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## Blepharospasm (Eyelid twitching)

Blepharospasm is a condition in which blinking or spasmodic closing of the eyes occurs at an increased rate. It ranges from a mild, embarrassing condition of twitching or fluttering of an eyelid to severe spasms of eye closure which interrupt useful vision.

Secondary blepharospasm is a common response to many common eye conditions, and can be caused by some conditions affecting the nervous system. This leaflet is mainly about primary blepharospasm, also called benign essential blepharospasm (BEB). BEB cannot be cured, but is usually successfully managed with botulinum toxin injections, repeated at intervals.

In the UK, if you have blepharospasm you must notify the Driver and Vehicle Licensing Agency (DVLA).

#### What is blepharospasm?

Blepharospasm is abnormal twitching, fluttering or spasmodic eyelid closure. It is caused by spasms of the orbicularis oculi muscle, the muscle which normally makes you blink. Most people blink 10 to 20 times per minute, a little less when concentrating on reading or a computer screen. An increase in blink frequency and strength is called blepharospasm.

Blepharospasm is a type of focal dystonia. 'Dystonia' means abnormal, unintentional, sustained muscle contractions or spasms. Focal means that it affects only one part of the body - in blepharospasm it affects the muscle around the eye. This muscle, the orbicularis oculi muscle, has spasms lasting from seconds to minutes.

Blepharospasm ranges from an increased blink frequency with occasional spasms to a disabling and painful condition that can interrupt vision.

Any abnormal blinking or eyelid twitching can be called blepharospasm, including blinking caused by eye irritation and injury, medications and Tourette's syndrome.

The blepharospasm mainly referred to here is called benign essential blepharospasm (BEB).

## How common is blepharospasm?

Essential blepharospasm, unrelated to eye or other disease, is not very common. It is thought to affect 5 per 100,000 people, women more commonly than men. It is more common with advancing age and typically develops in the sixth decade.

### Is blepharospasm hereditary?

About 1 in 20 patients with BEB have family members who have facial movement disorders, but no gene for blepharospasm has been identified.

## How does blepharospasm begin?

In most people BEB develops spontaneously with no known cause, beginning with frequent blinking affecting first one eye, then both. However, it often seems to follow symptoms of dry eye, possibly only in people who are susceptible to it.

If left untreated, BEB tends to become worse over a period of years, so that eventually those affected experience periods when they cannot open their eyes. If untreated it seems to stabilise eventually.

#### Blepharospasm symptoms

Symptoms of blepharospasm eye twitching include:

- Spasms typically occur in bright light or when reading or watching television.
- Both sides are usually affected, although symptoms often begin on one side.
- Nocturnal symptoms are unusual.

- If there is associated eye irritation this suggests the blepharospasm is not BEB but is secondary to an eye condition.
- Driving, fatigue and stress can also bring the spasms on, as can wind, pollution and atmospheric irritants like smoke.
- Visual concentration on a book or screen can make things worse for some people but better for others.

Talking, whistling, touching the face, walking and relaxation can improve the problem. Most people blink more frequently during conversation, but those with blepharospasm tend to blink less when talking.

The eye closing of blepharospasm can be very debilitating as it may interfere with reading, driving, watching television, and other visual activities. It is rarely associated with pain behind the eyeball (retro-orbital pain).

## Why is my eyelid twitching?

Primary blepharospasm, or benign essential blepharospasm (BEB), is a term used for eyelid twitching, fluttering or blinking without a known underlying cause. Blepharospasm is thought to be due to abnormal functioning of the basal ganglia, a pair of 'junction boxes' in the brain that help coordinate our movements.

#### What causes secondary blepharospasm?

Secondary blepharospasm is the term for when this results from other conditions affecting the eyes or nervous system disorders. Causes of secondary blepharospasm, which would generally have additional features as well as the eyelid spasm, include:

#### Common secondary causes of blepharospasm

- Eye trauma.
- Blepharitis, which is eyelid inflammation or infection. This is a common cause.
- Conjunctivitis, iritis, keratitis.
- Dry eye.
- Other chronic lid disease or ocular surface disease.

#### Less common secondary causes of blepharospasm

- Acute angle-closure glaucoma.
- Uveitis.
- Multiple sclerosis.
- Brain injury or tumour.
- Brain infections (viral encephalitis, Creutzfeldt-Jakob disease (CJD),
  AIDS, tuberculosis, tetanus).
- Parkinson's disease/multiple system atrophy/progressive supranuclear palsy.
- Reaction to medications eg, olanzapine, levodopa.
- Tardive dyskinesia (see below).
- Tourette's syndrome, although this usually causes a tic (an involuntary movement which can sometimes be deliberately suppressed) rather than a twitch.
- Cerebral palsy.

#### Conditions which may mimic blepharospasm

- Hemifacial spasm. This condition involves the forehead muscles as well as the eyelid, and is usually due to damage to the facial nerve, or to Bell's palsy.
- Ptosis this is a drooping eyelid without spasm.
- Myasthenia gravis.
- Oromandibular dystonia. This causes recurrent spasms of the face, mouth, throat and chin as well as potentially affecting blinking.

## Is blepharospasm an eye tic?

Technically blepharospasm is a twitching, not a tic, although it looks like one. A tic is an involuntary movement of a muscle or group of muscles which, whilst it occurs unintentionally, can sometimes, with concentration on the part of the affected person, be deliberately suppressed.

A twitch, as in blepharospasm, is a movement that cannot be suppressed.

### Does blepharospasm affect only the eyelids?

Benign essential blepharospasm (BEB) is blepharospasm not known to be caused by an underlying condition of the eyes or nervous system. It affects only the eyelids.

Some patients with primary blepharospasm also have other primary focal dystonias involving nearby or distant muscles, leading to abnormal movements of the eyebrows, forehead, lips, jaw and tongue. When the dystonia affects these more widespread facial muscles, but has no known underlying cause, then the disorder is known as Meige syndrome.

## Blepharospasm diagnosis

Reflex blepharospasm to a secondary cause must be ruled out, so your eyes will be examined and you will be questioned about, and checked for, evidence of any other underlying condition.

If no further symptoms are found, isolated blepharospasm does not usually require further investigation. The Blepharospasm Disability Index is a scale used by specialists to assess the severity of blepharospasm.

## Blepharospasm treatment

#### Self-help measures

Wearing dark glasses can reduce bright light triggers and make the condition less obvious to others. Wrap-around glasses are most protective.

Voluntary manoeuvres, such as pulling on or touching the eyelid, pinching the neck, talking, yawning, humming or singing, can be helpful.

#### Medication

Blepharospasm does not respond well to antispasmodic or sedative medicines.

Tetrabenazine is a medicine used in some severe movement disorders such as Huntington's disease. It has been shown to be helpful for some patients but is not licensed for this purpose, and its side-effects can be significant.

#### **Injections**

The preferred treatment is injection of botulinum toxin (Botox®) into the orbicularis oculi muscle. This treatment is highly effective, helping up to 90% of patients. Injections are placed at four spots along the lower and upper eyelids. Positive effects are generally seen within about three days of treatment, with the maximum effect 2-3 weeks after injection. Most patients need re-treatment every three months.

Side-effects are uncommon and include drooping of the eyelid, dry eye and occasional double vision, if the toxin leaks to the eye muscles; however, these symptoms wear off over time.

#### **Surgery**

Where vision is seriously impaired by severe eye closure, and in the event that other treatments fail, a surgeon may suggest removal of some of the muscles of eye closure. This can improve the ability to see properly.

#### Deep brain stimulation

Deep brain stimulation has been used (very rarely) for blepharospasm which is a part of Meige syndrome.

## Is tardive dyskinesia related to blepharospasm?

Tardive dyskinesia is a movement disorder that results from taking certain medication, particularly a class of medicines used mainly in psychiatric practice, called neuroleptics. It can affect the eyelids in a similar way to blepharospasm, but this would not be the only symptom. The predominant symptoms of tardive dyskinesia – movements of the tongue and jaw – are also present.

Tardive dyskinesia is a late effect of taking neuroleptic medications: the term 'tardive' means late.

# Is benign essential blepharospasm a psychiatric or psychological disorder?

BEB is a neurological disorder. It is sometimes misdiagnosed as a psychiatric disorder.

## Can I drive if I have blepharospasm?

In the UK, you must tell the DVLA if you have blepharospasm. Failure to do so may invalidate your insurance and is a criminal offence.

The DVLA will assess your condition further, and may supply a questionnaire or contact your doctor. If your blepharospasm is assessed as mild, and treatments are successful, it is likely you will be permitted to drive. If the condition is severe then, even if you are having treatment, you are unlikely to be permitted to drive.

# What is the outlook (prognosis) for blepharospasm?

Primary blepharospasm cannot usually be cured, but botulinum toxin injections are very helpful in managing the condition in most patients.

Blepharospasm does not usually get better without treatment, although this has occasionally occurred.

Dr Mary Lowth is an author or the original author of this leaflet.

#### **Further reading**

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