

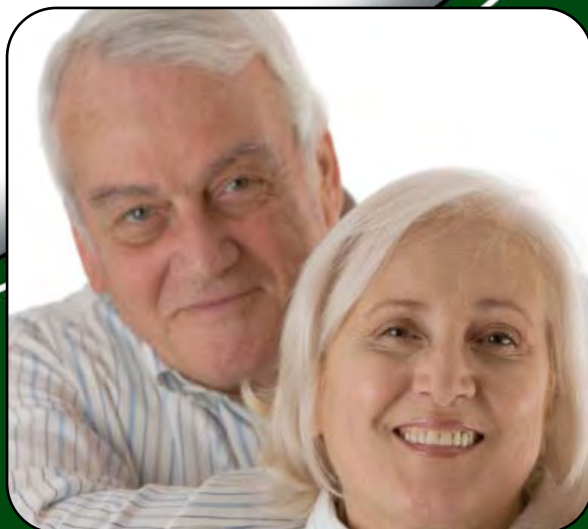
The information in this leaflet is for general information purposes. All questions and concerns regarding your vision should be directed to your eye care professional.



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Treatment Options for Wet Age-Related Macular Degeneration (AMD)



Wet or Neovascular AMD

In wet AMD, new and abnormal blood vessels spontaneously begin to grow into the macula, like weeds growing in cracks in a sidewalk, disrupting its normal function. Untreated, these blood vessels continue to grow, leaking blood and other fluids that can cause permanent damage, leaving you with serious vision loss.

Treatment for wet macular degeneration currently involves closing the abnormal blood vessels and stopping the leakage of blood and fluid into the retina. This process, if successful, decreases retinal thickness and reduces scarring. This improves the vision compared to what would have happened if no treatments were given.

Progress of treatment is monitored by fluorescein

angiography, which measures leakage, and/or by OCT, which measures retinal thickness.

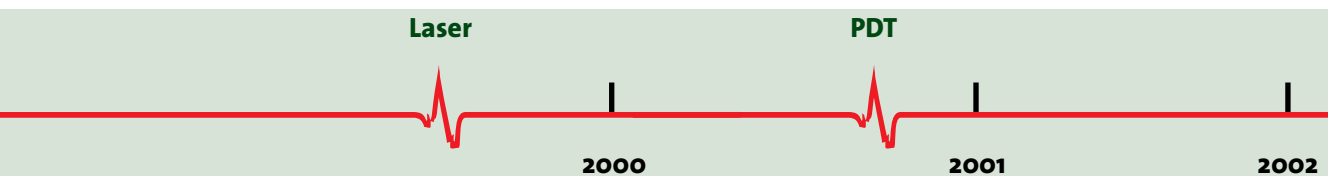
Treatments currently available for wet AMD do have limitations.

Anti-VEGF Therapy

Vascular Endothelial Growth Factor (VEGF) is the main stimulus for the growth of the new blood vessels in all forms of macular degeneration. Blockage of this compound causes the abnormal vessels to stop leaking and shrink. All of the anti-VEGF drugs must be injected into the eye to be effective.

Macugen (Pegaptanib)

Macugen was the first of these drugs to become available. It limits vision loss by targeting only one type of VEGF and has been successful at slowing disease progression in 2/3 of patients but does not improve



vision on average.

Treatments are given every six weeks for at least a year without interruption but may need to be continued beyond this. Currently only Quebec offers coverage for Macugen in wet AMD.

Avastin (Bevacizumab)

Avastin was originally developed as a colorectal cancer drug. It is NOT indicated or approved for use in the eye and is used 'Off-label' for wet AMD. Avastin blocks all forms of VEGF and acts in a manner similar to Lucentis to stop the blood vessel growth.

Major clinical trials proving the efficacy and safety of Avastin have not been done, nor are direct comparison studies between Avastin and Lucentis available. Clinical impressions and reports to date suggest patients are experiencing a noticeable improvement in vision and no significant safety

concerns with this medication have been noted to date.

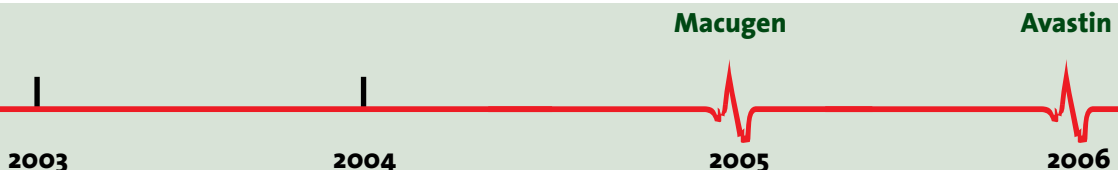
Treatments are given about every six weeks until there is a documented absence of fluid within the retina.



Lucentis (Ranibizumab)

The most recent anti-VEGF drug approved for use in the eye by Health Canada is Lucentis. Lucentis blocks all forms of VEGF and has been designed specifically for the eye to penetrate the retina quickly and completely to reach the area of the abnormal blood vessel growth.

The major studies evaluating Lucentis have clearly shown its effectiveness in treating wet AMD. For the first time, a



therapy has been shown to result in, on average, a visual gain for a majority of patients. Although only 30-40% of patients can expect a significant improvement, over 70% of patients experience some degree of visual gain and over 90% of patients avoid a moderate visual loss. This is a great step forward as it has allowed retinal physicians for the first time to define a successful outcome in terms of visual improvement rather than avoiding moderate visual loss. Lucentis studies have also shown that it can help improve a patient's ability to do everyday activities like reading, driving and recognizing faces.

Typically Lucentis is injected every 4-5 weeks and treatment continues until diagnostic tests show that the blood vessels are sealed and are no longer leaking.

Safety

Multicentre studies with Lucentis and Macugen have shown the safety of these anti-VEGF agents, with no statistically significant increase in the risk of stroke, heart problems or other systemic concerns. As with any procedure involving an injection into the eye, a small risk of infection and of retinal tears or detachment exists with treatment.

Photodynamic Therapy (PDT) / Visudyne

The oldest of the new approaches to treat wet AMD is the use of an intravenous light activated drug (Visudyne) with a non heat producing laser treatment used to activate the



Lucentis



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drug and seal the abnormal blood vessels. This produces less damage to the retina than thermal laser. Studies show Visudyne treatment is most useful in a rapidly progressing form of wet AMD termed “predominantly classic”. When used in this setting, it limits visual loss in 2/3 of treated patients. Few experience visual improvement but many patients achieve long term stability. Visudyne generally requires retreatment at 3 month intervals and typically 5-6 treatments are required.

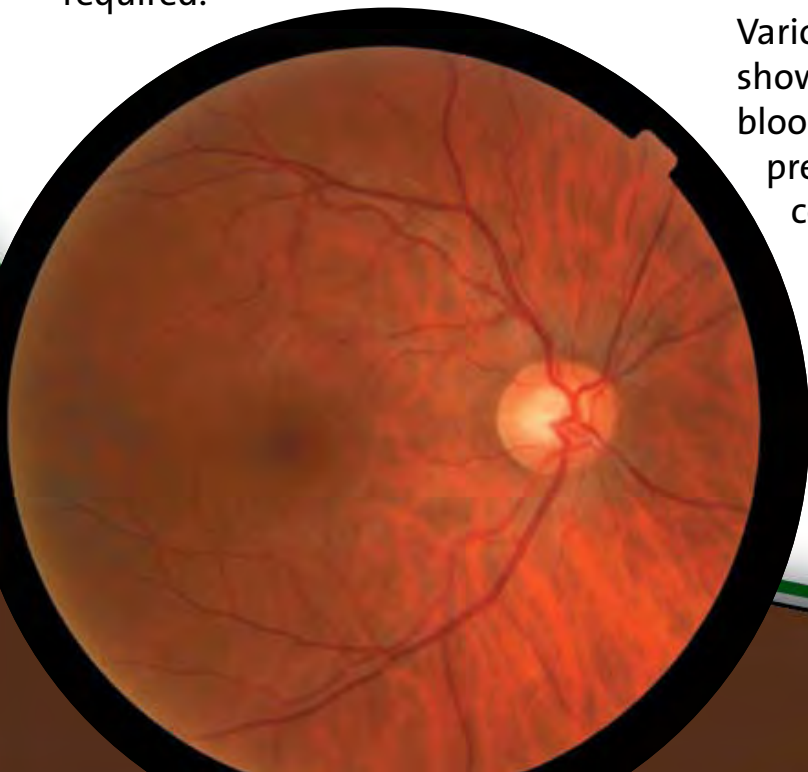
Currently, various provincial drug coverage policies exist across Canada which cover Visudyne treatments in wet AMD.

Thermal (Hot) Laser

This has been in use for many years and is useful in a small number of patients. A hot laser is aimed at the abnormal blood vessels, sealing and stopping them from leaking. The action of the hot laser destroys the retina in the treatment area however, leaving a permanent blind spot.

Steroids

Various steroids have been shown to reduce leakage and blood vessel growth in AMD. At present, steroids are used in combination with other treatments to prolong activity but are not used alone. These drugs may cause high pressure inside the eye (glaucoma) and speed up the development of cataract.



Combination Therapy

Combination therapy with Visudyne and a VEGF inhibitor (and occasionally a steroid) is done to try to reduce the need for retreatment. It is unclear whether combination treatment produces better results in the long term than treatment with a single agent alone but the available evidence suggests that the number of treatments appear to be **SIGNIFICANTLY** reduced. Studies investigating the role of combination treatment are ongoing. You and your specialist will determine which treatment is best for you. The most important thing you can do is monitor the state of your vision regularly, as well as be compliant with your appointments and your eye doctor's recommendations. If you notice a change in vision, contact your eye doctor immediately.

AMD Treatment Options A Summary

- Vision cannot be restored to normal. It may decrease during treatment.
- Treatments differ in their ability to stabilize and/or improve vision.
- Treatments must be repeated to be effective.
- Treatment for Macular Degeneration must be repeated several times to ensure maximum visual function preservation.
- Even after the treatments are stopped, the blood vessels may return and require another cycle of treatment.

