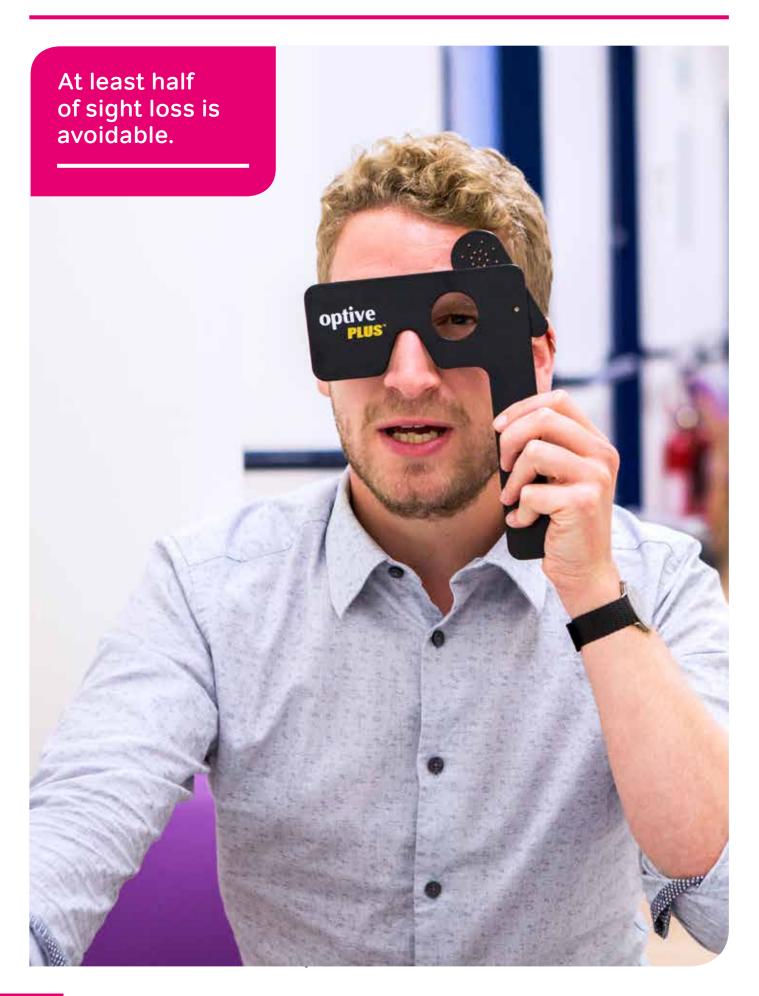


# Eye health and sight loss stats and facts

Last updated: April 2018





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"Eye health and sight loss stats and facts" is an update on the most important messages we use about eye health, people at risk of sight loss and blind and partially sighted people.

The statements presented here can be used to support a wide range of communications. These are our evidence-based messages about the eye health needs of the nation, how many people with sight loss need support and what impact sight loss has on everyday life.

The information in this document reflects the most recent evidence. It should be used to update any older versions of these statistics or messages that are in use.

If you have any questions about how to use any of these facts or stats in your work, please contact us at **stats@rnib.org.uk**.

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### Eye health



### Less than

1 in 3

registered blind and partially sighted people were offered mobility training, and only one in five received any practical support around the home

### At least half of sight loss is avoidable

At least half of all cases of sight loss in the UK are avoidable.

This is based on how many people are living with sight loss [1, 2]. The majority of sight loss due to refractive error can be corrected by wearing the right prescription glasses. Many forms of cataract are treatable. If detected and treated early, some sight loss due to glaucoma, AMD and diabetic retinopathy could be avoided.

### 16 million NHS eye tests

There are over 16 million NHS sight tests in the UK each year [3]. This figure only counts people who were eligible for and claimed a free NHS eye test, and does not include people who paid for their eye test.

### Over eight million outpatient appointments

There are over eight million NHS outpatient appointments in eye clinics and ophthalmology departments in the UK each year [4].

### Over 800,000 inpatient procedures

There are over 800,000 NHS inpatient procedures related to eye health in the UK each year [5].

### Children's screening

The UK National Screening Committee recommends universal vision screening for all children between the ages of 4–5 years, in school and led by orthoptists (specialists trained in children's vision screening) [6].

### Looking after your eyes

There are some important steps that we can all take to look after our eyes.

### Regular eye tests

Having a regular eye examination with an optometrist is the best way to make sure that your eyes are healthy. Everyone should have their eyes examined at least once every two years - even if there is no change in your vision [7]. Yet nearly 14 million adults have not had their eyes tested in the last two years [8].

### Stop smoking

Smoking can double the risk of developing agerelated macular degeneration [9], the UK's leading cause of blindness [10].

### Eat healthily and watch your weight

Eating a healthy diet is good for your general health and for your eyes [11]. Obesity can increase the risk of developing diabetes [12], which in turn can cause sight loss [13].

### Keep your eyes covered in the sun

Harmful rays in sunlight can damage your eyes and may increase the risk of cataracts and AMD [14, 15]. Wearing sunglasses, glasses or contact lenses with built-in UV filter will protect your eyes [16].

### Safety first

DIY and sports injuries cause thousands of eye related injuries each year [17]. Always wear appropriate safety goggles to protect your eyes.



Looking after your eyes is important for everyone because sight loss can affect you whatever your age or circumstances. However, some groups of people are at greater risk of losing their sight.

Around six million people are estimated to be living with sight-threatening eye conditions in the UK today.

This is based on research into how many people are living with age-related macular degeneration (AMD), glaucoma, cataract [18] and diabetic-eye disease [19, 20, 21]. It also includes figures from research into how many people are living with other eye problems, such as Drusen [18] and ocular hypertension [19], which increase the risk of preventable sight loss. Many of these people may not be affected by sight loss at this stage but could in the future. They represent the population at high risk of future sight loss.

### People in later life

The older you are, the greater your risk of sight loss. There are 1.2 million people living with sight loss who are aged 75 years and over. The proportion of people living with sight loss is:

- one in nine people aged 60 years and over
- one in five people aged 75 years and over
- one in two people aged 90 years and over [1, 2].

### Children and young people

There are more than 25,000 blind and partially sighted children aged 16 years and under in the UK. As many as half of these children have other disabilities [22].

Some children are at higher risk of vision impairment, including those who are very premature and very low birth weight babies [23, 24], children from the most economically deprived backgrounds [23, 24] and children with learning difficulties [25].

### People on low incomes

Prevalence of sight loss is associated with having a lower income [26, 27]. Difficulty in getting to an optometrist and concerns about the cost of glasses can result in people not going for eye tests as often as they want, or delaying visits until they experience symptoms [28, 29].

### People from ethnic communities

People from certain ethnic communities are at greater risk of some of the leading causes of sight loss yet many are unaware of this [30]:

- Black African and Caribbean people are four to eight times more at risk of developing certain forms of glaucoma compared to white people [31, 32].
- The risk of diabetic eye disease is around three times greater in South Asian people compared to white people [33]
- Black African and Caribbean people are also at a higher risk of diabetic eye disease [34].

### **People living with diabetes**

There are 3.5 million people in the UK who have been diagnosed diabetes [20], and a further 500,000 people living with undiagnosed diabetes [21]. People with diabetes are at increased risk of diabetic eye disease as well as glaucoma [35] and cataracts [36].

Within 20 years of being diagnosed, nearly all people with type 1 diabetes and almost two thirds of people with type 2 diabetes will have developed some form of diabetic retinopathy [37].

### People with learning disabilities

There are estimated to be more than one million adults in the UK with a learning disability [38]. Adults with learning disabilities are 10 times more likely to experience sight loss than the general population [38].

### People living with dementia

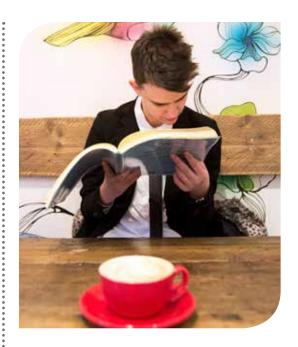
Up to 850,000 people in the UK have some form of dementia [39]. Prevalence of sight loss is higher among people with dementia, especially those living in care homes [40]. It is estimated that at least 250,000 people in the UK are living with both sight loss and dementia [41].

### People who smoke

There are nearly 10 million people in the UK who smoke, which is around 19 per cent of the adult population [42]. Smoking increases the risk of AMD [43]. There is also an increased risk of AMD for non-smokers exposed to passive smoking [44].

### **Stroke survivors**

The number of people with long-standing health conditions due to a stroke is increasing. Estimates suggest that around 60 per cent of stroke survivors experience some form of visual problems immediately after their stroke, and that these problems remain for around 20 per cent of people three months after their stroke [45].



1 in 5

people will start to live with sight loss in their lifetime.

### Who does sight loss affect?

Only

1 in 4

registered blind or partially sighted people of working age is in employment

# More than two million people are living with sight loss

More than two million people are estimated to be living with sight loss in the UK today. This sight loss is severe enough to have a significant impact on their daily lives [1, 2].

The more than two million people living with sight loss includes:

- people who are registered blind or partially sighted
- people whose vision is better than the levels that qualify for registration
- people who are awaiting or having treatment such as eye injections, laser treatment or surgery that may improve their sight
- people whose sight loss could be improved by wearing correctly prescribed glasses or contact lenses.

### Causes of sight loss

The main causes of sight loss amongst the more than two million people living with sight loss are [1]:

- Uncorrected refracted error 39 per cent
- AMD 23 per cent
- Cataract 19 per cent
- Glaucoma 7 per cent
- Diabetic eye disease 5 per cent

#### **Future risk**

The number of people in the UK with sight loss is set to increase dramatically. It is predicted that by 2050 the number of people with sight loss in the UK will double to over four million [1, 2].

This is based on the assumption that the underlying risk factors associated with sight loss do not change and that broad demographic changes such as aging population will continue in coming decades [46].

### Every day 250 people start to lose their sight

Every day 250 people start to lose their sight in the UK. This is equivalent to one person every six minutes [47].

This statistic includes AMD, glaucoma and diabetic retinopathy and some of the other causes of permanent and irreversible sight loss in the UK. Many more people will start live with sight loss as a result of uncorrected refractive error and cataract.

# One in five people will live with sight loss in their lifetime

This is based on the assumption that the underlying risk factors associated with sight loss do not change. In addition, many more people will experience sight loss as a result of eye injury, cataract or refractive error.

# 285 million people live with sight loss worldwide

An estimated 285 million people are living with sight loss worldwide, with 39 million people who are blind and 246 million people who are partially sighted. Globally, the leading causes of sight loss are uncorrected refractive error and cataract [48].



The number of people in the UK with sight loss is set to increase dramatically.

It is predicted that by 2050 the number of people with sight loss in the UK will double to over four million.

### 4 Certification and registration

A Certificate of Vision Impairment (CVI) certifies a person as either sight impaired (partially sighted) or severely sight impaired (blind). The purpose of the CVI is to provide a formal referral route for someone with sight loss to social care services. Each CVI form is completed by a consultant ophthalmologist in an eye clinic and a copy is sent to the person's local social services department. Upon receipt of the CVI, social services offer registration and other relevant advice and services [49].



#### 24,000 CVIs

Over 24,000 people are given a Certificate of Vision Impairment each year in England and Wales [50].

### 350,000 people registered

Around 350,000 people are registered blind or partially sighted in the UK in total. Half of these people are registered blind, and half are registered partially sighted [51].

### The leading causes of sight loss amongst registered blind and partially sighted people are:

- Age-related macular degeneration 48 per cent
- Glaucoma 16 per cent
- Cataract 12 per cent
- Retinitis Pigmentosa 10 per cent
- Diabetic eye disease 8 per cent [52].

The number of people newly registered blind or partially sighted has been decreasing in recent years. In England, since 2003 we know that new registrations have decreased by 29 per cent [51].

It is important to remember that certification and registration only provide information about blind and partially sighted people who have been in some contact with health and social care services. They are a useful indication of the number of people affected by sight loss, but they do not provide the complete picture of how many people are affected by sight loss in the UK.

### Cost of eye health and sight loss

#### £28 billion

The total estimated cost of eye health and sight loss in the UK is estimated to be around £28 billion every year [1]. This includes money spent on preventing and treating eye conditions. It also includes the indirect costs of sight loss, such as lower employment rates or the cost associated with the provision of informal care. Finally, it includes the total cost of the reduced wellbeing and health associated with living sight loss.

Further information about how the £28 billion is estimated is provided below.

#### £3 billion

The UK's healthcare cost linked to eye health is estimated to be at least £3 billion every year [5]. This includes the cost of providing NHS eye examinations, prescriptions and hospital services such as outpatient appointments and inpatient procedures. This works out at over £8 million every day.

#### £6 billion

Indirect costs associated with sight loss cost the UK economy around £6 billion every year [5]. The highest indirect costs are lower employment rates amongst people with sight loss and the cost to family and friends of providing informal care. This works out at over £15 million every day.

#### £19 billion

It is estimated that the associated reduction in wellbeing and health due to sight loss totals £19 billion every year [5]. This works out at over £50 million every day.

#### 180,000,000 informal care hours

Friends and family provide around 180 million hours of unpaid and informal care to support people living with sight loss every year in the UK [53]. This can range from things like preparing food, reading inaccessible information and help with getting out of the house [52].

### Only

17%

of people experiencing sight loss are offered emotional support in relation to their deteriorating vision

### Impact of sight loss

While it is possible to talk about the barriers and restrictions faced by blind and partially sighted people as a whole, there are significant variations in people's circumstances and experiences. Some factors are particularly influential, such as age, amount of vision, the age at which someone experienced sight loss and whether or not someone has additional disabilities.

Some people are born with an eye condition. More commonly sight loss develops during older age. Although most people have some sight, some experience further loss of vision over time and others have no useful vision.

### Children and young people

The majority of blind and partially sighted children are educated in inclusive (mainstream) education [54]. But blind and partially sighted children are increasingly being deprived of specialist support [55], and learning materials and exams are not consistently made available in alternative formats [56].

### Remaining sight can change over time

For many people, even after they are registered blind or partially sighted, their remaining sight is unstable. Often people experience changes in vision over many years, and this may mean that they need to learn and relearn how to adapt to living with sight loss.

71 per cent of blind and partially sighted people have experienced deterioration in their sight over the last 12 months [52].

### Lower wellbeing

Feelings of wellbeing are lower amongst blind and partially sighted people when compared to the rest of the population [65]. More than four in 10 people attending low vision clinics are suffering from symptoms of clinical depression [57].

31 per cent of blind and partially sighted people were rarely or never optimistic about the future [52].

### Lack of emotional support

Being told you are losing your sight can be difficult to come to terms with, with common effects being depression, reduced wellbeing and a process similar to be eavement [58].

Only 17 per cent of people experiencing sight loss are offered emotional support in relation to their deteriorating vision [52].

### **Essential practical support is missing**

Having to re-learn how to do everyday things is the reality of losing your sight. This can include everything from re-learning how to make a cup of tea to moving safely around your local area.

Less than one in three registered blind and partially sighted received any mobility training in the first year of experiencing sight loss, and only one in five received practical support around the home with things like preparing food or cleaning [52].

### Relying on some form of support

Many blind and partially sighted people rely on some form of support or care, and often this is informal and unpaid. This support can range from tasks like preparing meals or cleaning to help with setting heating controls or help with picking out the right clothing [52].

Nearly half of blind and partially sighted people said that they always or frequently need support to read written information [52].

The proportion of blind and partially sighted people in employment has decreased

Only one in four registered blind or partially sighted people of working age is in employment [52].

Age, additional disabilities, severity of sight loss and educational attainment level are all factors that influence the employment status of blind and partially sighted people [52].

### **Financial struggles**

Blind and partially sighted people face additional costs and expenditure as a result of their sight loss [59]. Four in 10 blind and partially sighted people of working age say that they have some or great difficulty making ends meet [52].



There are over

25,000

visually impaired children aged 16 years and under.

The number of people in the UK with sight loss is set to increase dramatically. It is predicted that by 2050 the number of people with sight loss in the UK will double to over four million.

### Travel and transport remains a major issue

Four out of every 10 blind and partially sighted people were not able to make all the journeys that they wanted or needed to make [52].

Two-thirds of people of working age and one-third of people of pension age had collided with an obstacle on the pavement in the last three months [52].

# Feeling isolated from the people and things around them

Four out every 10 blind and partially sighted people felt moderately or completely cut off from people and things around them [52].

### Limited choice about how to spend free time

Half of blind and partially sighted people said that they were always or frequently limited in the activities that they were able to take part in. One in four people reported that they had little or no choice about how they spent their free time [52].

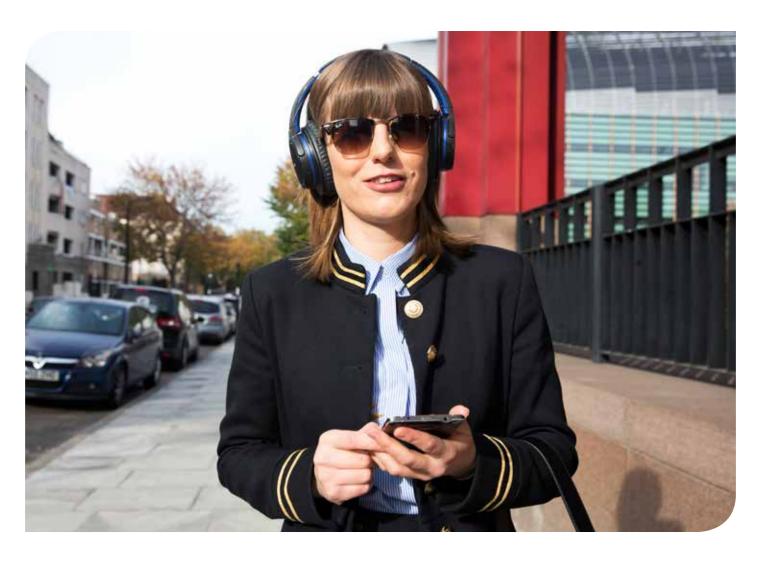
### Poor access to key information

Nine out of ten blind and partially sighted people said that information on medication or food packaging was quite difficult or impossible to read [52].

# Barriers to getting the most out of technology

There is a significant generational divide in the use of technology, with younger blind and partially sighted people much more likely to be using the internet, a computer or a smartphone compared to older people [52].

Overall, less than one in three blind and partially sighted people feel able to make the most of new technology [52].



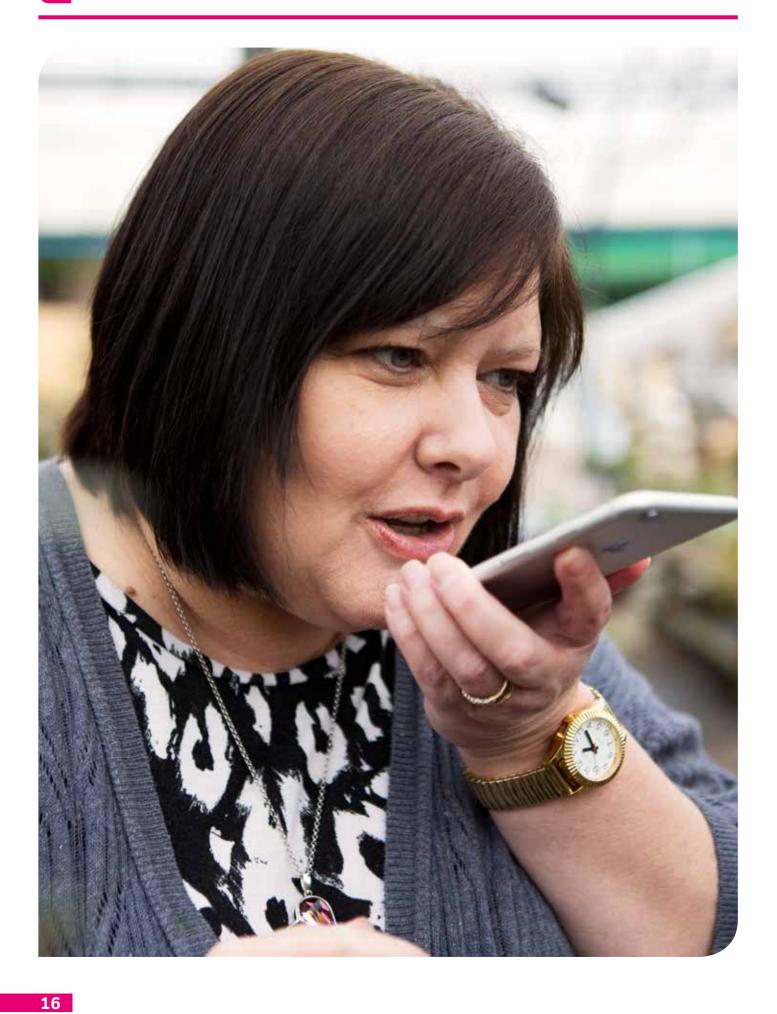
# Public awareness and attitudes towards sight loss is poor

Nearly half of blind and partially sighted people of working age said they had been treated unfairly by others in the last 12 months due to their sight loss [52].

### Sight loss is the biggest barrier people face

When people are asked to talk about the reasons why they experience difficulty or restrictions, whether in relation to travel, employment, technology, or leisure, by far the most common reason given is their sight loss. Many people, including those with a range of other challenges and impairments, consider sight loss as the major factor in stopping them from doing all the things they would like to do in life [52].

Sight loss affects people of all ages. As we get older we are increasingly likely to experience sight loss.



State of the Nation: Eye Health 2017 provides the latest evidence on eye health across the UK. It supports strategic thinking to transform eye health and take steps to stop people losing their sight unnecessarily.

### My Voice

Research into the views and experiences of over 1,200 registered blind and partially sighted people in the UK. My Voice covers a range of different topics, such as employment, transport and access to information and services. It is a key source in helping us understand the circumstances of blind and partially sighted people.

### Sight Loss Data Tool

Sight Loss Data Tool is the UK's biggest collection of eye health datasets. The Excel based tool shows users all of the local figures relating to sight loss and eye health to use as evidence in campaigns, fundraising and service development.

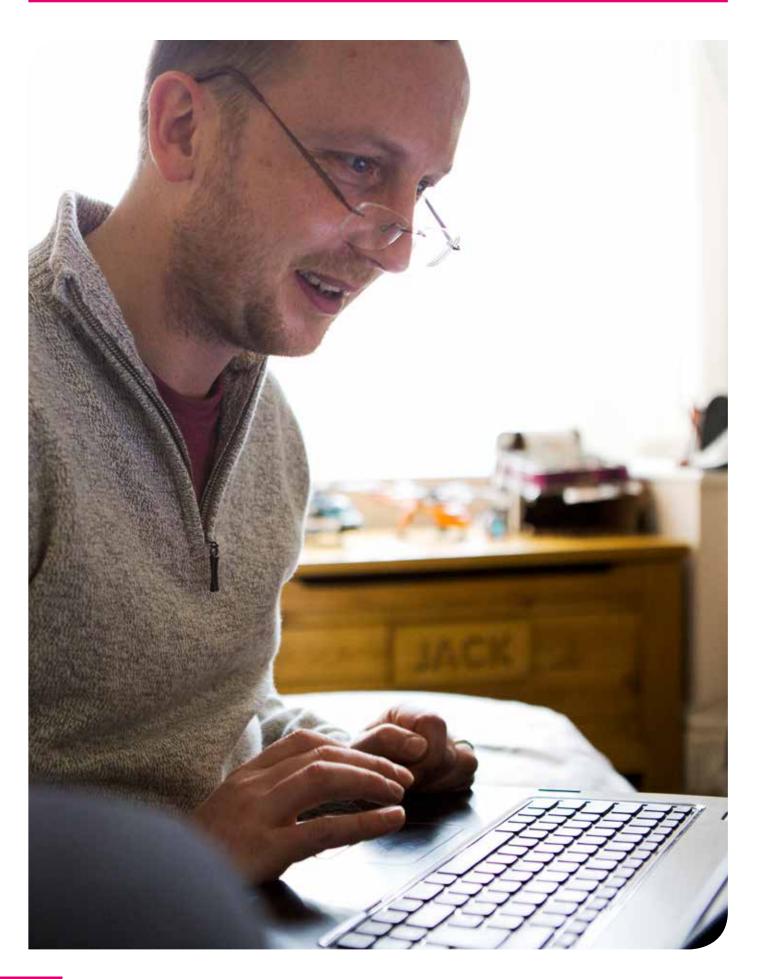
#### **Evidence-based reviews**

RNIB's Evidence-based reviews look in detail at the experiences of blind and partially sighted people in different age groups. They include a profile of the group, the policies that govern and impact upon their lives, and a commentary on what the evidence tells us. We publish reviews focusing on children and young people, people of working age and older people.

"Eye health and sight loss stats and facts" provides a summary of important evidence, but there are many more resources available that provide further information.

State of the Nation: Eye Health 2017

# RNIB Knowledge and Research Hub



Information on the latest research news and reports published by RNIB, as well as guides to impact measurement, blogs and other resources.

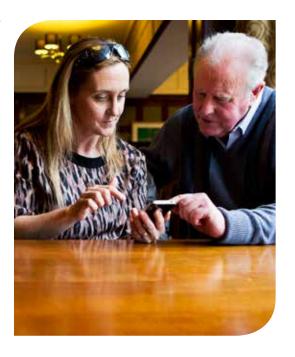
All of these resources can be accessed on the RNIB website: rnib.org.uk/research

Eye health and sight loss stats and facts is an annual update on the most important messages we use about eye health, people at risk of sight loss and blind and partially sighted people.

The report is available to download from: rnib.org.uk/stats

National Helpline 0303 123 9999

RNIB Helpline 0303 123 9999 helpline@rnib.org.uk



Blind and partially sighted people have lower wellbeing compared to the rest of the population.

### References

- Pezzullo L, Streatfield J, Simkiss P, and Shickle D (2018) The economic impact of sight loss and blindness in the UK adult population. BMC Health Services Research, 18:63.
- Office for National Statistics (2015)
   2014-based National Population Projections: Principle projections.
- 3. Figures for NHS sight tests are based on the latest General Ophthalmic Activity Statistics publications:
- Health and Social Care Information Centre (2017) General Ophthalmic Services activity statistics - England, year ending 31 March 2017.
- ISD Scotland (2017) General Ophthalmic Services Statistics as at 31 March 2017.
- Welsh Government (2017) NHS ophthalmic statistics by year: 2016/17.
- Health and Social Care Northern Ireland (2017) General Ophthalmic Service Statistics in Northern Ireland 2016/17.
- 4. Figures for NHS outpatient appointments are based on the latest hospital activity statistics:
- Health and Social Care Information Centre (2017) Hospital Outpatient Activity: treatment speciality – 2016/17.
- ISD Scotland (2017) Annual trends in outpatient activity: consultant-led clinics, 2016/17.
- Welsh Government (2017) Outpatient attendances by treatment function, 2016/17.
- Department of Health Northern Ireland (2017) Hospital statistics: outpatient activity statistics 2016/17.
- Figures for NHS inpatient procedures are based on the latest hospital activity statistics:

- Health and Social Care Information Centre (2017) Hospital Episode Statistics, Admitted Patient Care -England, 2016/17.
- ISD Scotland (2017) Inpatient and Day Case Activity: Annual information by specialty, 2016/17.
- NHS Wales (2017) Patient Episode Database for Wales, main treatment speciality, 2016/17.
- Department of Health Northern Ireland (2017) Hospital statistics: Inpatient and day case activity statistics 2016/17.
- UK National Screening Committee (2013) Review of Vision Defects Screening in Children.
- 7. The College of Optometrists (2016) Frequency of eye examinations.
- 8. RNIB (2016) The State of the Nation Eye Health 2016. RNIB and SpecSavers.
- Evans J, Fletcher A, Wormald R (2005) 28,000 Cases of age related macular degeneration causing visual loss in people aged 75 years and above in the United Kingdom may be attributable to smoking. Br J Ophthalmol. 2005 May;89(5):550-3.
- Access Economics (2009) Future Sight Loss UK 1: The economic impact of partial sight and blindness in the UK adult population. RNIB.
- Cumming R, Mitchell P and Smith W (2000) Diet and cataract. Ophthalmology: Volume 107, Issue 3, Pages 450–456.
- 12. National Institute for Health and Care Excellence (2012) Type 2 diabetes: prevention in people at high risk.
- 13. Scanlon P (2008) The English national screening programme for sight threatening diabetic retinopathy. Journal of Medical Screening 15 (1); 1–4.

- 14. McCarty C and Taylor H (2002)
  A review of the epidemiologic
  evidence linking ultraviolet radiation
  and cataracts. Dev Ophthalmol.
  2002;35:21-31.
- 15. Sui G, Liu G, et al (2013) Is sunlight exposure a risk factor for age-related macular degeneration? A systematic review and meta-analysis. Br J Ophthalmol. 2013 Apr;97(4):389-94.
- 16. Yam J and Kwok A (2013) Ultraviolet light and ocular diseases. Int Ophthalmol. 2014 Apr;34(2):383-400.
- RoSPA (2002) Home and Leisure Accident Surveillance System. The Royal Society for the Prevention of Accidents.
- Public Health Action Support Team (2013) National Eye Health Epidemiological Model.
- 19. Minassian D and Reidy A (2009) Future Sight Loss UK 2: An epidemiological and economic model for sight loss in the decade 2010-2020. EpiVision and RNIB.
- 20. Figures for diagnosed diabetes are taken from the Quality and Outcomes Framework:
- NHS Digital (2016) Quality and Outcomes Framework
- NHS Wales (2016) Quality and Outcomes Framework
- NHS Scotland (2016) Quality and Outcomes Framework
- Department of Health Northern Ireland (2016) Quality and Outcomes Framework
- 21. Association of Public Health Observatories (2010) Diabetes Prevalence Model.
- 22. Morris M and Smith P (2008)
  Educational provision for blind and partially sighted children and young people in Britain: 2007. RNIB.

- 23. Rahi J, Cable N and the British Childhood Visual Impairment Study Group (2003) Severe visual impairment and blindness in children in the UK. Lancet, 25;362(9393):1359-65.
- 24. Cumberland P, Pathai S and Rahi J (2010) Prevalence of eye disease in early childhood and associated factors: Findings from the Millennium Cohort Study. Ophthalmology, 117(11), 2184-2190.
- 25. Woodhouse J, Davies N, McAvinchey A and Ryan B (2014) Ocular and visual status among children in special schools in Wales: the burden of unrecognised visual impairment. Archives of Diseases in Childhood, 99, 500-504.
- 26. Davies S (2014) Annual Report of the Chief Medical Officer, Surveillance Volume, 2012: On the State of the Public's Health. Department of Health.
- 27. Ulldemolins A, Lansingh V, Valencia L, Carter M and Eckert K (2012) Social inequalities in blindness and visual impairment: A review of social determinants. Indian Journal of Ophthalmology, 60(5), 368-375.
- 28. Leamon S, Hayden C, Lee H, Trudinger D, Appelbee E, Hurrell D and Richardson I (2014) Improving access to optometry services for people at risk of preventable sight loss: a qualitative study in five UK locations. Journal of Public Health 36 (4), 667-73.
- 29. Hayden (2012) The barriers and enablers that affect access to primary and secondary eye care services across England, Wales, Scotland and Northern Ireland. Shared Intelligence, on behalf of RNIB.
- 30. The College of Optometrists (2013)
  Britain's eye health in focus: A
  snapshot of consumer attitudes and

- behaviour towards eye health. The College of Optometrists.
- 31. Wormald P, Basauri E, Wright L and Evans J (1994) The African Caribbean Eye Survey: Risk factors for glaucoma in a sample of African Caribbean people living in London. Eye (London, England), 8(3), 315-320.
- 32. Cross V, Shah P, Bativala R and Spurgeon P (2007) ReGAE 2: glaucoma awareness and the primary eye-care service: some perceptions among African Caribbeans in Birmingham UK. Eye 21, 912–920
- 33. Pardhan S, Gilchrist J and Mahomed I. (2004) Impact of age and duration on sight threatening retinopathy in South Asians and Caucasians attending a diabetic clinic. Eye (London, England), 18(3), 233-240.
- 34. Sivaprasad S, Gupta B, Gulliford M,
  Dodhia H, Mohamed M, Nagi D and
  Evans J (2012) Ethnic Variations in
  the Prevalence of Diabetic Retinopathy
  in People with Diabetes Attending
  Screening in the United Kingdom
  (DRIVE UK). PLoS One, 7(3): e32182.
- 35. Newman-Casey P, Talwar N, Nan B, Musch D and Stein (2011) The Relationship between Components of Metabolic Syndrome and Open-Angle Glaucoma. Ophthalmology, 118(7), 318-1326.
- 36. Javadi M and Zarei-Ghanavati S (2008) Cataracts in Diabetic Patients: A Review Article. J Ophthalmic Vis Res, 3(1): 52–65.
- 37. Jones S, and Edwards R (2010)
  Diabetic retinopathy screening: a
  systematic review of the economic
  evidence. Diabetic Medicine, 27(3),
  249-56.
- 38. Emerson E and Robertson J (2011)
  The Estimated Prevalence of Visual

- Impairment among People with Learning Disabilities in the UK. RNIB.
- 39. Alzheimer's Society (2014) Dementia UK: Update. Alzheimer's Society.
- 40. Bowen M, Edgar D, Hancock B et al (2016) The Prevalence of Visual Impairment in People with Dementia: a cross sectional study of 60-89 year old people with dementia and qualitative exploration of individual, carer and professional perspectives. National Institute for Health Research.
- 41. Estimated number of people living with sight loss and dementia has been calculated by combining data on how many people are living with dementia [39] with data on how many people who have dementia also have sight loss [40].
- 42. Action on Smoking and Health (ASH) (2016) Smoking statistics. ASH.
- 43. Chakravarthy U, Augood C, Bentham G, de Jong P, Rahu M, Seland J and Fletcher A (2007) Cigarette smoking and age-related macular degeneration in the EUREYE Study. Ophthalmology, 114(6), 1157-63.
- 44. Khan J, Thurlby D, Shahid H, Clayton D, Yates J, Bradley M and Bird, A (2006) Smoking and age related macular degeneration: the number of pack years of cigarette smoking is a major determinant of risk for both geographic atrophy and choroidal neovascularisation. The British Journal of Ophthalmology, 90(1), 75-80.
- 45. Rowe F (2013) Care provision and unmet need for post stroke visual impairment: Final report. Stroke Association and Thomas Pocklington Trust.
- 46. Government Office for Science (2016) Future of an Aging Population. HM Government.

- 47. Deloitte Access Economics (2017). Incidence and risk of sight loss and blindness in the UK. RNIB.
- 48. WHO (2016) Visual impairment and blindness. World Health Organisation.
- 49. Boyce T (2012) The Certification and Registration Processes: Stages, barriers and delays. RNIB.
- 50. Figures for CVIs taken from: Public Health England.(2017) Public Health Outcomes Framework. Welsh Government (2017) Sensory health: Eye care and hearing statistics.
- 51. Figures on registration are taken from the most recent publications available:
- Health and Social Care Information Centre (2017) Registered Blind and Partially Sighted People – England, Year Ending 31 March 2017.
- Scottish Government (2010)
   Registered Blind and Partially Sighted
   People, Scotland 2010.
- Welsh Government (2017) Register of physically/sensory disabled persons on 31 March 2017.
- NHS Health and Social Care Boards (2017) Register of blind and partially sighted people: Freedom of Information request by RNIB for year ending 31 March 2017. RNIB.
- 52. Slade J and Edwards R (2015) My Voice 2015: The views and experiences of blind and partially sighted people in the UK. RNIB.
- 53. The total number of hours of informal care has been estimated using information from the UK Census 2011 on the number of informal carers and the hours of care they provide each week. We have estimated the proportion of informal care related to sight loss by using the proportion of formal care provision that was

- recorded to relate to people with sight loss.
- 54. Department for Education (2016)
  Special educational needs in England:
  January 2015.
- 55. Keil S (2016) Freedom of Information (FOI) questions on local authority education provision for children and young people with vision impairment in England: 2015. RNIB
- 56. Flynn K, Cobb R and Keil S (2016) The quality of GCSE exam papers in braille and modified large print. RNIB
- 57. Nollett C, Bray N, Bunce C, et al (2016)
  Depression in visual impairment trial
  (DEPVIT): a randomized clinical trial of
  depression treatments in people with
  low vision. Invest Ophthalmol Vis Sci.
  57:4247–4254.
- 58. Thurston M, Thurston A and McLeod (2010) Socio-emotional effects of the transition from sight to blindness. The British Journal of Visual Impairment, Vol 28(2): 90–112.
- 59. Hill, Davis, Hirsch, Pedley and Smith (2016) Sight Loss and Minimum Living Standards: The additional costs of living for people of working age who are severely sight impaired and for people of pension age with acquired sight impairment. Centre for Research in Social Policy, Loughborough University.

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