

## What is Facial palsy?

This leaflet is suitable for people who have been diagnosed with facial palsy by a GP or a specialist doctor. The most important thing is to understand what has happened to your face, why it's happened and what to expect from your recovery.

In order to maximise your recovery it is important to understand your face and how the nerves and muscles in the face work.

The term facial palsy generally refers to weakness of the facial muscles, usually on one side of the face, mainly resulting from temporary or permanent damage to the facial nerve.

There are different degrees of facial palsy - sometimes only the lower half of the face is affected, sometimes the whole side of the face is affected and in rare cases both sides of the face can be affected.



For anyone in any stage of recovery from facial palsy it is beneficial to attend a support group to help reduce isolation and benefit recovery. Information on the 14 support groups run in the UK can be found on the facial palsy UK website

<http://www.facialpalsy.org.uk/support/local-groups/>

or by emailing

[support@facialpalsy.org.uk](mailto:support@facialpalsy.org.uk)

## What causes Facial Palsy?

The most commonly known cause of facial palsy is Bell's palsy however there are actually many possible causes. Nearly all of these causes result in swelling or pressure on or around the facial nerve which stops the nerve sending messages to the face.

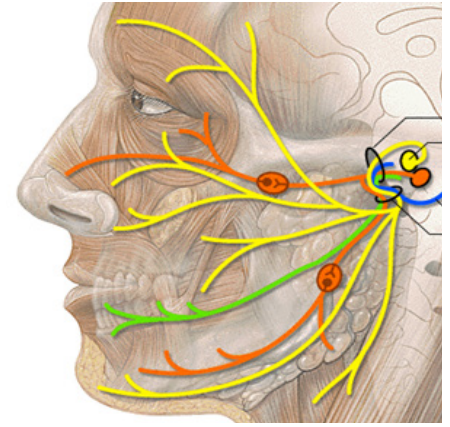
The nerve may stop working because of infection, virus, trauma, surgery or anything that causes pressure on the nerve. Although a stroke can cause facial palsy it is slightly different as the problems are caused by injury to the brain rather than direct damage to the facial nerve. Sometimes people even have facial palsy from birth.

## How do the facial nerves work?

There is one facial nerve on each side of the face. Damage to the left facial nerve will only affect the left side of the face and vice versa. The facial nerve is the electrical wire that sends signals from your brain to the muscles in your face telling them to move. When the nerve has been damaged the muscles no longer

receive signals and therefore won't work, just like trying to switch on a lamp which isn't plugged into an electrical socket, it just wouldn't turn on!

Your facial nerve leaves the brain as one wire and travels through the skull in a little tunnel before it comes out into the face. Here it divides up into 5 branches to supply all the muscles of the face which are used for facial expression. As well as the 5 nerve branches that control the muscles there are 2 branches that control tear and saliva production and one branch that can affect your taste.



## How do the facial muscles work?

It is really important to know all about the facial muscles and how they work in order to make the best possible recovery from facial palsy. It might be helpful to think about the facial muscles as being divided up into 5 zones. Normally, when the face moves in one zone all the other zones are relaxed.

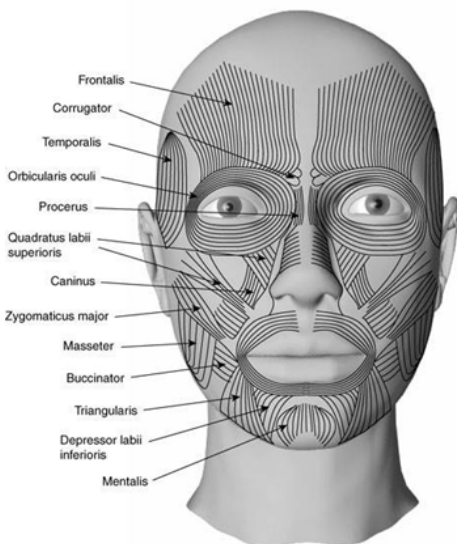
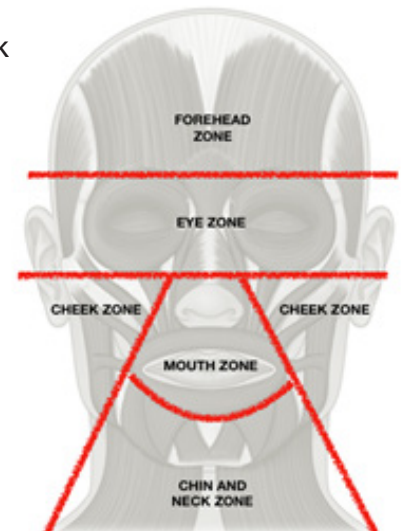
In the forehead zone the frontalis muscle raises the eyebrows and the corrugator muscle makes us frown.

In the eye zone the orbicularis oculi muscle closes the eye and blinks the eye. This is important for protecting the eye and keeping it lubricated.

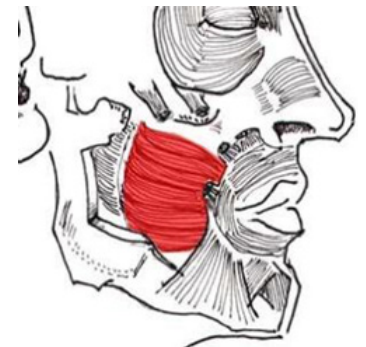
In the cheek zone the levator muscles lift the top lip whilst the zygomatic and risorius muscles make us smile.

In the mouth zone the orbicularis oris muscle allows us to pucker the lips, whistle and pout. It also helps to make a seal around the lips when we eat and drink and allows us to pronounce our words during speech.

In the chin and neck zone the depressor muscles pull the lower lip down helped by the platysma muscle and the mentalis muscle sticks the bottom lip out.



Another important muscle is the buccinator muscle which is inside the cheek and sucks the cheek in towards the teeth.



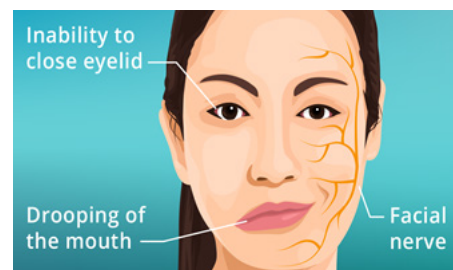
## How does Facial Palsy affect people?

There are lots of symptoms that facial palsy can cause. People with facial palsy experience a wide range of physical and emotional problems which affect their day to day function.

The early stage is called **flaccid paralysis**. Symptoms in this stage will vary between people but can commonly include;

- loss of movement and expressiveness on the affected side of the face,
- difficulty communicating effectively
- a dry eye which doesn't close properly
- dryness of the mouth and altered taste
- difficulty with eating, drinking and speaking

- the affected nostril feeling blocked
- trouble with noise sounding too loud in the affected ear
- It is also normal to feel self-conscious and many people tend to avoid going out and about which can make them feel isolated and low in mood
- Sometimes there can be pain in or around the ear or aching in the face



This is all perfectly normal throughout this stage.

**The most important thing to remember is that exercises when your face is floppy can do more harm than good.**

For more information about this and what can be done to help in this stage are 7 self-help videos on management of flaccid facial paralysis on the facial palsy UK website; <http://www.facialpalsy.org.uk/support/self-help-videos/management-of-flaccid-facial-paralysis-floppy-face/>

## How long will it take me to recover?

For some people the nerve has only been mildly swollen or compressed and usually they recover in the first 3-6 weeks. If you don't notice improvement within this time it is likely that the pressure on the nerve was more severe. You are still likely to improve however it will take longer and facial movement on that side of your face may not be as easy to control as it was before.

Recovery tends to be split into **3 stages**. The first stage is called **flaccid paralysis** when the face is floppy with no movement, this has already been described. The 2nd stage is called **paresis** which is when symmetry improves and tiny movements may begin. The final stage is called **synkinesis**.

More severe swelling and pressure on the facial nerve means the nerve actually has to regrow from where it has been compressed. Nerves regrow at a rate of 1mm per day so the first signs of facial recovery are often not seen until 4 months has passed. As the nerve branches are different lengths the first recovery will usually be seen in the cheek and eye as the nerve branches here are shorter meaning the re-growing nerve gets here first. The nerve branches to the forehead and chin are longer so regrowth of the nerve to these areas can take longer.

## The 'Paretic' stage

At this stage the first thing people notice is that the symmetry of their face improves when their face is relaxed and the muscles feel firmer. Whilst exercising when your face is completely floppy is not recommended, once you get to the paresis stage some gentle exercise can begin.

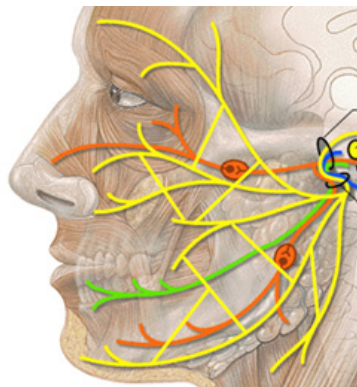
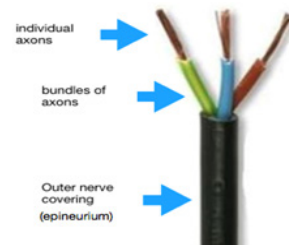
Exercises should now be small, very precise, symmetrical movements. There is more information about what exercises to do at this stage in the self help videos about 'paretic exercise' on the facial palsy website.

It is really important to understand that if you have had a slower recovery like this facial movement will not be as easy to control as it was before. You are likely to develop a side effect called synkinesis which means 'linked or unwanted movements'. For example your face twitching, your eye narrowing when you eat, or the cheek lifting when you close the eyes. People commonly feel that getting synkinesis is their fault or due to them doing something wrong but it absolutely isn't – This is an unavoidable symptom of slower nerve recovery.

In a small number of cases, such as where the nerve has been cut during an operation, then recovery won't happen unless the nerve is surgically repaired or other procedures are carried out to make some of the muscles move again.

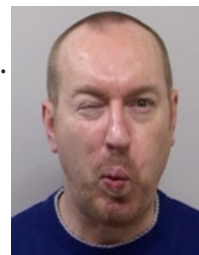
## What causes synkinesis and how does it affect people?

Synkinesis is caused by the nerve cross-wiring as it regrows. The facial nerve is like the flex or cable on a lamp which has strands of wire covered in insulation to make sure the electrical signals go to the lamp. Similarly the facial nerve has strands of wires called axons which are bundled together and covered in an insulating layer. Each axon has a tube around it to make sure the electrical signal gets from the brain to the right muscle.



In synkinesis the re-growing nerve wire can grow down the wrong tube and arrive at the wrong muscle so the brain ends up telling the wrong muscle to move even though it is sending the same signal it did before. This makes it harder to control the facial movements than it was before because the muscles are more likely to move together rather than individually e.g. when you whistle the eye may squint or close.

It's not all bad news though as some of the right nerve wires will get to the right muscles, however the degree of correct and incorrect nerve wiring is impossible to predict.



## How can synkinesis be improved?

More good news is that specialist therapy can help improve normal facial movements and expressions however bad you feel your synkinesis is. The patient in these pictures worked hard with their exercises and really improved their facial movement.

Therapy works by getting the flexibility and mobility back into muscles which have got short, tight and stiff due to being overused as they are moving together all the time.

Having all your muscles working at the same time restricts your movement as they work against each other in a tug of war. Special exercises can help change this and a specialist facial therapist can show you how.



People tend to make the mistake when they have synkinesis of thinking that the harder they try to move the better their movement will be. This is completely wrong - it is helpful to imagine the facial movement you want to do like a boat. Unwanted (synkinetic) movements are working as an anchor preventing the boat from moving freely. Specialist exercises can help to stop the unwanted movements and just as raising an anchor allows a boat to sail freely the exercises allow the face to move more freely.

For more information on synkinesis and how to manage it please view the synkinesis management videos. To get to this visit the facial palsy UK website [www.facialpalsy.org.uk](http://www.facialpalsy.org.uk), click on support and then self-help videos and follow the link to the 4 synkinesis videos. There is also a link to an audio guide to help you re-learn how to relax your face if you have synkinesis called 'Calming practice for the Face and Neck'.

The information in this leaflet is also available in video form in the self-help videos section of [www.facialpalsy.org.uk](http://www.facialpalsy.org.uk)