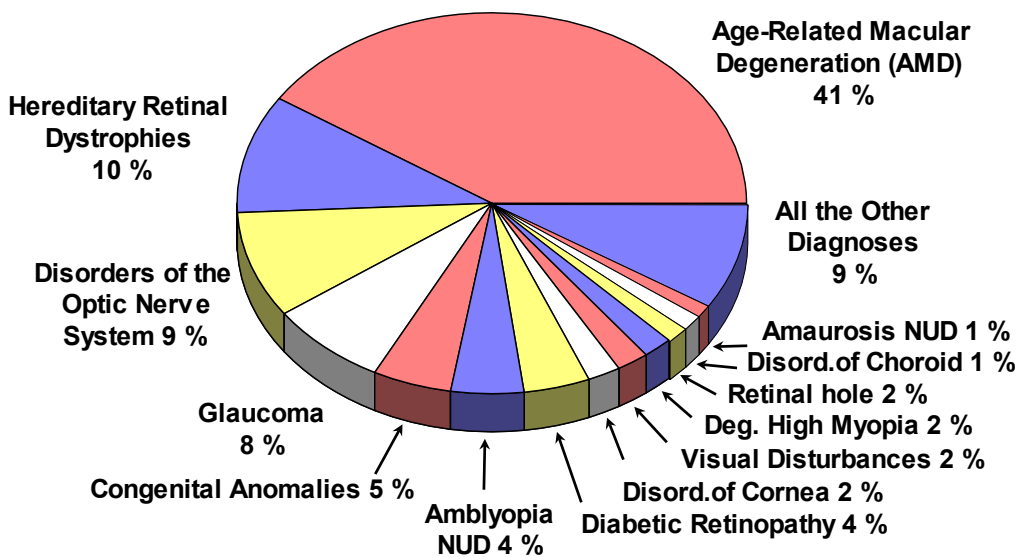
Registered visual impairment in Finland in 2018, total distribution and new registrations

<b>A. AGE GROUP 0 - 17 YEARS</b>	Total %	New 2018 %
Disorders of optic nerve and visual pathways	31.9	22.5
- cortical blindness	18.9	12.5
Congenital anomalies of eye	21.9	22.5
Hereditary retinal dystrophies	11.6	12.5
Amblyopia NUD	8.4	10.0
Albinism	4.9	0.0
Nystagmus	4.5	2.5
ROP, retinopathy of prematurity	3.8	0.0
Disorders of refraction and accommodation	3.0	2.5
Amaurosis NUD	2.0	2.5
Other diagnoses	8.1	25.0
<b>0 - 17 years total (total N = 689, new 2018 N = 40)</b>	<b>100.0</b>	<b>100.0</b>
<b>B. AGE GROUP 18 - 64 YEARS</b>	Total %	New 2018 %
Hereditary retinal dystrophies	20.8	18.1
Disorders of optic nerve and visual pathways	20.3	13.8
- optic atrophy	10.6	6.0
Congenital anomalies of eye	12.9	1.7
Amblyopia NUD	7.6	2.6
Diabetic retinopathy	6.9	12.9
Visual field defects, other vis. disturbances (excl amblyopia)	3.6	9.5
ROP, retinopathy of prematurity	3.5	0.0
High myopia (myopia maligna)	2.9	7.8
Disorders of choroid	2.8	1.7
Glaucoma	2.8	8.6
Amaurosis NUD	1.9	0.9
Nystagmus (Irregular eye movement)	2.1	2.6
Disorders of cornea	1.8	3.4
Other diagnoses	10.1	16.4
<b>18 - 64 years total (total N = 4 894, new 2018 N = 116)</b>	<b>100.0</b>	<b>100.0</b>
<b>C. AGE GROUP 65+ YEARS</b>	Total %	New 2018 %
AMD, Age-related macular degeneration	58.5	70.6
Glaucoma	10.0	13.2
Hereditary retinal dystrophies	5.6	0.5
Disorders of optic nerve and visual pathways	3.4	2.0
Diabetic retinopathy	3.3	2.2
Amblyopia NUD	3.0	1.1
Disorders of cornea	2.4	2.0
Retinal hole	2.0	1.4
High myopia (myopia maligna)	1.6	0.3
Retinal vascular occlusion	1.5	2.1
Other diagnoses	8.7	4.6
<b>65+ years total (total N = 12 589, new 2018 N = 1 431)</b>	<b>100.0</b>	<b>100.0</b>

Coding manual for Medical Eye Services, 1980, Based on ICD-9

### FIGURE 3 PRINCIPAL DIAGNOSES OF VISUAL IMPAIRMENT

Registered visual impairment in Finland in 2018 (N = 18 172)



The Finnish Register of Visual Impairment 2018

### TABLE 4 MULTIPLE IMPAIRMENT AND DIABETES

Registered visual impairment in Finland in 2018  
(total and new registrations)

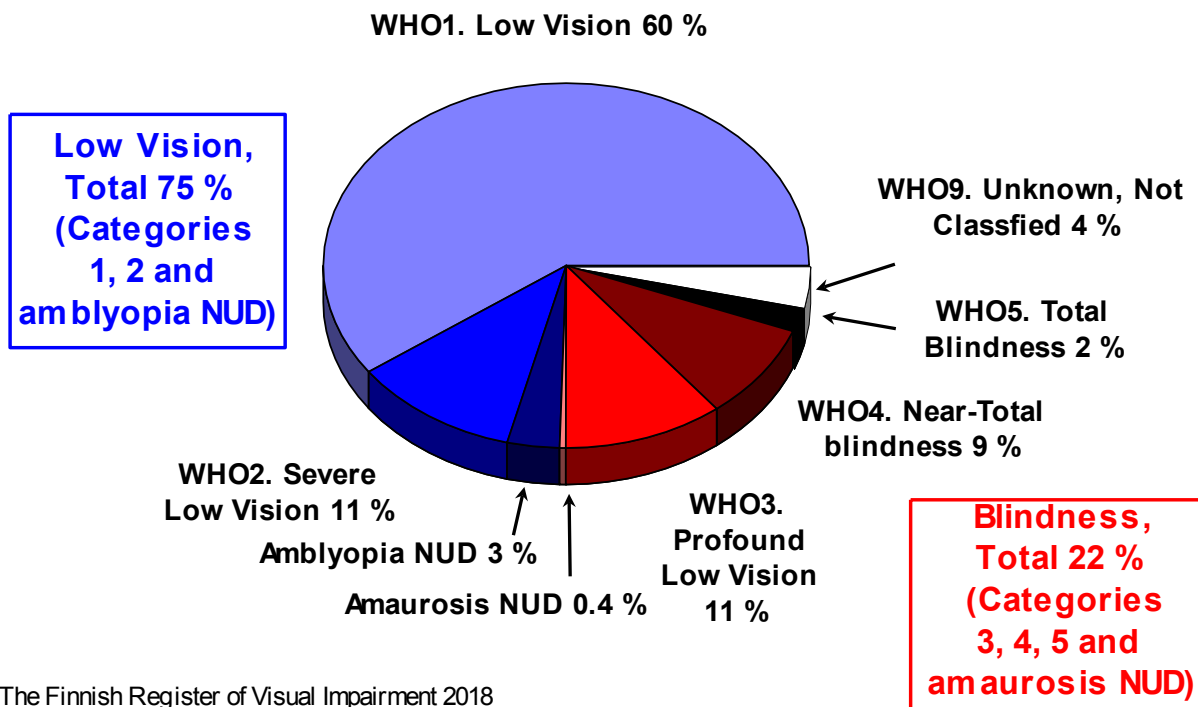
	Total %	New 2018 %
Diabetes	9.2	10.2
Hearing	5.5	6.2
Learning disabilities	4.7	1.3
Mobility	4.6	4.2
CP, Cerebral Palsy	2.3	0.4
<b>N</b>	<b>18 172</b>	<b>1 587</b>

### TABLE 5 AGE AT ONSET OF VISUAL IMPAIRMENT

Registered visual impairment in Finland in 2018  
(total and new registrations)

	Total %	New 2018 %
0	9.8	1.3
1 – 17	4.9	1.2
18 – 39	7.0	0.5
40 – 64	10.1	4.0
65+	36.2	54.9
Unknown/not reported	32.0	38.1
<b>Total</b>	<b>100.0</b>	<b>100.0</b>
<b>N</b>	<b>18 172</b>	<b>1 587</b>

**FIGURE 4 CATEGORIES OF VISUAL IMPAIRMENT BY WHO'S DEFINITION**  
Registered visual impairment in Finland in 2018 (N = 18 172)



**TABLE 6 CATEGORIES OF VISUAL IMPAIRMENT BY WHO'S DEFINITION**  
Registered visual impairment in Finland in 2018 (N = 18 172)

	Visual acuity	Visual field $\varnothing$	Total %	New 2018 %
1 Moderate low vision	less than 0.3 $\rightarrow$ $\geq$ 0.1		59.8	70.0
2 Severe low vision	less than 0.1 $\rightarrow$ $\geq$ 0.05		11.4	8.8
low vision, not specif			3.4	0.7
<b>Low vision total</b>	less than 0.3 $\rightarrow$ $\geq$ 0.05		<b>74.6</b>	<b>79.5</b>
3 Profound low vision	less than 0.05 $\rightarrow$ $\geq$ 0.02	less than 20°	10.6	8.8
4 Near-total blindness	less than 0.02 $\rightarrow$ 1/ $\infty$	less than 10°	8.7	5.0
5 Total blindness	0		2.2	0.1
blindness not specified			0.4	0.0
<b>Blindness total</b>	less than 0.05	less than 20°	<b>21.9</b>	<b>13.9</b>
9 Unknown (Other)			3.5	6.6
<b>Total</b>			<b>100.0</b>	<b>100.0</b>
<b>N</b>			<b>18 172</b>	<b>1 587</b>



**TABLE 7 NATIVE LANGUAGE**

Registered visual impairment in Finland in 2018  
(total and new registrations)

	Total %	New 2018 %
finnish	91.3	88.7
swedish	5.9	8.4
russian	0.5	0.5
arabic	0.3	0.4
estonian	0.2	0.7
somali	0.2	-
other, unknown/not reported	1.6	1.4
<b>Total</b>	<b>100.0</b>	<b>100.0</b>
<b>N</b>	<b>18 172</b>	<b>1 587</b>

**TABLE 8 FAMILY STATUS IN AGE GROUPS**

Registered visually impaired 15 – 64 years old persons % in Finland according to National Census in 2015%

	Age group					Total
	0 - 14 y	15 - 24 y	25-44 y	45-64 y	65 y+	
A	96.8	62.5	16.1	3.3	0.0	7.0
B	-	6.9	36.2	50.2	34.2	34.8
C	-	25.8	40.5	41.8	60.7	53.1
D	4.3	5.9	7.3	4.7	5.0	5.2
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

A Child in a family

B Spouse, partner, mother/father

C Not belonging to families

D Unknown, institutionalised population

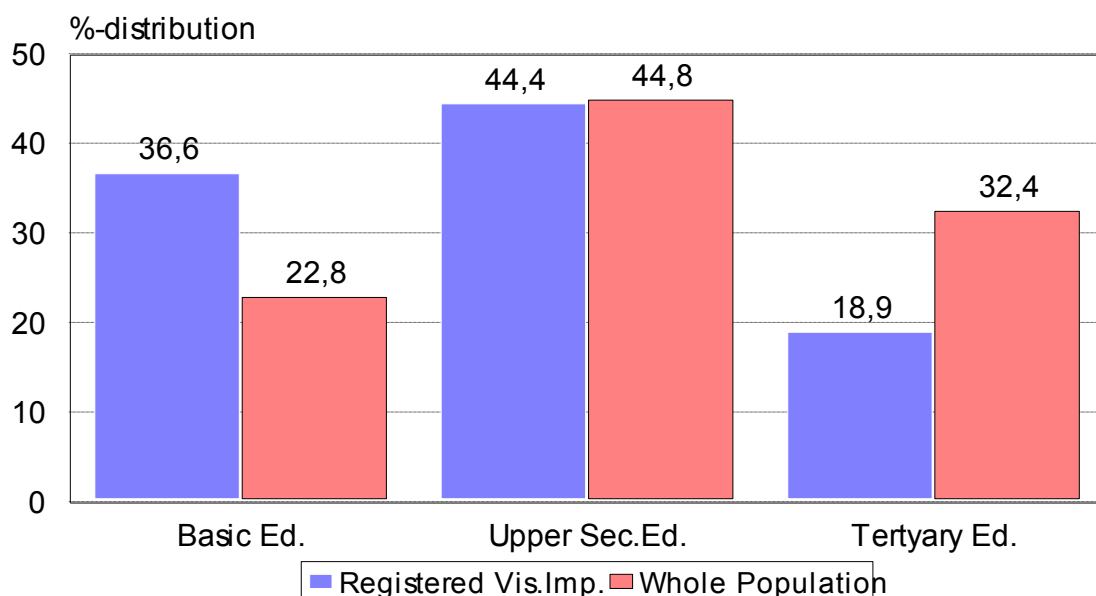
**TABLE 9 MAIN TYPE OF ACTIVITY**

Registered visually impaired 15 - 64 year old persons in Finland according to National Census in 2015 compared with the whole population

	Registered vis. impaired persons %	Whole population %
Fully employed	22.1	68
Partially employed	17.5	
Unemployed	3.2	6
Students	3.0	7
Pensioners	51.6	9
Other or unknown	2.7	10
<b>Total</b>	<b>100.0</b>	<b>100.0</b>
<b>N (the registered visually impaired persons in this study)</b>	<b>4 661</b>	

**FIGURE 5 LEVEL OF EDUCATION**

Registered visually impaired 15 - 64 year old persons in Finland according to National Census in 2015 compared with the whole population



The Finnish Register of Visual Impairment 2017

**TABLE 10 LEVEL OF EDUCATION**

Registered visually impaired 15 - 64 years old persons in Finland according to National Census in 2012 and 2005 compared with the whole population

Level of education (1)	The duration of education	Regist.vis.imp. %		Whole population %	
		2015	2005	2015	2005
Basic education	up to 9 years	36.6	40.6	22.8	29.0
Upper secondary educ.	10 - 12 years	44.4	42.6	44.8	42.8
Tertiary education	13 years +	18.9	16.8	32.4	28.2
<b>Total</b>		<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
<b>N (the registered visually impaired persons in this study)</b>		<b>4 661</b>	<b>3 744</b>		

(1) The Finnish Standard Classification of Education

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