

Asthenopia

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Asthenopia or eye strain is an ophthalmological condition that manifests itself through nonspecific symptoms such as fatigue, red eyes, eye strain, pain in or around the eyes, blurred vision, headache and occasional double vision. Symptoms often occur after reading, computer work, or other activities that involve tedious visual tasks. When concentrating on a visually intense task, such as continuously focusing on a book or computer monitor, the inner eye muscles may tighten, which can cause the eyes to get irritated, dry, and uncomfortable. Giving the eyes a chance to focus on a distant object at least once an hour usually alleviates the problem. Small font sizes exacerbate the strain if they cause unconscious squinting or straining to focus. On a computer, a CRT with a low refresh rate can cause similar problems because of the flickering image. Aging CRTs also often go slightly out of focus, and this can also cause eye strain. LCDs do not go out of focus and are less susceptible to visible flicker. Higher refresh rates and larger font sizes are worthwhile when addressing eyestrain problems. ([From the Wikipedia article Asthenopia](#).)

Recent Publications on Asthenopia:



- [Effects of polyphenol on visual fatigue caused by VDT work.](#)
*Visual fatigue of VDT (visual display terminal) operators poses a serious...*30th October, 2009
Tokyo Metropolitan University, Japan.- Int J Occup Saf Ergon. 2009;15(3):339-43.
- [Measurement of visual strain in radiologists.](#)
*RATIONALE AND OBJECTIVES: The authors hypothesized that the current...*23rd September, 2009
Department of Radiology, University of Arizona, 1609 N Warren, Tucson, AZ- Acad Radiol. 2009 Aug;16(8):947-50. Epub 2009 May 5. ([DOI Direct Link](#))
- [Visual discomfort and objective measures of static accommodation.](#)
*PURPOSE: Accommodation insufficiency and fatigue have been associated with...*17th September, 2009
Colleges of Optometry and Biomedical Sciences, Western University of- Optom Vis Sci. 2009 Jul;86(7):883-9. ([DOI Direct Link](#))
- [Work-induced pain, trapezius blood flux, and muscle activity in workers with chronic shoulder and neck pain.](#)
*Pain, trapezius microcirculation, and electromyography (EMG) were recorded...*19th August, 2009
National Institute of Occupational Health, P.O. Box 8149, Dep., N-0033- Pain. 2009 Jul;144(1-2):147-55. Epub 2009 May 1. ([DOI Direct Link](#))
- [Effects of using a screen filter on call center workers' visual fatigue measurement.](#)
*This study evaluated the potential effectiveness of screen filters in...*11th June, 2009
Department of Industrial Management, National Taiwan University of Science- Percept Mot Skills. 2009 Feb;108(1):229-38.

- [VDT screen height and inclination effects on visual and musculoskeletal discomfort for Chinese wheelchair users with spinal cord injuries.](#)
*This study investigated the visual fatigue and musculoskeletal discomfort...*3rd June, 2009
 Department of Industrial Engineering and Management Information, Huafan- Ind Health. 2009 Jan;47(1):89-93.
- [Dr. Zhang Ren's experience in the acupuncture treatment of different diseases with the same therapeutic principle.](#)
*OBJECTIVE: To explore the therapeutic effect of acupuncture on convergence...*13th May, 2009
 Shanghai First People's Hospital, Shanghai 20081, China.- J Tradit Chin Med. 2008 Jun;28(2):110-3.
- [Blue-enriched white light in the workplace improves self-reported alertness, performance and sleep quality.](#)
*OBJECTIVES: Specifications and standards for lighting installations in...*31st December, 2008
 Surrey Sleep Research Centre, Clinical Research Centre, Egerton Road,- Scand J Work Environ Health. 2008 Aug;34(4):297-306. Epub 2008 Sep 22.
- [Longitudinal study of visual discomfort symptoms in college students.](#)
*PURPOSE: To determine the variation of visual discomfort symptom reporting...*23rd December, 2008
 Southern California College of Optometry, 2575 Yorba Linda Boulevard,- Optom Vis Sci. 2008 Oct;85(10):992-8. ([DOI Direct Link](#))
- [Will musculoskeletal, visual and psychosocial stress change for visual display unit \(VDU\) operators when moving from a single-occupancy office to an office landscape?](#)
*This study investigated the effect of moving from single-occupancy offices...*17th December, 2008
 Department of Optometry and Visual Science, Buskerud University College,- Int J Occup Saf Ergon. 2008;14(3):259-74.
- [Nutritional therapies for ocular disorders: Part Three.](#)
*Parts one and two of this series discussed nutritional and botanical...*17th December, 2008
 - Altern Med Rev. 2008 Sep;13(3):191-204.
- [Computer eye strain.](#)
*Parts one and two of this series discussed nutritional and botanical...*17th December, 2008
 - Insight. 2008 Jul-Sep;33(3):26-7.
- [\[Observation on therapeutic effect of moxibustion with thunder-fire herbal moxa stick on xerophthalmia of oligodacrya\]](#)
*OBJECTIVE: To observe clinical therapeutic effect of moxibustion with...*17th September, 2008
 Department of Acupuncture and Moxibustion, Beijing Tongren Hospital- Zhongguo Zhen Jiu. 2008 Aug;28(8):585-8.
- [\[Do patients undergo changes of their personality due to visual field defects? An investigation with FPI-R and NEI-VQ\]](#)
*BACKGROUND: Visual restrictions can lead to anxiety and possibly to social...*30th August, 2008
 Institut Medizin. Psychologie, Universitätsklinikum Schleswig-Holstein,- Klin Monatsbl Augenheilkd. 2008 Jun;225(6):570-6. ([DOI Direct Link](#))
- [\[Acupuncture for treatment of 40 cases of convergence insufficient asthenopia with exotropia\]](#)
*OBJECTIVE: To explore the therapeutic effect of acupuncture on convergence...*6th August, 2008
 Teaching and Research Section of Ophthalmology, Nanjing University of TCM,- Zhongguo Zhen Jiu. 2008 May;28(5):345-7.

Asthenopia Patents:



- 6040818- [Method and apparatus for displaying pixels on a display device](#)
- 6386701- [Eyewear for relief of computer vision syndrome](#)
- 6410006- [Composition for prophylaxis and/or treatment of dry eye syndrome comprising vitamin D](#)
- 6416178- [Color translucent eyewear lenses applied with antireflective \(AR\) coatings](#)
- 6444236- [Compositon containing medicinal herbs and young antlers of cornu cervi](#)
- 6467906- [System for evaluating and correcting irregular astigmatism in the eye of a patient](#)
- 6469683- [Liquid crystal optical device](#)
- 6483485- [Method and device for protecting eyes through screen displaying setting](#)
- 6491467- [Writing instrument](#)
- 6508651- [Dentures and false teeth](#)
- 6538624- [Head-mounted image display apparatus](#)
- 6372266- [Medicinal composition for treating dysmenorrhea and endometriosis industrial use](#)
- 6344047- [Instrument for inserting a punctum plug and method for manufacturing the instrument](#)
- 6334003- [Data input system for enabling data input by writing without using tablet or the like](#)
- 6048064- [Optometric apparatus](#)
- 6074061- [Progressive focal lens for eyeglasses](#)
- 6083251- [Eye treatment method and apparatus](#)
- 6086579- [Method of analyzing astigmatism and apparatus for performing corneal surgery](#)
- 6088006- [Stereoscopic image generating system for substantially matching visual range with vergence distance](#)
- 6159397- [Translucent eyewear lenses and method of manufacture therefor](#)
- 6187331- [Composition for prophylaxis and/or treatment of dry syndrome comprising vitamin D](#)
- 6238363- [Apparatus for intubation of lacrimal drainage pathway](#)
- 6250765- [Antiglare sheet for use with display of portable game machine](#)
- 6268359- [Preventives or remedies for vision disorders](#)
- 6569903- [Ophthalmic compositions](#)
- 6572606- [Laser fluence compensation of a curved surface](#)
- 7275823- [Optometric device](#)
- 7296892- [Ocular accommodative function examination apparatus](#)
- 7336244- [Optical device and three-dimensional display device](#)
- 7341346- [Ocular accommodative function examination apparatus](#)
- 7342628- [Liquid crystal display device](#)
- 7344247- [Ocular accommodative function examination apparatus](#)
- 7348306- [Composition for promoting lacrimal secretion](#)
- 7368444- [N-carbamoyl nitrogen-containing fused ring compounds and drugs containing these compounds as the active ingredient](#)
- 7473777- [Method for production of halogen-containing phthalocyanine compound](#)
- 7531236- [Polarizing complex with functional layers](#)
- 7232667- [Keratinocyte growth factor-2 polynucleotides](#)
- 7229686- [Antireflection film and making method](#)
- 7209097- [Optical device and three-dimensional display device](#)
- 6597004- [Powdered far-infrared radiator and method of making the same](#)
- 6648834- [Mentation test method and mentation test apparatus](#)
- 6649625- [Agent for prophylaxis and treatment of glaucoma](#)
- 6673812- [Preventives/remedies for glaucoma](#)
- 6679855- [Method and apparatus for the correction of presbyopia using high intensity focused ultrasound](#)
- 6693077- [Keratinocyte growth factor-2](#)
- 6714174- [Optical device and three-dimensional display device](#)
- 6869182- [Frame and lens system](#)
- 6875181- [Mentation test method and mentation test apparatus](#)
- 6919365- [Imidazolidinedione derivatives and use thereof as drugs](#)
- 7569694- [Coumarin compound, material for light emitting device and organic electroluminescent device](#)

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Send comments and feedback to:

Peter Barfoot Managing Director, BioPortfolio Ltd.

UK Tel: (+44) 1300 321501

USA Voicemail and Fax: (+1) 415 680 2472

[Peter Barfoot peter.barfoot@bioportfolio.com](mailto:peter.barfoot@bioportfolio.com)

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