



Royal Berkshire
NHS Foundation Trust

Tips on controlling your diabetic retinopathy and preventing sight loss

Information for General
Practitioners

Dear Colleague,

As part of our ongoing treatment of patients with diabetic retinopathy (DR), we feel that it is important that we raise their awareness of their condition in order to maximise their ability to control the progression of disease. We have therefore put together this booklet with an aim to:

1. Provide them with basic information about DR.
2. Inform them on how best to limit the chances of disease progression.
3. Provide them with a means of recording their current significant test results.

It is with regard to the final point above that we would like your help. During your consultation with these patients, please help them by filling in their latest test results in the back of their booklet. This will not only give them a means of monitoring their own control, but also gives you an opportunity to point out the good and bad aspects of their management.

This booklet is similar to one which will be given to your patients. We have referenced this version so that you can analyse the evidence base as well as added other tips for clinicians in ***bold italics***.

Together we hope to empower our patients to take control of their condition and ultimately give them every chance of limiting any loss of sight.

Thank you for your ongoing support.

**Medical Retina Team, Department of Ophthalmology,
Royal Berkshire NHS Foundation Trust.**

Tip 1: Be responsible for your lifestyle

- Exercise for 30-120 minutes per day¹ – of course not everyone can run a marathon, but whatever your ability, something is better than nothing. If in doubt, ask your GP or practice nurse for advice.
- Moderate alcohol consumption² – drinking more than 2-3 units per day (1 large glass of wine / 1 pint of standard beer) can cause a rise in your blood pressure, which will increase your risks of damage to the eyes.
- Avoid obesity³⁴ – this tends to lead to high blood pressure, raised cholesterol and tends to make exercise more difficult.
- Balanced diet⁵ – aim for 9/7 (men/women) portions of fruit and vegetables per day. These will help keep your cholesterol and overall weight down.

¹ DoH, CMO Update, Issue 41, March 2005.

² Mukamal et al. Alcohol consumption and abnormalities of brain structure and vasculature. *American Journal of Geriatric Medicine*, 2004 Jan-Feb; 13(1):22-8.

³ Chaturvedi et al. Markers of insulin resistance are strong risk factors for retinopathy incidence in type 1 diabetes. *Diabetes Care*, 2001 Feb; 24(2):284-9.

⁴ Olusi et al. Obesity is an independent risk factor for plasma lipid peroxidation and depletion of erythrocyte cytoprotective enzymes in humans. *International Journal of Obesity*, 2002; 26, 1159-1164.

⁵ Glottlieb et al. Men should eat nine servings of fruit and vegetables a day. *BMJ*, 2003; 326:1003 (10 May).

Tip 2: Be Blood Pressure Aware

- High blood pressure speeds up the damage caused to your eyes⁶.
- Blood pressure is measured as one number over another – e.g. 130/80.
- To minimise the chance of damage to the eyes, a diabetic person should keep their blood pressure below 130/80 and know what their last reading was.
- ***If the patient has proteinuria the target blood pressure should be less than 125/75.***
- Your doctor may prescribe some medications to take to help achieve this but *you* can do your part by following the tips in this leaflet. ***Treatment with an ACE inhibitor or Angiotensin II inhibitor is recommended (unless contraindicated).***

Tip 3: Keep track of your diabetes

- Diabetes is monitored either by regular finger-prick tests or by blood tests every few months.
- The finger prick tests give us a “snapshot” look at your blood sugar and this can vary depending on when you’ve eaten etc.
- The blood test measures something called – HbA1c. This gives us an impression of your “average” blood sugar control over months and is very useful in monitoring diabetic damage to the eyes.
- Ideally, the HbA1c should be less than 7% to minimise the chance of damage to the eyes⁷.

⁶ Adler et al. Association of systolic blood pressure with macrovascular and microvascular complications of type 2 diabetes. (UKPDS 36): prospective observational study. *BMJ*, 2000; 321:412-419 (12 August).

⁷ Weissman et al. Intensive Diabetes Treatment and Cardiovascular Disease. *N Engl J Med*, 2006; 354:1751-1752, Apr 20.

- ***A high HbA1c should be brought to normal over several months. A sudden drop in HbA1c can lead to rapid and uncontrollable retinopathy.***⁸
- It is important to know what your latest readings are so that your doctors can judge how the treatment is going.

Tip 4: “Know Your Number” - Cholesterol

- Cholesterol is one of the types of fat in our blood. ***Triglycerides are, of course, also important.***
- Too much fat in the blood can increase your chance of damage to your organs, including the eyes.⁹
- Diabetic patients are especially at risk of developing these problems.
- It is therefore important to do whatever you can to lower these levels.
- As with blood pressure, your doctor may prescribe you medication to help keep your cholesterol level down, but you must do your part in cutting down on your “fatty food” intake. ***Statins are recommended for all diabetics (unless contraindicated).***¹⁰
- ***In situations where triglycerides are high, consider the use of fibrate.***

⁸ Sivas et al. The Effects of Inappropriate Insulin Therapy in type 2 Diabetes on Diabetic Retinopathy Progression. *EAS*, Dec 2005 meeting.

⁹ Miljanovic et al. A prospective study of serum lipids and risk of diabetic macular edema in type 1 diabetes. *Diabetes*, 2004, Nov; 53(11):2883-92.

¹⁰ Statins show greater benefit for diabetic patients. *BMJ*, 2006;332 (13 May).

- ***Fibrate may be advisable in all patients with exudative maculopathy.***¹¹
- People with diabetes should keep their cholesterol level below 5.
- Your GP will be able to offer you advice on altering your diet to help you achieve your goal.

Tip 5: No better time to quit

- The single best thing you can do for your health is to stop smoking as soon as possible.
- Smoking doubles the damage done to your body, in general, by diabetes over time.
- With regards to your eyes, smoking can TRIPLE the speed at which your eyes are damaged.
- For every daily cigarette the speed of eye damage is increased by 15%.
- Passive smoking can DOUBLE the risk of eye damage.
- Having read these facts, visit your GP or practice nurse to discuss the various method to help you “kick the habit”. You may regret it if you don’t act today!

Having read this leaflet you are now equipped with the basics to successfully manage your condition.

The final thing you must do is record your information and bring this with you to your appointments.

¹¹ Dobson et al. Results of the largest clinical trial in type 2 diabetes patients demonstrating positive effects of fenofibrate therapy on cardiovascular events. *The Lancet*.

My diabetes:

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|----------------------|--|--|--|--|--|--|--|--|--|
| Date | | | | | | | | | |
| HbA1c | | | | | | | | | |
| BP | | | | | | | | | |
| Cholesterol | | | | | | | | | |
| Triglycerides | | | | | | | | | |
| Weight (kg) | | | | | | | | | |
| BMI | | | | | | | | | |



Write any questions regarding your diabetes or eye condition down here (it's all too easy to forget them at the time!) and ask you doctor at your next appointment.

Contacting us

If you have got a minor eye problem, please seek advice from your GP, optician or pharmacist. If you think your problem might be urgent, please attend Eye Casualty.

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| Eye Casualty (Reading): | Mon-Fri 9am to 5pm; Sat & Sun & bank holidays 9am-12.30pm; Closed Christmas Day and New Year's Day |
| Eye Casualty: Prince Charles Eye Unit (Windsor): | Mon-Fri 9am to 5pm; Sat 9am-12.30pm; Closed Sun & bank holidays |
| Dorrell Ward (Reading): | 0118 322 7172 (24 hours a day) |
| Eye Day Unit (Reading): | 0118 322 7123 (Mon-Fri 7am to 6pm) |

Visit the Trust website: www.royalberkshire.nhs.uk

Dr B J Coakley GPVTS
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