UNC SCHOOL OF MEDICINE
DEPARTMENT OF OPHTHALMOLOGY

The University of North Carolina

Living with Low Vision

Outline & Index

Introduction

Computer Settings for Low Vision

Low Vision Gateway - Intro to various aspects of Low Vision

Websites with Useful Advice for the Visually Challenged

Local Services for those with Low Vision

Transportation & Low Vision

Catalogs for Low Vision Products

Proper Nutrition, Proper Eyecare

Optical Magnifiers

Cell Phones

AudioBooks & eBooks

eBook Readers

Low Vision Magazines & Newsletters

Low Vision Blogs & User Groups

Assistive Technology

Magnifiers, Electronic, Hand Held

Magnifiers, Electronic, Desktop (CCTV)

Magnifier Software for the Computer Screen

Magnifiers for the Web Browser

Low Vision Web Browsers

Text to Speech Screen Readers, Software for Computers

Scan to Speech Conversion

Speech to Text Conversion, Speech Recognition

The Macintosh

The Apple Macintosh & its Special Strengths

Mac Universal Access Commands

Magnifiers for the Macintosh

Text to Speech Screen Readers for Macintoshes

Speech Recognition for Macs

Financial Aid for Assistive Technology

UNC SCHOOL OF MEDICINE
DEPARTMENT OF OPHTHALMOLOGY

The University of North Carolina

Living with Low Vision

AudioBooks & eBooks

Audiobooks are read to you by a recorded actor. eBooks allow you to download the book, magnify the type size and have the computer read to you out loud.

Free Online eBooks

- Online Books
  http://onlinebooks.library.upenn.edu/
- Gutenberg Project
  http://www.gutenberg.net/index.php
- Net Library – 24,000 eBooks & 2,000 eAudiobooks. Sign up thru your public library, then sign on to NC Live, and finally to Net Library.
  http://netlibrary.com/Centers/AudiobookCenter/Browse.aspx?Category=Lectures

Free Online Audiobooks

- http://librivox.org/newcatalog/search.php?title=&author=&status=complete&action=Search
- http://www.audiobooksforfree.com/

Books on CD & cassette

North Carolina Library for the Blind (see above)
http://statelibrary.dcr.state.nc.us/lbph/lbph.htm

Downloadable Talking Books for the Blind
https://www.nlstalkingbooks.org/dtb/

Audible.com. Over 40,000 current sellers. Annual subscription service.
http://www.audible.com/adbl/site/homepage/AnonHome.jsp?BV_UseBVCookie=Yes

Simply Audiobooks. Rental or Download service.
http://www.simplyaudiobooks.com/

AudioBooks.com. Rent or buy. New or used.
http://www.audiobooks.com/

AudioBooks.net. 22,000 paid titles, 500 free titles.
http://www.audiobooks.net/

The Talking Books Librarian
Get the latest developments.
http://talkingbookslibrarian.blogspot.com/

Your Local Public Library has books on cassette & CD.

Return to Index

UNC SCHOOL OF MEDICINE
DEPARTMENT OF OPHTHALMOLOGY

The University of North Carolina

Living with Low Vision

Catalogs for Low Vision Products

The Low Vision Store

- http://www.thelowvisioncenter.com/lowvipr.html
- http://www.thelowvisioncenter.com/index.html?gclid=COaYl5r_iJQCFQrVsgodtQ7vWg
- http://stores.ebay.com/The-Low-Vision-Store

Independent Living Aids Inc
http://www.independentliving.com/

LS&S Products
http://www.lssproducts.com/

Beyond Sight
http://www.beyondsight.com/

Maxi Aids
http://www.maxiaids.com/

Enable Mart
http://www.enablemart.com/Catalog/Vision

Return to Index

UNC SCHOOL OF MEDICINE
DEPARTMENT OF OPHTHALMOLOGY

The University of North Carolina

Living with Low Vision

Cell Phones

Code Factory - Cell Phone Enhancements
http://codefactory.es/en/

Cell Phone Technologist
Ray Gonzales
919-523-0205
http://www.etoengineering.com

Accessible Cell Phones
http://www.mnlowvision.com/phone.html

The Owasys 22C Screenless Cell Phone
http://www.screenlessphone.com/

The Jitterbug phone – large screen, large buttons
http://www.jitterbug.com/Phones.aspx

Return to Index

UNC SCHOOL OF MEDICINE
DEPARTMENT OF OPHTHALMOLOGY

The University of North Carolina

Living with Low Vision

Computer Settings for Low Vision

Have a comfortable chair and good posture to reduce physical fatigue.
Good lighting in general is an aid for low vision.
Minimize glare. Adjust lighting and screen angle.
Take a break every 20 minutes to limit eye strain.
http://www.uveitis.org/low.html#
http://www.eterlab.com/eyedefender/
http://www.mdsupport.org/library/lighting.html

The **Ott-Lite** "total- spectrum" bulb that produces high color rendering, while retaining excellent contrast and visual acuity.For persons with low vision, the implications for a light that provides enhanced contrast, sharpened clarity, and lower glare while it increases illumination and offers true color rendering are obvious. In addition, because the bulb is cool to the touch, it provides a more comfortable work space.
http://www.ott-lite.com/Cms/vsp.aspx

The following settings will allow you to simulate ZoomText using Microsoft Word.

Screen Resolution & Object Size for a PC

1. Right click on a clear area of the Desktop
2. Click on Properties on the drop down menu
3. *Alternate method, click on Start> Control Panel > Display.*
4. Click on Settings tab
5. Slide Screen Resolution to left (800 x 600)
6. Click on Appearance tab

7. Change Font Size to Large
8. Click on Apply
9. Click on Color Scheme tab
10. Choose High Contrast White or Black, to suit.
11. Click on Apply
12. Click on OK
13. In upper right corner of window, click on Full Screen center box just to the left of the X box.

Monitor Contrast & Brightness Settings

1. Use the Accessiblity Wizard to set contrast & icon size.
2. Go to Start > All Programs > Accessories > Accessibility > Accessibility Wizard.
3. Follow instructions to set preferences.

Mouse Settings

1. Go to Start > Control Panel
2. Double click on Mouse icon
3. Click on Pointers tab
4. Check the Pointer Shadow box
5. Click on Pointer Options tab
6. Check the Display pointer trails box & set length to medium
7. Check the box marked Show Location of Mouse.
8. Click on Apply
9. Click on OK

When needed, press CTRL key repeatedly to find the mouse.

Mouse Dexterity Exercises

- http://www.seniornet.org/howto/mouseexercises/mousepractice.html

- http://www.lakeco.lib.in.us/mouselinks.htm

Computer Tips from SeniorNet
http://www.seniornet.org/jsnet/index.php?option=com_content&task=view&id=152&Itemid=1

Increase Website Visibility

1. To increase the contrast & invert the color of the font in a website, click on the paragraph, hold down the **CTRL** key & type **A**.
2. To increase the font size, hold down the **CTRL** key & roll the **MOUSE WHEEL** up. This works for most, but not all, websites.

Thumb Drives

Copy a book or any long document to a thumb drive, along with a screen reader, such as Browsealoud and SmartRead. Plug this into any computer, which will now be activatable & able to read. ZoomText is now available on a thumb drive.

Document Page Width for 800 x 600 resolution

1. In Word, go to File > Page Setup
2. Click on Margins tab
3. Set Left margin to 0.5
4. Set Right margin to 3.5
5. Click on OK
6. Select the entire document, CTRL A.
7. Format Paragraph Left-aligned.

This simulates Word Wrap.

Magnification in Microsoft Word

1. Open a Word document, if necessary.
2. Click in body of the document, if necessary.
3. Hold down the CTRL key

4. Roll the mouse wheel up & down to change the font magnification.

Read Out Loud in Microsoft Word

1. Open a Word document.
2. Click on Tools > Speech
3. The Speech Toolbar will appear.
4. Click mouse pointer where you want Speech to begin.
5. Click Speak in Language Toolbar.

Easy Access Applications

These are simplified versions of Flickr & YouTube for low vision.

Easy Flickr
http://icant.co.uk/easy-flickr/

Easy YouTube
http://icant.co.uk/easy-youtube/

Return to Index

Return to Index

Financial Aid for Assistive Technology

There are a lot of sites, but very little funding available.
Not covered by Medicare.

ICDRI Advice
http://www.icdri.org/Finance.htm

US Dept of Health Advice. See page 3.
http://www.aoa.gov/press/fact/pdf/fs_assitive_tech.pdf

Eldercare Locator
http://www.eldercare.gov/Eldercare/Public/resources/fact_sheets/assistive_tech.asp

NC State Financial Assistance Advice
http://www.ncatp.org/Funding/Funding%20to%20Individuals.html

New Freedoms Initiative Bill before Congress May 2008
http://usgovinfo.about.com/library/weekly/aa020201b.htm

Assoc of Blind Citizens AT Fund
http://www.blindcitizens.org/assistive_tech.htm

Postage Free Mail for the Visually Handicapped
http://www.usps.com/cpim/ftp/pubs/pub347.pdf

The New Fund – low interest loans for disabled Virginians
http://www.atlfa.org/

Return to Index

UNC SCHOOL OF MEDICINE
DEPARTMENT OF OPHTHALMOLOGY

The University of North Carolina

Living with Low Vision

Living with Low Vision

In an ad by an automotive company, there is a picture of a woman. She is strong, athletic. She is wearing a tee shirt and running shorts. She has only one leg; the other is a runner's high-tech prosthetic.

The caption reads "Don't ever give up. Not once. Not ever.
My dream is to do extraordinary things every day. Life's calling. Where to next?"

This is the attitude we must bring to low vision.

Low Vision Care is not a surgical procedure or medicinal treatment, but rather a rehabilitative program to teach you new strategies to maximize your remaining vision.

There are a myriad of resources to help you live independently and productively. But there is a great deal of redundancy between manufacturers. Try several alternatives before you commit to a solution. Some of you may need our remedial computer lessons. Some of you may want to avoid computers altogether. Each person is different.

We will show these alternative assistives, some free, some inexpensive, some quite expensive. Magnifiers can range from a simple magnifying glass to an electronic closed circuit TV magnifier, such as a Topaz CCTV. Sometimes these freebies

will do the job for you. Sometimes you will choose the professional solutions for their quality & ease of use. You may find that screen magnification allows you to read a computer screen. Or you might find it better to have a computer or an iPod read out loud to you. It is up to you. It is your choice.

This course consists of three parts: the teachers, these notes and you. Of these, YOU are the most important part. Your willingness to work hard and to learn are essential for your success.

Return to Index

UNC SCHOOL OF MEDICINE
DEPARTMENT OF OPHTHALMOLOGY

The University of North Carolina

Living with Low Vision

Local Services for those with Low Vision

UNC Eye Center
UNC Department of Ophthalmology
Communications Center
2nd Floor ACC Bldg CB 7720
Chapel Hill, NC 27599
919-966-5509

Duke Eye Center
Low Vision Unit
2351 Irwin Rd
Durham, NC 27710
(919) 681-3937

Low Vision Support Group

Contacts:	Herb Halbrecht	919-969-1573
	John Logan	919-957-4247
	Lauren Tappan	919-929-5256

NC Division of Services for the Blind
Located at The Governor Morehead School for the Blind
309 Ashe Ave
Raleigh, NC
919-733-9822
(919) 715-1154
http://www.ncdhhs.gov/dsb/index.htm

NC Rehab Center for the Blind
Located at The Governor Morehead School for the Blind
Pattie Barker
305 Ashe Ave
Raliegh, NC, 27606
Phone: (919) 733-5897
http://www.dhhs.state.nc.us/dsb/guide.htm

North Carolina Assistive Technology Program - NCATP
1110 Navaho Dr.
Suite 101,
Raleigh, NC 27609
919-850-2787
http://www.ncatp.org/

NCATP is the largest source in NC for AT demos & trial loans.
NCATP is both free & fee based. NC Services for the Blind is all free.

Partnerships in Assistive Technology
Exchange center for assistive devices, when available.
1110 Navaho Dr.
Suite 100,
Raleigh, NC 27609
919-872-2298
http://www.pat.org/

PAT Expo Exchange Program Dec. 3, 4, 5, 2008

NC Library for the Blind
1811 Capital Blvd.,
Raleigh, NC 27635
(919) 733-4376
http://statelibrary.dcr.state.nc.us/lbph/lbph.htm
http://www.loc.gov/NLS/
http://www.klas.com/talkingbooks/nc

Magazine for NLS subscribers
http://www.choicemagazinelistening.org/

See also AudioBooks & eBooks below.

Foundation for Fighting Blindness
Eastern Region Office
4600 Marriott Drive, Suite 340
Raleigh, NC 27612
(919) 781-8014
http://www.blindness.org/

Raleigh Durham Chapter, FFB
Jane Gardner, Chapter President
5435 N. Highland Drive
Durham, NC 27712-1921
919-383-7719
ncraleigh@fightblindness.org

Alliance of Disability Advocates
401 Oberlin Rd., Suite 103
Raleigh, NC 27605
919.833.1117
http://www.alliancecil.org

The Macular Degeneration Partnership
http://www.amd.org/

The Triangle Radio Reading Service
http://www.trianglereadingservice.org/

Return to Index

Return to Index

Low Vision Blogs & User Groups

Welcome to sci.med.vision
http://groups.google.com/group/sci.med.vision/browse_thread/thread/7348639e81d8ac15?hl=en#

Access Watch
http://www.accesswatch.info/

Gordon's D-Zone
http://gd-zone.blogspot.com/2008/06/here-i-go-part-1.html

Marco's Accessibility Blog
http://www.marcozehe.de/tag/accessibility/

BlindConfidential
http://blindconfidential.blogspot.com/

Universally Designed
http://universallydesigned.net/general/reading-making-it-a-more-pleasant-past-time/

Low Vision Aids Blog – the latest AT devices
http://lowvision.wordpress.com/

Serotek Blog
http://blog.serotek.com/

Fred's Head Companion
http://www.fredshead.info/

Return to Index

Return to Index

Low Vision Magazines & Newsletters

Dialogue Magazine
http://www.blindskills.com/dialogue.html

Vision Access Magazine
http://www.cclvi.org/vaccess/main.htm

EyeWorld Magazine
http://www.eyeworld.org/

Low Vision Newsletters

- http://www.eyeassociates.com/lownews.htm
- http://www.blind.msstate.edu/Worksight2006.html
- http://www.lowvisionclub.com/newsletters.html
- http://www.lowvision.com/tips/newsletter-archive/
- http://www.lighthouse.org

Return to Index

Return to Index

Low Vision Web Browsers

Opera Browser adapts for low vision
Built-in magnifier, adaptable menues, etc.
http://us.geocities.com/tim_hobbs.geo/opb.htm

Mozilla Firefox Browser does too.
http://www.mozilla.org/

Web Eyes – Add-on for Internet Explorer
http://www.ionwebeyes.com/

Tips for Browser setup
http://www.alistapart.com/articles/lowvision/
http://63.240.118.132/Section.asp?DocumentID=1452&SectionID=4

Connect Outloud by Freedom Scientific
http://www.freedomscientific.com/fs_products/software_connect.asp

Fire Vox – a screen reader add-on for the FireFox browser
http://www.firevox.clcworld.net/features.html

Web Visum –helpful add-ons for Firefox browser
http://www.webvisum.com/

WebLV adds the Internet & email to CCTV
http://www.jbliss.com/weblv.htm

Webbie – Free Low Vision Browser
http://www.webbie.org.uk/

IBM Home Page Reader – Talking web browser
http://www-03.ibm.com/able/news/hpr_enduser.html

Browsealoud – free software for PC & Mac that reads text selected by mouse on compatible websites. Mostly in UK.
http://www.browsealoud.com/page.asp?pg_id=80004

Accessible Google
In order to help the visually impaired find the most relevant, useful information on the web, and as quickly as possible, Google developed Accessible Search. Google Accessible Search identifies and prioritizes search results that are more easily used by blind and visually impaired users – that means pages that are clean and simple (think of the Google homepage!) and that can load without images.
http://labs.google.com/accessible/

Return to Index

Return to Index

Text to Speech Screen Readers for Macintoshes

Mac Text to Speech Synthesis
http://www.apple.com/education/accessibility/technology/text_to_speech.html

TextSpeech Pro for Macs by Digital Future
http://www.digitalfuturesoft.com/texttospeechproductsformacosx.php

Return to Index

Return to Index

Simple computer keystrokes to control your Macintosh:

Universal Access and VoiceOver	
Keyboard shortcut	**Description**
Option-Command-8	Turn on Zoom
Option-Command-+ (plus)	Zoom in
Option-Command-- (minus)	Zoom out
Control-Option-Command-8	Switch to White on Black
Control-F1	Turn on Full Keyboard Access When Full Keyboard Access is turned on, you can use the key combinations listed in the table below from the Finder.
Control-F2	Full Keyboard Access Highlight Menu
Control-F3	Full Keyboard Access Highlight Dock
Control-F4	Full Keyboard Access Highlight Window (active)

Control-F5	Full Keyboard Access Highlight Toolbar
Control-F6	Full Keyboard Access Highlight Utility window
Command-F5	**Turn VoiceOver on or off** (Mac OS X 10.4 or later)
Control-Option-F8	Open VoiceOver Utility (Mac OS X 10.4 or later)
Control-Option-F7	Display VoiceOver menu (Mac OS X 10.4 or later)
Control-Option-;	**Enable/disable VoiceOver** Control-Option lock (Mac OS X 10.4 or later)

The Universal Access preference pane allows you to turn on Mouse Keys. When Mouse Keys is on, you can use the numeric keypad to move the mouse.

Return to Index

Return to Index

Magnifier Software for the Computer Screen

Commercial Computer Magnifiers

Magic by Freedom Scientific, with or without speech
http://www.freedomscientific.com/PDF/lowvision/flyers/MAGicFlyer.pdf

ZoomText by Ai Squared, with or without speech
http://www.aisquared.com/index.cfm

Lunar & Lunar Plus by Dolphin
http://www.yourdolphin.com/productdetail.asp?id=3

Free & Low Cost Computer Magnifiers

Asstd Screen Magnifiers: free, shareware & professional.
Magnification should also do Text Smoothing.
Many have jagged edges on the font. Some are not stable.

- http://www.magnifiers.org/links/Download_Software/Screen_Magnifiers/
- http://www.bluechillies.com/query.php?text=IE%Magnifier&page=1

Magic Lens Max

- Customizable lens shape with 3 smooth styles (Ellipse, Rounded Rectangle and Rectangle)
- Variable magnification from 1/2x to 32x

http://www.visionsuit.com/index.html

Dragnifier magnifies mouse area
http://www.halley.cc/stuff/dragnifier.html

Screen Loupe
http://www.gregorybraun.com/Loupe.html

ZoomWare, by AISquared, improves screen magnification, contrast & color
http://www.getzoomware.com/videos

Return to Index

Return to Index

Magnifiers, Electronic, Hand Held

DinoView portable
http://www.independentliving.com/prodinfo.asp?number=454658

Optelec Compact+ portable
http://www.optelec.com/us_en/index.php/products/electronic-low-vision/compact-plus/

Amigo
http://www.ulva.com/Online-Store/Video-Magnifiers/amigo.htm
http://www.enhancedvision.com/products/low_vision_assistive_devices.php

Opal by Freedom Scientific
http://www.accessibility.net/store/Handheld_Magnifiers.html

Nemo
http://www.ulva.com/Online-Store/Video-Magnifiers/nemo.htm

Smartview Series - 4 new electronic magnifiers from Humanware
http://www.humanware.com/en-usa/products/low_vision/smartview

The QuickLook video magnifier
http://www.jbliss.com/quicklook.htm

Return to Index

Return to Index

Magnifiers for the Mac

Text magnification is built into the Mac operating system.

Coloristic - Simple magnifier utility, that magnifies the area around the mouse cursor. Also for Windows XP. $12
http://www.bubblepop.com/coloristic/index.html

Lupe for Macintosh - from Artis Software, Lupe is a FREE screen magnifier utility, that magnifies the area around the mouse cursor from 2 to 8 times. (
http://www.artissoftware.com/lupe.html

Macintosh Software Toolkit – freeware & shareware utilities that help sight impaired people accessing the Macintosh
http://trace.wisc.edu/world/computer_access/mac/macshare.html

Return to Index

Return to Index

Magnifiers for the Web Browser

Magnifiers for Internet Explorer

Go to manufacturers web site for Zoom Text & for Dolphin's Hal Screen Reader or Supernova Reader Magnifier, as listed here.

Browser Buddy
http://www.bluechillies.com/details/8918.html

ProSurf
http://www.bluechillies.com/details/10133.html

Hyperjoint Zoom Buttons
http://www.bluechillies.com/download/8128.html

Big.Com free magnifier for Internet Explorer
http://download.nytimes.com/Big-com-Web-Magnifier/9100-12777_4-10515888.html?tag=lst-0-3

Firefox Browser Add-ons

No Squint for FireFox Browser
https://addons.mozilla.org/en-US/firefox/addon/2592
A FireFox browser add-on. It allows you to adjust the default text zoom level for any site - and then remembers it on a per-site basis.

Low Browse – free Firefox add-on developed by Lighthouse International
http://lighthouse.org/aboutus/press/press-releases/lowbrowse

Return to Index

Return to Index

Magnifiers, Electronic, Desktop (CCTV)

Topaz by Freedom Scientific
http://www.accessibility.net/store/CCTV.html

Smartview Extend by Humanware
http://www.accessibility.net/store/CCTV.html
http://www.humanware.com/en-usa/products/low_vision

Jordy Head mounted CCTV
http://www.nanopac.com/Jordy.htm

Optelec ClearNote+ desktop
http://www.optelec.com/us_en/index.php/products/electronic-low-vision/clearnote/

Onyx by Freedom Scientific
http://www.freedomscientific.com/products/lv/onyx-main-product-page.asp
http://www.granteyeglasses.com/onyx.html

Merlin CCTV
http://www.enhancedvision.com/downloads/MerlinPlusSpecs.pdf

Magnicam works with your TV
http://www.magnicam.com/

Return to Index

UNC SCHOOL OF MEDICINE
DEPARTMENT OF OPHTHALMOLOGY

The University of North Carolina

Living with Low Vision

Optical Magnifiers

How to Choose a Magnifier to do the Right Job

- http://www.eschenbach.com/chart.html
- http://www.eschenbach.com/newsletters/200802.pdf

Magnifiers, Optical

Illuminated Magnifiers, Hand held
http://www.independentliving.com/products.asp?dept=79&deptname=Hand-Held-Magnifiers

Illuminated Magnifier, 5 Diopter Rectangular Lens, w/Weighted Base
http://www.all-spec.com/1/viewitem/240-101/ALLSPEC/prodinfo/w3path=cat

Selsi Magnifiers
http://www.selsioptics.com/readers.html

Telescopic & Microscopic Eyeglasses

- http://lowvisiondoctor.com/_wsn/page4.html

- http://www.lowvision-copihue.com/catalog25x-low-vision-telescopes.htm
- http://www.collette-optical.com/atelescopic.php
- http://www.activeforever.com/showproduct.aspx?ProductID=2103&SEName=eschenbach-maxdetail-glasses
- http://www.selsioptics.com/Sports-Glasses.html

Return to Index

Return to Index

Portable eBook Storage Devices & Readers

VictorReader Stream by Humanware
Plays pre-recorded Natl Library for the Blind books downloaded via a std. desktop computer.
Includes Text to Speech Reader for elctronic documents.
http://www.humanware.com/en-usa/products/dtb_players/compact_models/_details/id_81/victorreader_stream.html

iPod Touch by Apple
Plays pre-recorded books or photos loaded from your desktop.
Connects to Internet via WiFi including YouTube videos, Google Search, News Reader & over 600 applications.
Downloads books, songs or podcasts directly from iTunes store.
Sends and receives email.
http://www.apple.com/ipodtouch/
http://www.apple.com/webapps/index.html

The Kindle by Amazon
Downloads books directly from Amazon via built-in internet modem.
Does not magnify or read out loud … yet.
http://www.amazon.com/Kindle-Amazons-Wireless-Reading-Device/dp/B000FI73MA
http://talkingbookslibrarian.blogspot.com/2007/11/amazon-announces-kindle-wireless.html

Cybook Gen3 is the European Kindle
http://www.bookeen.com/ebook/ebook-reading-device.aspx

iRex iLiad is a larger Kindle. Loads from your desktop.
http://www.irextechnologies.com/products/iliad
http://en.wikipedia.org/wiki/ILiad_(E-book_Reader)
http://www.youtube.com/watch?v=UdlPHxPNw-Y

Return to Index

UNC SCHOOL OF MEDICINE
DEPARTMENT OF OPHTHALMOLOGY

The University of North Carolina

Living with Low Vision

Proper Nutrition, Proper Eyecare

Vision Nutrition Article
http://findarticles.com/p/articles/mi_m1272/is_2689_131/ai_92691057

Research to Prevent Blindness
http://www.rpbusa.org/rpb/

The Vision Learning Center
http://www.preventblindness.org/vlc/taking_care.htm

Macular Degeneration Vitamins
http://www.macular-degeneration-vitamins.com/

Low-Vision Rehab May Improve Macular Disease
http://www.emaxhealth.com/96/22247.html

Vision Nutrition
http://www.vision-nutrition.com/paulharvey.html

The Eye Advisory on eye disease prevention & treatment
http://www.eyeadvisory.com/intro.html

Bilberry & Eye Disease
http://www.peoplespharmacy.com/archives/herb_library/bilberry.php

Cataracts & N-Acetyl-Carnosine

Peoples Pharmacy quote: “A listener tantalized others with his testimonial on using a dietary supplement, l-carnosine, to reverse his cataracts. We discuss this approach with the ophthalmologist who suggested it.” Approved in Europe,under test in the US, but primary cure for cataracts in US & Europe is still surgery.

- http://www.peoplespharmacy.com/archives/radio_shows/684_health_news_update.php
- http://www.eyeadvisory.com/cataracts.html
- http://www.raysahelian.com/carnosine.html
- http://www.smart-drugs.net/carnosine-eyedrops-article.htm
- http://www.weeklyuniverse.com/2004/cataract.htm

Return to Index

Return to Index

Scan to Speech Conversion:

Converts a physical book to speech.

Daisy EasyReader
www.yourdolphin.com

OpenBook
http://www.freedomscientific.com/products/fs/openbook-product-page.asp

SARA
http://www.freedomscientific.com/products/lv/sara-product-page.asp

Kurzweil 3000 Professional
http://www.kurzweiledu.com/kurz3000.aspx#q1

KNFB Reader on a cell phone

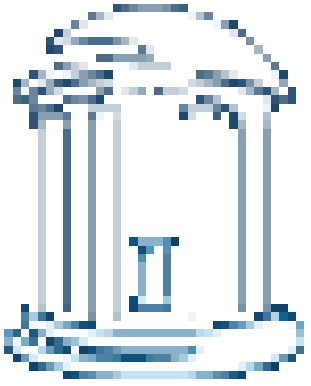
- http://www.knfbreader.com/
- http://gizmodo.com/349558/kurzweil-develops-first-seeing+eye-cellphone

Zoom-Ex is a fast, packaged, light weight scan to speech unit. It folds up and fits in your laptop bag. Runs on any Windows-based computer or laptop.
http://www.zoom-ex.com/html/zoomex_products_zoom_ex.htm
Review & prices for Zoom-Ex in Vision Access Magazine, Vol. 14, No. 4, Page 43.
http://www.cclvi.org/vaccess/main.htm

An inexpensive alternative approach is to scan the document on any scanner. Buy one that can scan bound books. This first step just makes a picture of

the document. Then run it thru OCR software such as IRIS, Kurzweil 1000 or FineReader, converting it to real text. Then read that file out loud with a screen reader.

Return to Index



UNC

Return to Index

Speech Recognition for Macs

You speak into a microphone & the computer obeys the command or types a document.

Comparison
http://speechwiki.org/out-loud/mac.html

Instructional Video
http://lifehacker.com/software/speech-recognition/hack-attack-make-your-macs-speech-recognition-work-for-you-215764.php

MacSpeech Dictate
http://www.macspeech.com/

Return to Index

Return to Index

Speech to Text Conversion, Speech Recognition

The computer types what you speak.
Enter computer commands verbally.

Dragon Naturally Speaking Speech Recognition Software 9.0+

- Speak rather than type.
- Spell correctly every time.
- Move around your document, format paragraphs, and even move your mouse by voice.

http://www.nuance.com/naturallyspeaking/

MacSpeech Speech Recognition for Macintoshes
http://www.macspeech.com/pages.php?cID=4&pID=24

Microsoft Speech Recognition
Part of the MS Word Speech Toolbar
Must be taught to recognize your speech.

Return to Index

Return to Index

Text to Speech (TTS) Screen Readers, Software for Computers

Have your computer read to you.

BBC Screen Reader Testing Guidelines
http://209.85.215.104/search?q=cache:WxmnUYWLDUUJ:www.bbc.co.uk/guidelines/newmedia/accessibility/screenreader.shtml+how+%22screen+reader%22+UK&hl=en&ct=clnk&cd=2&gl=us

Comparison of Web-based Text to Speech programs.
Info is helpful, but live links are not functional.
http://www.laits.utexas.edu/hebrew/personal/tts/table.html

Commercial Screen Readers for the Blind

JAWS screen reader by Freedom Scientific
http://www.freedomscientific.com/fs_products/software_jaws.asp
http://en.wikipedia.org/wiki/JAWS_(screen_reader)

HAL by Dolphin
http://www.yourdolphin.com/productdetail.asp?id=5

Commercial Screen Readers for Low Vision

Magic by Freedom Scientific, with JAWS speech
http://www.freedomscientific.com/PDF/lowvision/flyers/MAGicFlyer.pdf

ZoomText Reader by Ai Squared,
http://www.aisquared.com/index.cfm

Lunar Plus by Dolphin
http://www.yourdolphin.com/productdetail.asp?id=3

Window-Eyes screen reader by GWMicro
http://www.gwmicro.com/Window-Eyes/

TextAloud screen readers by Nextup
Uses Acapela voices
http://www.nextup.com/products.html

Infovox Desktop for Windows – screen reader by Acapela
http://www.acapela-group.com/infovox-desktop-for-windows-3-speech-solutions.html

Free & Low Cost Screen Readers for Low Vision

Many of these are experimental. Proceed with caution.

Text to Speech Shareware
http://www.sharewareconnection.com/titles/speech-to-text.htm

SmartRead - Free Computer Screen Reader
http://www.smartysoft.com/index.php

Speech Synthesizer 5.0
http://www.caltrox.com/products/speech.htm

TextSpeech Pro for PCs by Digital Future
http://www.textspeechpro.com/download.html

Free Text to Speech software by Dimio's Tools
http://dimio.altervista.org/eng/

Help Read - a free text reader
http://www.pixi.com/~reader1/allbrowser/

Read Please & Read Please Plus
http://www.readplease.com/english/readplease.php

Say Pad text to speech also can create Text to Audio MP3 files
http://www.afreego.com/Categories/Multimedia/MP3/006712.php

Read to Me text to speech reader
http://download.nytimes.com/Read-to-Me-Text-To-Speech/9100-7239_4-10702544.html?tag=lst-0-2

Verbose Text to Speech Converter
http://www.nch.com.au/verbose/index.html

NVDA - NonVisual Desktop Access (NVDA) is a free and open source screen reader for the Microsoft Windows operating system.
http://www.nvda-project.org/

Talklets by Textic Textic, the company behind Talklets, has developed breakthrough technology for turning web content into speech.
http://www.textic.com/index.html
http://assistivetek.blogspot.com/

Text to Speech conversion is built into **Microsoft Word**.

1) Choose Speech in the Tools menu
2) Select Speak in the floating Speech toolbar
3) If “Speak” is not visible, click on small down arrow at end of Speech toolbar & select.

Text to Speech conversion is built into **Adobe Acrobat Reader** 8.0 and later:
1) Set up in Edit > Preferences > Reading > Read Out Loud Options.

2) Activate in View > Read Out Loud > Activate

Text to Speech is built into the **Mac Leopard OS X**
Cmd-F5 starts Voice Over

Talking Dictionary on your computer
http://benolsatuem.com/2008/07/talking-dictionary-710.html

WebAnywhere … web-based screen reader for the web.
Online text to speech reader runs on Internet.
Still under development.

- http://www.networkworld.com/community/node/29310
- http://webinsight.cs.washington.edu/papers/webanywhere-html/
- http://webanywhere.cs.washington.edu/
- http://www.eschoolnews.com/news/top-news/?i=54514;_hbguid=1acccdf1-82d9-4583-bdf2-efcf294c5f81&d=top-news
- http://www.msnbc.msn.com/id/25630182/page/2/

Odiogo - It transforms news sites and blog posts into high fidelity, near human quality audio files ready to download and play anywhere, anytime, on any device, MP3 or iPod.
http://www.odiogo.com/

Menus That Talk – a service available at some restaurants
http://www.menusthattalk.com/products.html

Return to Index

Return to Index

The Apple Macintosh & its Special Strengths

The Apple Macintosh has an excellent set of assistives built into the operating system. It is capable of text magnification and text to speech conversion without additional software.

Apple's commitment to accessibility is evident throughout the Mac OS X operating system, which is not only easy to use by design, but also includes a wide variety of features and technologies specifically designed to provide access to users with disabilities. Apple refers to these features collectively as **Universal Access** and has integrated them into the operating system so they can be used in conjunction with a variety of applications from Apple and other developers. Apple is also changing the ways people interact with technology through innovative products like the iPhone, which bring new possibilities for making user interfaces accessible to users with disabilities.

The new features in Universal Access.

http://www.apple.com/macosx/features/300.html#universalaccess

Accessibility Technologies in Mac OS X

- Zoom
- Full keyboard navigation
- Sticky Keys and Slow Keys

- Mouse Keys
- Closed-Captioning in QuickTime
- Visual alert
- Spoken items
- Talking alerts
- Speech recognition
- Display adjustment

http://www.apple.com/accessibility/voiceover/manual.html

Return to Index

UNC SCHOOL OF MEDICINE
DEPARTMENT OF OPHTHALMOLOGY

The University of North Carolina

Living with Low Vision

The Low Vision Gateway

Intro to various aspects of Low Vision

- http://www.lowvision.org/
- http://www.lowvisioninfo.org/
- http://www.lowvisionfriends.com/

VisionAware.org, a "Self-Help for Vision Loss" web site that provides free, practical, hands-on information to enhance quality of life and independence for adults with vision loss, their families and friends, caregivers, and related professionals.
http://www.visionaware.org/

Return to Index

UNC SCHOOL OF MEDICINE
DEPARTMENT OF OPHTHALMOLOGY

The University of North Carolina

Living with Low Vision

Transportation & Low Vision

What can you do now that you can no longer drive:

- Shuttle Buses
- Public Transportation
- Shuttle Services
- Taxis
- Friends & relatives
- Car Pools
- Walking
- GPS Navigation

On-going Plans for transport in the Durham/chapel Hill area

- http://citizenwill.org/2007/03/07/campos-racetrack-5-miles-long/http://www.owdna.org/issues.htm
- http://www.facilities.ufl.edu/cp/pdf/PeopleMovers.pdf

Durham Area Transit Authority – DATA

- http://data.durhamnc.gov/Index_DATA.cfm
- http://data.durhamnc.gov/access.cfm

Google Ride Finder (under development)
http://labs.google.com/ridefinder

Google Transit – Plan a trip using public transport (Works in some cities.)
http://www.google.com/transit

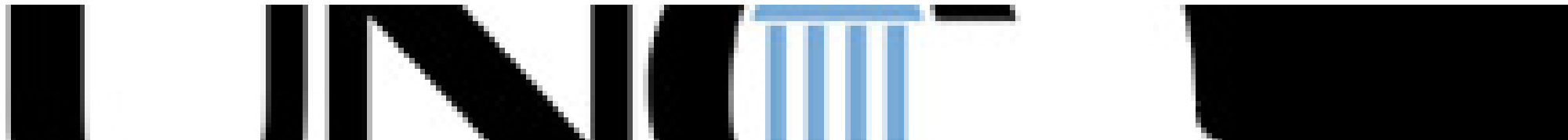
Trekker Breeze … hand-held talking GPS device... simply press a button and Breeze tells you your street location on the spot as you walk or ride in a vehicle.
http://www.humanware.com/en-usa/products/gps/trekker_breeze/_details/id_101/trekker_breeze.html

The Sonic Pathfinder – a travel aid for the blind
http://www.sonicpathfinder.org/

Electronic Travel Aids for Low Vision

- http://www.noogenesis.com/eta/current.html
- http://www.seeingwithsound.com/extra/Sonar_ETA.doc
- http://www.wayfinding.net/eta.htm
- http://www.abledata.com/abledata.cfm?pageid=19327&ksectionid=19327&top=10414

Return to Index



Living with Low Vision

In an ad by an automotive company, there is a picture of a woman. She is strong, athletic. She is wearing a tee shirt and running shorts. She has only one leg; the other is a runner's high-tech prosthetic.

The caption reads "Don't ever give up. Not once. Not ever.
My dream is to do extraordinary things every day.
Life's calling. Where to next?"

This is the attitude we must bring to low vision.

Low Vision Care is not a surgical procedure or medicinal treatment, but rather a rehabilitative program to teach you new strategies to maximize your remaining vision.

There are a myriad of resources to help you live independently and productively. But there is a great deal of redundancy between manufacturers. Try several alternatives before you commit to a solution. Some of you may need our remedial computer lessons. Some of you may want to avoid computers altogether. Each person is different.

We will show these alternative assistives, some free, some inexpensive, some quite expensive. Magnifiers can range from a simple magnifying glass to an electronic closed circuit TV magnifier, such as a Topaz CCTV. Sometimes these freebies will do the job for you. Sometimes you will choose the professional solutions for their quality & ease of use. You may find that screen magnification allows you to read a computer screen. Or you might find it better to have a computer or an iPod read out loud to you. It is up to you. It is your choice.

This course consists of three parts: the teachers, these notes and you. Of these, YOU are the most important part. Your willingness to work hard and to learn are essential for your success.

Course Outline & Index

Computer Proficiency Survey

Computer Settings

Websites with Useful Advice for the Visually Challenged

Local Services for those with Low Vision

Transportation & Low Vision

Catalogs for Low Vision Products

Low Vision Gateway - Intro to various aspects of Low Vision

Proper Nutrition, Proper Eyecare

Optical Magnifiers

Cell Phones

AudioBooks & eBooks

eBook Readers

Low Vision Magazines & Newsletters

Low Vision Blogs & User Groups

Portable eBook Storage Devices

Magnifiers, Electronic, Hand Held

Magnifiers, Electronic, Desktop (CCTV)

Magnifiers, Software for Computer Screen

Magnifiers for the Web Browser

Low Vision Web Browsers

Magnifiers for the Macintosh

Text to Speech Screen Readers, Software for Computers

Scan to Speech Conversion

Speech to Text Conversion, Speech Recognition

The Apple Macintosh & its Special Strengths

Mac Voice-Over Commands

Text to Speech Screen Readers for Macintoshes

Speech Recognition for Macs

Financial Aid for Assistive Technology

Computer Settings for Low Vision

Have a comfortable chair and good posture to reduce physical fatigue.
Good lighting in general is an aid for low vision. Minimize glare.
Adjust lighting and screen angle.
Take a break every 20 minutes to limit eye strain.
http://www.uveitis.org/low.html#
http://www.eterlab.com/eyedefender/
http://www.mdsupport.org/library/lighting.html

The Ott-Lite "total- spectrum" bulb that produces high color rendering, while retaining excellent contrast and visual acuity.For persons with low vision, the implications for a light that provides enhanced contrast, sharpened clarity, and lower glare while it increases illumination and offers true color rendering are obvious. In addition, because the bulb is cool to the touch, it provides a more comfortable work space.
http://www.ott-lite.com/Cms/vsp.aspx

The following setting will allow you to simulate ZoomText using Microsoft Word.

Screen Resolution & Object Size for a PC

1. Right click on a clear area of the Desktop
2. Click on Properties on the drop down menu
3. Alternate method, click on Start> Control Panel > Display.
4. Click on Settings tab
5. Slide Screen Resolution to left (800 x 600)

6. Click on Appearance tab
7. Change Font Size to Large
8. Click on Apply
9. Click on Color Scheme tab
10. Choose High Contrast White or Black, to suit.
11. Click on Apply
12. Click on OK
13. In upper right corner of window, click on Full Screen center box just to the left of the X box.

Monitor Contrast & Brightness Settings

Use the Accessiblity Wizard to set contrast & icon size

1. Go to Start > All Programs > Accessories > Accessibility > Accessibility Wizard
2. Follow instructions to set preferences.

Mouse Settings

1. Go to Start > Control Panel
2. Double click on Mouse icon
3. Click on Pointers tab
4. Check the Pointer Shadow box
5. Click on Pointer Options tab
6. Check the Display pointer trails box & set length to medium
7. Check the box marked Show Location of Mouse.
8. Click on Apply
9. Click on OK

When needed, press CTRL key repeatedly to find the mouse.

Mouse Dexterity Exercises

- http://www.seniornet.org/howto/mouseexercises/mousepractice.html
- http://www.lakeco.lib.in.us/mouselinks.htm

Computer Tips from SeniorNet

http://www.seniornet.org/jsnet/index.php?option=com_content&task=view&id=152&Itemid=1

Increase Website Visibility

To increase the contrast & invert the color of the font in a website, click on the paragraph, hold down the **CTRL** key & type **A**.

To increase the font size, hold down the **CTRL** key & roll the **MOUSE WHEEL** up. This works for most, but not all, websites.

Thumb Drives

Copy a book or any long document to a thumb drive, along with a screen reader, such as Browsealoud and SmartRead. Plug this into any computer, which will now be activatable & able to read.

Document Page Width for 800 x 600 resolution

In Word, go to File > Page Setup
Click on Margins tab
Set Left margin to 0.5
Set Right margin to 3.5
Click on OK
Select the entire document, CTRL A.
Format Paragraph Left-aligned.

Magnification in Microsoft Word

Open a Word document, if necessary.
Click in body of the document, if necessary.
Hold down the CTRL key
Roll the mouse wheel up & down to change the font magnification.

Read Out Loud in Microsoft Word

Open a Word document.
Click on Tools > Speech
The Speech Toolbar will appear.
Click mouse pointer where you want Speech to begin.
Click Speak in Language Toolbar.

Easy Access Applications

These are simplified versions of Flickr & YouTube for low vision.

Easy Flickr
http://icant.co.uk/easy-flickr/

Easy YouTube
http://icant.co.uk/easy-youtube/

Return to Index

Websites with Useful Advice for the Visually Challenged

How Can I Organize My Kitchen To Find Things More Easily?
http://www.visionaware.org/how_can_i_organize_my_kitchen_to_find_things_more_easily

Useful Home Adaptations for The Blind and Visually Impaired
http://www.lowvision.com/tips/useful-home-adaptations-for-the-blind-and-visually-impaired/

Adapting To Reduced Vision From Age-Related Macular Degeneration
http://www.cigna.com/healthinfo/rt1271.html

Online Lessons on Living Better at Home
http://www.lighthouse.org/livingbetter/

How to Find a Dropped Object
http://www.visionaware.org/locating-dropped-objects

Videos about Low Vision

- http://video.google.com/videosearch?q=%22low+vision%22&sitesearch=#

- http://uk.youtube.com/watch?v=fw91hsVrf40
- http://www.webmd.com/video/tips-for-better-vision
- http://www.videojug.com/film/how-to-cope-with-sight-loss-2
- http://www.eyecareamerica.org/eyecare/conditions/low-vision/video.cfm

Low Vision Simulation
http://www.lowvisionsimulationkit.com/products.html
http://www.lowvisiononline.unimelb.edu.au/LowVision/LowVision_simulation.htm

Op Lights

Return to Index

Local Services for those with Low Vision

UNC Eye Center
UNC Department of Ophthalmology
Communications Center
2nd Floor ACC Bldg CB 7720
Chapel Hill, NC 27599
919-966-5509

Duke Eye Center
Low Vision Unit
2351 Irwin Rd
Durham, NC 27710
(919) 681-3937

Low Vision Support Group

Contacts:	Herb Halbrecht	919-969-1573
	John Logan	919-957-4247
	Lauren Tappan	919-929-5256

NC Division of Services for the Blind
Located at The Governor Morehead School for the Blind
309 Ashe Ave
Raleigh, NC
919-733-9822

(919) 715-1154
http://www.ncdhhs.gov/dsb/index.htm

NC Rehab Center for the Blind
Located at The Governor Morehead School for the Blind
Pattie Barker
305 Ashe Ave
Raliegh, NC, 27606
Phone: (919) 733-5897
http://www.dhhs.state.nc.us/dsb/guide.htm

North Carolina Assistive Technology Program - NCATP
1110 Navaho Dr.
Suite 101,
Raleigh, NC 27609
919-850-2787
http://www.ncatp.org/

NCATP is the largest source in NC for AT demos & trial loans.
NCATP is both free & fee based. NC Services for the Blind is free.

Partnerships in Assistive Technology
Exchange center for assistive devices, when available.
1110 Navaho Dr.
Suite 100,
Raleigh, NC 27609
919-872-2298
http://www.pat.org/

PAT Expo Exchange Program Dec. 3, 4, 5, 2008

NC Library for the Blind
1811 Capital Blvd.,
Raleigh, NC 27635
(919) 733-4376
http://statelibrary.dcr.state.nc.us/lbph/lbph.htm
http://www.loc.gov/NLS/
http://www.klas.com/talkingbooks/nc

Magazine for NLS subscribers
http://www.choicemagazinelistening.org/

See also AudioBooks & eBooks below.

Foundation for Fighting Blindness
Eastern Region Office

4600 Marriott Drive, Suite 340
Raleigh, NC 27612
(919) 781-8014
http://www.blindness.org/

Raleigh Durham Chapter, FFB
Jane Gardner, Chapter President
5435 N. Highland Drive
Durham, NC 27712-1921
919-383-7719
ncraleigh@fightblindness.org

Alliance of Disability Advocates
401 Oberlin Rd., Suite 103
Raleigh, NC 27605
919.833.1117
http://www.alliancecil.org

The Macular Degeneration Partnership
http://www.amd.org/

The Triangle Radio Reading Service
http://www.trianglereadingservice.org/

Return to Index

Transportation & Low Vision

What can you do now that you can no longer drive:

- Shuttle Buses
- Public Transportation
- Shuttle Services
- Taxis
- Friends & relatives
- Car Pools
- Walking
- GPS Navigation

On-going Plans for transport in the Durham/chapel Hill area

- http://citizenwill.org/2007/03/07/campos-racetrack-5-miles-long/
- http://www.owdna.org/issues.htm
- http://www.facilities.ufl.edu/cp/pdf/PeopleMovers.pdf

Durham Area Transit Authority – DATA
http://data.durhamnc.gov/Index_DATA.cfm
http://data.durhamnc.gov/access.cfm

Google Ride Finder (under development)
http://labs.google.com/ridefinder

Google Transit – Plan a trip using public transport
http://www.google.com/transit

Trekker Breeze … hand-held talking GPS device... simply press a button and Breeze tells you your street location on the spot as you walk or ride in a vehicle.
http://www.humanware.com/en-usa/products/gps/trekker_breeze/_details/id_101/trekker_breeze.html

The Sonic Pathfinder – a travel aid for the blind
http://www.sonicpathfinder.org/

Electronic Travel Aids for Low Vision

- http://www.noogenesis.com/eta/current.html
- http://www.seeingwithsound.com/extra/Sonar_ETA.doc
- http://www.wayfinding.net/eta.htm
- http://www.abledata.com/abledata.cfm?pageid=19327&ksectionid=19327&top=10414

Return to Index

Catalogs for Low Vision Products

The Low Vision Store

- http://www.thelowvisioncenter.com/lowvipr.html
- http://www.thelowvisioncenter.com/index.html?gclid=COaYl5r_iJQCFQrVsgodtQ7vWg
- http://stores.ebay.com/The-Low-Vision-Store

Independent Living Aids Inc
http://www.independentliving.com/

LS&S Products
http://www.lssproducts.com/

Beyond Sight
http://www.beyondsight.com/

Maxi Aids
http://www.maxiaids.com/

Enable Mart
http://www.enablemart.com/Catalog/Vision

Return to Index

The Low Vision Gateway

Intro to various aspects of Low Vision

- http://www.lowvision.org/
- http://www.lowvisioninfo.org/
- http://www.lowvisionfriends.com/

VisionAware.org, a "Self-Help for Vision Loss" web site that provides free, practical, hands-on information to enhance quality of life and independence for adults with vision loss, their families and friends, caregivers, and related professionals.

http://www.visionaware.org/

Return to Index

Proper Nutrition, Proper Eyecare

Vision Nutrition Article
http://findarticles.com/p/articles/mi_m1272/is_2689_131/ai_92691057

Research to Prevent Blindness
http://www.rpbusa.org/rpb/

The Vision Learning Center
http://www.preventblindness.org/vlc/taking_care.htm

Macular Degeneration Vitamins
http://www.macular-degeneration-vitamins.com/

Low-Vision Rehab May Improve Macular Disease
http://www.emaxhealth.com/96/22247.html

Vision Nutrition
http://www.vision-nutrition.com/paulharvey.html

The Eye Advisory on eye disease prevention & treatment
http://www.eyeadvisory.com/intro.html

Bilberry & Eye Disease
http://www.peoplespharmacy.com/archives/herb_library/bilberry.php

Cataracts & N-Acetyl-Carnosine
Peoples Pharmacy quote: “A listener tantalized others with his testimonial on using a dietary supplement, l-carnosine, to reverse his cataracts. We discuss this approach with the ophthalmologist who suggested it.” Approved in Europe,under test in the US, but primary cure for cataracts in Europe is still surgery.

- http://www.peoplespharmacy.com/archives/radio_shows/684_health_news_update.php
- http://www.eyeadvisory.com/cataracts.html

- http://www.raysahelian.com/carnosine.html
- http://www.smart-drugs.net/carnosine-eyedrops-article.htm
- http://www.weeklyuniverse.com/2004/cataract.htm

Return to Index

Optical Magnifiers

How to Choose a Magnifier to do the Right Job
http://www.eschenbach.com/chart.html

http://www.eschenbach.com/newsletters/200802.pdf

Magnifiers, Optical

Illuminated Magnifiers, Hand held
http://www.independentliving.com/products.asp?dept=79&deptname=Hand-Held-Magnifiers

Illuminated Magnifier, 5 Diopter Rectangular Lens, w/Weighted Base
http://www.all-spec.com/1/viewitem/240-101/ALLSPEC/prodinfo/w3path=cat

Selsi Magnifiers
http://www.selsioptics.com/readers.html

Telescopic & Microscopic Eyeglasses

- http://lowvisiondoctor.com/_wsn/page4.html
- http://www.lowvision-copihue.com/catalog25x-low-vision-telescopes.htm
- http://www.collette-optical.com/atelescopic.php

- http://www.activeforever.com/showproduct.aspx?ProductID=2103&SEName=eschenbach-maxdetail-glasses
- http://www.selsioptics.com/Sports-Glasses.html

Return to Index

Cell Phones

Code Factory - Cell Phone Enhancements
http://codefactory.es/en/

Cell Phone Technologist
Ray Gonzales
919-523-0205
http://www.etoengineering.com

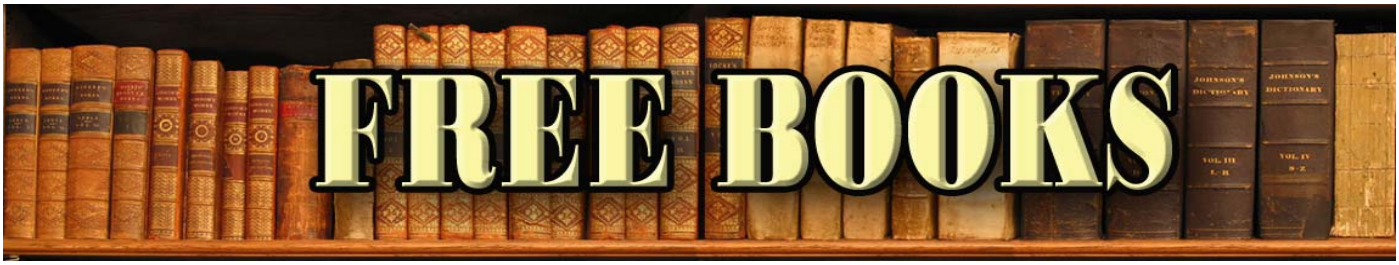
Accessible Cell Phones
http://www.mnlowvision.com/phone.html

The Owasys 22C Screenless Cell Phone
http://www.screenlessphone.com/

The Jitterbug phone – large screen, large buttons
http://www.jitterbug.com/Phones.aspx

Return to Index

AudioBooks & eBooks



Audiobooks are read to you by a recorded actor. eBooks allow you to download the book, magnify the type size and have the computer read to you out loud.

Free Online eBooks

- Online Books

http://onlinebooks.library.upenn.edu/

- Gutenberg Project

http://www.gutenberg.net/index.php

- Net Library – 24,000 eBooks & 2,000 eAudiobooks. Sign up thru your public library, then sign on to NC Live, and finally to Net Library.

http://netlibrary.com/Centers/AudiobookCenter/Browse.aspx?Category=Lectures

Free Online Audiobooks

- http://librivox.org/newcatalog/search.php?title=&author=&status=complete&action=Search
- http://www.audiobooksforfree.com/

Books on CD & cassette

North Carolina Library for the Blind (see above)
http://statelibrary.dcr.state.nc.us/lbph/lbph.htm

Downloadable Talking Books for the Blind
https://www.nlstalkingbooks.org/dtb/

Audible.com. Over 40,000 current sellers. Annual subscription service.
http://www.audible.com/adbl/site/homepage/AnonHome.jsp?BV_UseBVCookie=Yes

Simply Audiobooks. Rental or Download service.
http://www.simplyaudiobooks.com/

AudioBooks.com. Rent or buy. New or used.
http://www.audiobooks.com/

AudioBooks.net. 22,000 paid titles, 500 free titles.
http://www.audiobooks.net/

The Talking Books Librarian
Get the latest developments.
http://talkingbookslibrarian.blogspot.com/

Your Local Public Library has books on cassette & CD.

Return to Index

Low Vision Magazines & Newsletters

Dialogue Magazine
http://www.blindskills.com/dialogue.html

Vision Access Magazine
http://www.cclvi.org/vaccess/main.htm

EyeWorld Magazine
http://www.eyeworld.org/

Low Vision Newsletters

- http://www.eyeassociates.com/lownews.htm
- http://www.blind.msstate.edu/Worksight2006.html
- http://www.lowvisionclub.com/newsletters.html
- http://www.lowvision.com/tips/newsletter-archive/
- http://www.lighthouse.org

Return to Index

Low Vision Blogs & User Groups

Welcome to sci.med.vision
http://groups.google.com/group/sci.med.vision/browse_thread/thread/7348639e81d8ac15?hl=en#

Access Watch
http://www.accesswatch.info/

Gordon's D-Zone
http://gd-zone.blogspot.com/2008/06/here-i-go-part-1.html

Marco's Accessibility Blog
http://www.marcozehe.de/tag/accessibility/

BlindConfidential
http://blindconfidential.blogspot.com/

Universally Designed
http://universallydesigned.net/general/reading-making-it-a-more-pleasant-past-time/

Low Vision Aids Blog – the latest AT devices
http://lowvision.wordpress.com/

Serotek Blog
http://blog.serotek.com/

Fred's Head Companion
http://www.fredshead.info/

Return to Index

Portable eBook Storage Devices & Readers

VictorReader Stream by Humanware
Plays pre-recorded Natl Library for the Blind books downloaded via a std. desktop computer.
Includes Text to Speech Reader for elctronic documents.
http://www.humanware.com/en-usa/products/dtb_players/compact_models/_details/id_81/victor reader_stream.html

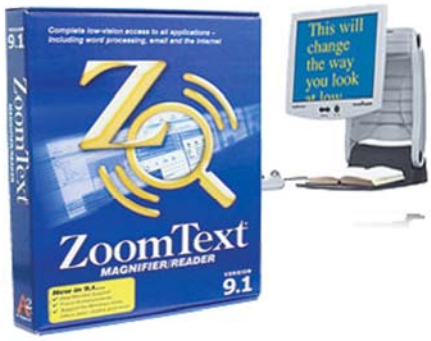
iPod Touch by Apple
Plays pre-recorded books or photos loaded from your desktop.
Connects to Internet via WiFi including YouTube videos, Google Search, News Reader & over 600 applications.
Downloads books, songs or podcasts directly from iTunes store.
Sends and receives email.
http://www.apple.com/ipodtouch/
http://www.apple.com/webapps/index.html

The Kindle by Amazon
Downloads books directly from Amazon via built-in internet modem.
Does not magnify or read out loud … yet.
http://www.amazon.com/Kindle-Amazons-Wireless-Reading-Device/dp/B000FI73MA
http://talkingbookslibrarian.blogspot.com/2007/11/amazon-announces-kindle-wireless.html

Cybook Gen3 is the European Kindle
http://www.bookeen.com/ebook/ebook-reading-device.aspx

iRex iLiad is a larger Kindle. Loads from your desktop.
http://www.irextechnologies.com/products/iliad
http://en.wikipedia.org/wiki/ILiad_(E-book_Reader)
http://www.youtube.com/watch?v=UdlPHxPNw-Y

Return to Index



Magnifiers, Electronic, Hand Held

DinoView portable
http://www.independentliving.com/prodinfo.asp?number=454658

Optelec Compact+ portable
http://www.optelec.com/us_en/index.php/products/electronic-low-vision/compact-plus/

Amigo
http://www.ulva.com/Online-Store/Video-Magnifiers/amigo.htm
http://www.enhancedvision.com/products/low_vision_assistive_devices.php

Opal by Freedom Scientific
http://www.accessibility.net/store/Handheld_Magnifiers.html

Nemo
http://www.ulva.com/Online-Store/Video-Magnifiers/nemo.htm

Smartview Series - 4 new electronic magnifiers from Humanware
http://www.humanware.com/en-usa/products/low_vision/smartview

The QuickLook video magnifier
http://www.jbliss.com/quicklook.htm

Return to Index

Magnifiers, Electronic, Desktop (CCTV)

Topaz by Freedom Scientific
http://www.accessibility.net/store/CCTV.html

Smartview Extend by Humanware
http://www.accessibility.net/store/CCTV.html
http://www.humanware.com/en-usa/products/low_vision

Jordy Head mounted CCTV
http://www.nanopac.com/Jordy.htm

Optelec ClearNote+ desktop
http://www.optelec.com/us_en/index.php/products/electronic-low-vision/clearnote/

Onyx by Freedom Scientific
http://www.freedomscientific.com/products/lv/onyx-main-product-page.asp
http://www.granteyeglasses.com/onyx.html

Merlin CCTV
http://www.enhancedvision.com/downloads/MerlinPlusSpecs.pdf

Magnicam works with your TV
http://www.magnicam.com/

Return to Index

Magnifiers, Software for Computer Screen

Commercial Computer Magnifiers

Magic by Freedom Scientific, with or without speech
http://www.freedomscientific.com/PDF/lowvision/flyers/MAGicFlyer.pdf

ZoomText by Ai Squared, with or without speech
http://www.aisquared.com/index.cfm

Lunar & Lunar Plus by Dolphin
http://www.yourdolphin.com/productdetail.asp?id=3

Free & Low Cost Computer Magnifiers

Asstd Screen Magnifiers: free, shareware & professional. Magnification should also do Text Smoothing. Many have jagged edges on the font. Some are not stable.

- http://www.magnifiers.org/links/Download_Software/Screen_Magnifiers/
- http://www.bluechillies.com/query.php?text=IE%Magnifier&page=1

Magic Lens Max

- Customizable lens shape with 3 smooth styles (Ellipse, Rounded Rectangle and Rectangle)
- Variable magnification from 1/2x to 32x

http://www.visionsuit.com/index.html

Dragnifier magnifies mouse area
http://www.halley.cc/stuff/dragnifier.html

Screen Loupe
http://www.gregorybraun.com/Loupe.html

ZoomWare, by AISquared, improves screen magnification, contrast & color
http://www.getzoomware.com/videos

Return to Index

Magnifiers for the Web Browser

Magnifiers for Internet Explorer

Go to manufacturers web site for Zoom Text & for Dolphin's Hal Screen Reader or Supernova Reader Magnifier.

Browser Buddy
http://www.bluechillies.com/details/8918.html

ProSurf
http://www.bluechillies.com/details/10133.html

Hyperjoint Zoom Buttons
http://www.bluechillies.com/download/8128.html

Big.Com free magnifier for Internet Explorer
http://download.nytimes.com/Big-com-Web-Magnifier/9100-12777_4-10515888.html?tag=lst-0-3

Firefox Browser Add-ons

No Squint for FireFox Browser
https://addons.mozilla.org/en-US/firefox/addon/2592
A FireFox browser add-on. It allows you to adjust the default text zoom level for any site - and then remembers it on a per-site basis.

Low Browse – free Firefox add-on developed by Lighthouse International
http://lighthouse.org/aboutus/press/press-releases/lowbrowse

Low Vision Web Browsers

Opera Browser adapts for low vision
Built-in magnifier, adaptable menues, etc.
http://us.geocities.com/tim_hobbs.geo/opb.htm

Mozilla Firefox Browser does too.
http://www.mozilla.org/

Web Eyes – Add-on for Internet Explorer
http://www.ionwebeyes.com/

Tips for Browser setup
http://www.alistapart.com/articles/lowvision/
http://63.240.118.132/Section.asp?DocumentID=1452&SectionID=4

Connect Outloud by Freedom Scientific
http://www.freedomscientific.com/fs_products/software_connect.asp

Fire Vox – a screen reader add-on for the FireFox browser
http://www.firevox.clcworld.net/features.html

Web Visum –helpful add-ons for Firefox browser
http://www.webvisum.com/

WebLV adds the Internet & email to CCTV
http://www.jbliss.com/weblv.htm

Webbie – Free Low Vision Browser
http://www.webbie.org.uk/

IBM Home Page Reader – Talking web browser
http://www-03.ibm.com/able/news/hpr_enduser.html

Browsealoud – free software for PC & Mac that reads text selected by mouse on compatible websites. Mostly in UK.
http://www.browsealoud.com/page.asp?pg_id=80004

Accessible Google
In order to help the visually impaired find the most relevant, useful information on the web, and as quickly as possible, Google developed Accessible Search. Google Accessible Search identifies and prioritizes search results that are more easily used by

blind and visually impaired users – that means pages that are clean and simple (think of the Google homepage!) and that can load without images.
http://labs.google.com/accessible/

Return to Index

Magnifiers for the Mac

Text magnification is built into the Mac operating system.

Coloristic - Simple magnifier utility, that magnifies the area around the mouse cursor. Also for Windows XP. $12
http://www.bubblepop.com/coloristic/index.html

Lupe for Macintosh - from Artis Software, Lupe is a FREE screen magnifier utility, that magnifies the area around the mouse cursor from 2 to 8 times.
http://www.artissoftware.com/lupe.html

Macintosh Software Toolkit – freeware & shareware utilities that help sight impaired people accessing the Macintosh
http://trace.wisc.edu/world/computer_access/mac/macshare.html

Return to Index

Text to Speech (TTS) Screen Readers, Software for Computers

Have your computer read to you.

BBC Screen Reader Testing Guidelines
http://209.85.215.104/search?q=cache:WxmnUYWLDUUJ:www.bbc.co.uk/guidelines/newmedia/accessibility/screenreader.shtml+how+%22screen+reader%22+UK&hl=en&ct=clnk&cd=2&gl=us

Comparison of Web-based Text to Speech programs.
Info is helpful, but live links are not functional.
http://www.laits.utexas.edu/hebrew/personal/tts/table.html

Commercial Screen Readers for the Blind

JAWS screen reader by Freedom Scientific
http://www.freedomscientific.com/fs_products/software_jaws.asp
http://en.wikipedia.org/wiki/JAWS_(screen_reader)

HAL by Dolphin
http://www.yourdolphin.com/productdetail.asp?id=5

Commercial Screen Readers for Low Vision

Magic by Freedom Scientific, with JAWS speech
http://www.freedomscientific.com/PDF/lowvision/flyers/MAGicFlyer.pdf

ZoomText Reader by Ai Squared,
http://www.aisquared.com/index.cfm

Lunar Plus by Dolphin
http://www.yourdolphin.com/productdetail.asp?id=3

Window-Eyes screen reader by GWMicro
http://www.gwmicro.com/Window-Eyes/

TextAloud screen readers by Nextup
Uses Acapela voices
http://www.nextup.com/products.html

Infovox Desktop for Windows – screen reader by Acapela
http://www.acapela-group.com/infovox-desktop-for-windows-3-speech-solutions.html

Free & Low Cost Screen Readers for Low Vision

Many of these are experimental. Proceed with caution.

Text to Speech Shareware
http://www.sharewareconnection.com/titles/speech-to-text.htm

SmartRead - Free Computer Screen Reader
http://www.smartysoft.com/index.php

Speech Synthesizer 5.0
http://www.caltrox.com/products/speech.htm

TextSpeech Pro for PCs by Digital Future
http://www.textspeechpro.com/download.html

Free Text to Speech software by Dimio's Tools
http://dimio.altervista.org/eng/

Help Read - a free text reader
http://www.pixi.com/~reader1/allbrowser/

Read Please & Read Please Plus
http://www.readplease.com/english/readplease.php

Say Pad text to speech also can create Text to Audio MP3 files
http://www.afreego.com/Categories/Multimedia/MP3/006712.php

Read to Me text to speech reader
http://download.nytimes.com/Read-to-Me-Text-To-Speech/9100-7239_4-10702544.html?tag=lst-0-2

Verbose Text to Speech Converter
http://www.nch.com.au/verbose/index.html

NVDA - NonVisual Desktop Access (NVDA) is a free and open source screen reader for the Microsoft Windows operating system.
http://www.nvda-project.org/

Talklets by Textic Textic, the company behind Talklets, has developed breakthrough technology for turning web content into speech.
http://www.textic.com/index.html
http://assistivetek.blogspot.com/

Text to Speech conversion is built into **Microsoft Word**.

1) Choose Speech in the Tools menu
2) Select Speak in the floating Speech toolbar
3) If "Speak" is not visible, click on small down arrow at end of Speech toolbar & select.

Text to Speech conversion is built into **Adobe Acrobat Reader** 8.0 and later:

1) Set up in Edit > Preferences > Reading > Read Out Loud Options.
2) Activate in View > Read Out Loud > Activate

Text to Speech is built into the **Mac Leopard OS X**
Cmd-F5 starts Voice Over

Talking Dictionary on your computer
http://benolsatuem.com/2008/07/talking-dictionary-710.html

WebAnywhere … web-based screen reader for the web.
Online text to speech reader runs on Internet.
Still under development.

- http://www.networkworld.com/community/node/29310
- http://webinsight.cs.washington.edu/papers/webanywhere-html/
- http://webanywhere.cs.washington.edu/
- http://www.eschoolnews.com/news/top-news/?i=54514;_hbguid=1acccdf1-82d9-4583-bdf2-efcf294c5f81&d=top-news
- http://www.msnbc.msn.com/id/25630182/page/2/

Odiogo - It transforms news sites and blog posts into high fidelity, near human quality audio files ready to download and play anywhere, anytime, on any device, MP3 or iPod.
http://www.odiogo.com/

Menus That Talk – a service available at some restaurants
http://www.menusthattalk.com/products.html

Return to Index

Scan to Speech Conversion:

Converts a physical book to speech.

Daisy EasyReader
www.yourdolphin.com

OpenBook
http://www.freedomscientific.com/products/fs/openbook-product-page.asp

SARA
http://www.freedomscientific.com/products/lv/sara-product-page.asp

Kurzweil 3000 Professional
http://www.kurzweiledu.com/kurz3000.aspx#q1

KNFB Reader on a cell phone

- http://www.knfbreader.com/
- http://gizmodo.com/349558/kurzweil-develops-first-seeing+eye-cellphone

Zoom-Ex is a fast, packaged, light weight scan to speech unit. It folds up and fits in your laptop bag. Runs on any Windows-based computer or laptop.
http://www.zoom-ex.com/html/zoomex_products_zoom_ex.htm
Review & prices for Zoom-Ex in Vision Access Magazine, Vol. 14, No. 4, Page 43.
http://www.cclvi.org/vaccess/main.htm

An inexpensive alternative approach is to scan the document on any scanner. Buy one that can scan bound books. This first step just makes a picture of the document. Then run it thru OCR software such as IRIS, Kurzweil 1000 or FineReader, converting it to real text. Then read that file out loud with a screen reader.

Return to Index

Speech to Text Conversion, Speech Recognition

The computer types what you speak.
Enter computer commands verbally.

Dragon Naturally Speaking Speech Recognition Software 9.0+

- Speak rather than type.
- Spell correctly every time.
- Move around your document, format paragraphs, and even move your mouse by voice.

http://www.nuance.com/naturallyspeaking/

MacSpeech Speech Recognition for Macintoshes
http://www.macspeech.com/pages.php?cID=4&pID=24

Microsoft Speech Recognition
Part of the MS Word Speech Toolbar
Must be taught to recognize your speech.

Return to Index

The Apple Macintosh & its Special Strengths

The Apple Macintosh has an excellent set of assistives built into the operating system. It is capable of text magnification and text to speech conversion without additional software.

Apple's commitment to accessibility is evident throughout the Mac OS X operating system, which is not only easy to use by design, but also includes a wide variety of features and technologies specifically designed to provide access to users with disabilities. Apple refers to these features

collectively as **Universal Access** and has integrated them into the operating system so they can be used in conjunction with a variety of applications from Apple and other developers. Apple is also changing the ways people interact with technology through innovative products like the iPhone, which bring new possibilities for making user interfaces accessible to users with disabilities.

The new features in Universal Access.

http://www.apple.com/macosx/features/300.html#universalaccess

Accessibility Technologies in Mac OS X

- Zoom
- Full keyboard navigation
- Sticky Keys and Slow Keys
- Mouse Keys
- Closed-Captioning in QuickTime
- Visual alert
- Spoken items
- Talking alerts
- Speech recognition
- Display adjustment

Simple computer keystrokes to control your Macintosh:

Universal Access and VoiceOver	
Keyboard shortcut	**Description**
Option-Command-8	Turn on Zoom
Option-Command-+ (plus)	Zoom in
Option-Command--(minus)	Zoom out
Control-Option-Command-8	Switch to White on Black
Control-F1	Turn on Full Keyboard Access

	When Full Keyboard Access is turned on, you can use the key combinations listed in the table below from the Finder.
Control-F2	Full Keyboard Access Highlight Menu
Control-F3	Full Keyboard Access Highlight Dock
Control-F4	Full Keyboard Access Highlight Window (active) or next window behind it
Control-F5	Full Keyboard Access Highlight Toolbar
Control-F6	Full Keyboard Access Highlight Utility window (palette)
Command-F5 or fn-Command-F5	**Turn VoiceOver on or off** (Mac OS X 10.4 or later)
Control-Option-F8 or fn-Control-Option-F8	Open VoiceOver Utility (Mac OS X 10.4 or later)
Control-Option-F7 or fn-Control-option-F7	Display VoiceOver menu (Mac OS X 10.4 or later)
Control-Option-; or fn-Control-option-;	**Enable/disable VoiceOver** Control-Option lock (Mac OS X 10.4 or later)

The Universal Access preference pane allows you to turn on Mouse Keys. When Mouse Keys is on, you can use the numeric keypad to move the mouse.

Return to Index

Text to Speech Screen Readers for Macintoshes

Mac Text to Speech Synthesis
http://www.apple.com/education/accessibility/technology/text_to_speech.html

TextSpeech Pro for Macs by Digital Future
http://www.digitalfuturesoft.com/texttospeechproductsformacosx.php

Speech Recognition for Macs

You speak into a microphone & the computer obeys the command or types a document.

Comparison
http://speechwiki.org/out-loud/mac.html

Instructional Video
http://lifehacker.com/software/speech-recognition/hack-attack-make-your-macs-speech-recognition-work-for-you-215764.php

MacSpeech Dictate
http://www.macspeech.com/

Return to Index

Financial Aid for Assistive Technology

There are a lot of sites, but very little funding available.
Not covered by Medicare.

ICDRI Advice
http://www.icdri.org/Finance.htm

US Dept of Health Advice. See page 3.
http://www.aoa.gov/press/fact/pdf/fs_assitive_tech.pdf

Eldercare Locator
http://www.eldercare.gov/Eldercare/Public/resources/fact_sheets/assistive_tech.asp

NC State Financial Assistance Advice
http://www.ncatp.org/Funding/Funding%20to%20Individuals.html

New Freedoms Initiative Bill before Congress May 2008
http://usgovinfo.about.com/library/weekly/aa020201b.htm

Assoc of Blind Citizens AT Fund
http://www.blindcitizens.org/assistive_tech.htm

Postage Free Mail for the Visually Handicapped
http://www.usps.com/cpim/ftp/pubs/pub347.pdf

The New Fund – low interest loans for disabled Virginians
http://www.atlfa.org/

Return to Index

UNC SCHOOL OF MEDICINE
DEPARTMENT OF OPHTHALMOLOGY

The University of North Carolina

Living with Low Vision

Websites with Useful Advice for the Visually Challenged

How Can I Organize My Kitchen To Find Things More Easily?
http://www.visionaware.org/how_can_i_organize_my_kitchen_to_find_things_more_easily

Useful Home Adaptations for The Blind and Visually Impaired
http://www.lowvision.com/tips/useful-home-adaptations-for-the-blind-and-visually-impaired/

Adapting To Reduced Vision From Age-Related Macular Degeneration
http://www.cigna.com/healthinfo/rt1271.html

Online Lessons on Living Better at Home
http://www.lighthouse.org/livingbetter/

How to Find a Dropped Object
http://www.visionaware.org/locating-dropped-objects

Videos about Low Vision

- http://video.google.com/videosearch?q=%22low+vision%22&sitesearch=#
- http://uk.youtube.com/watch?v=fw91hsVrf40
- http://www.webmd.com/video/tips-for-better-vision

- http://www.videojug.com/film/how-to-cope-with-sight-loss-2
- http://www.eyecareamerica.org/eyecare/conditions/low-vision/video.cfm

Low Vision Simulation to show your family

- http://www.lowvisionsimulationkit.com/products.html
- http://www.lowvisiononline.unimelb.edu.au/LowVision/LowVision_simulation.htm

Return to Index