

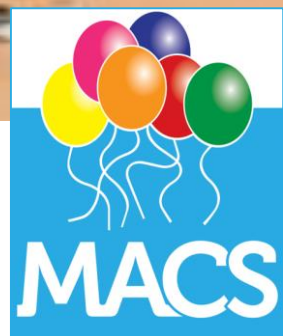
Prosthetic Eyes – Transforming Lives

A MACS Publication



MACS (Microphthalmia, Anophthalmia & Coloboma Support) is a charity registered in England & Wales (1161897)

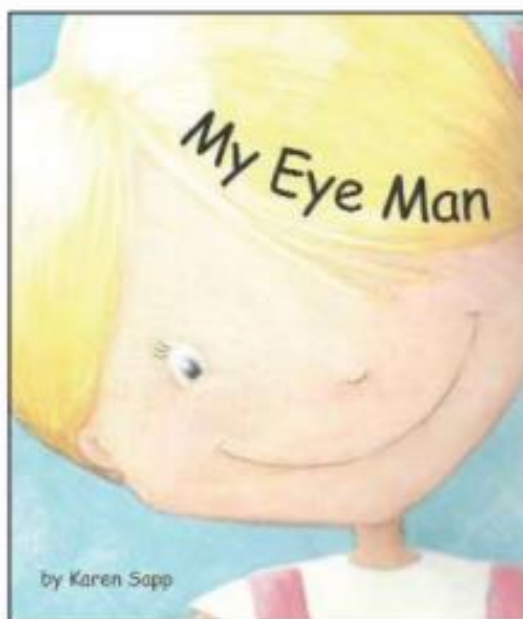
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PROSTHETIC EYES TRANSFORMING LIVES

We know that one of the most difficult things our children, and us parents, go through is a visit to the prosthetics department to have an eye/eyes made,

Most parents will have no idea of what this process involves and so we hope that the information included in this booklet will help to give you an insight (excuse the pun) into what you can expect when you get there.



We do have another publication, **"My Eye Man"** which is designed to support the younger child who is going through this experience.

It follows Katie as she visits the hospital to have her eye made. The book is free to MACS members.

If you would like a copy please call **0800 1698088** or e-mail jenny@macs.org.uk

We gratefully acknowledge our friends and professionals in the medical field for their assistance in putting this leaflet together especially David Carpenter, Chief Ocularist, Ocular Prosthetics Department, Moorfields Eye Hospital, City Road, London EC1V 2PD.

ADAM'S NEW EYE

Adam is visiting **Moorfields Eye Hospital** to have a new prosthetic eye made.

He is 13 and has a Microphthalmic left eye which has no vision in it. Here he is, looking very happy and excited at the thought of getting a brand new eye!



First David inserts a clear plastic "**cover**" into Adams eye. It has a small tube which comes out the front. **It doesn't hurt at all!**

He then injects the "**custard**" into that small tube. Adam says it feels cold, **but it still doesn't hurt!**





We have to wait about 30 seconds until the "*custard*" sets and



..... David then gently removes this "*custard*" and uses it to make a wax mould of what will become Adam's new eye.



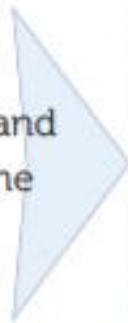
Whilst the wax is cooling, David colour matches Adam's iris, and begins to paint it.



Once the wax mould has cooled and hardened it is trimmed up and smoothed over ready to try it in Adam's socket to check for size and comfort. This is sometimes the fiddly bit as it may have to be adjusted and tried in a few times until it is a completely comfortable fit.

David marks where the centre of the iris will be when the wax mould is ready. He uses a marker pen to do this!

Look carefully at this picture and you will see the spot where the iris will be placed!



A hole is carved into the front of the wax mould and the painted iris placed in the hole. The iris has a peg coming out the front which is the direction the eye will look so David can adjust the angle to ensure the eye will be looking straight.

We then go home, and wait for the call from David to let us know Adam's new eye is ready for him to collect it. This can take from 3 – 5 weeks depending on how busy they are! David still has a lot of work to do on the eye to convert the wax to acrylic, and to add the veining onto the white of the eye using a fine red thread.



Finally the day comes and Adam goes to collect his new eye.



The back of a prosthetic eye is like a cup shape rather than the round sphere many people imagine it to be.

It fits snugly over Adams Microphthalmic eye and this may even mean that the prosthesis will move as his eye underneath moves. He tries it in for size and to ensure that it is comfortable.

David checks that it has opened the socket up as much as possible and looks as symmetrical to his other eye as it possibly can.

Adam takes it out again and David gives it a final polish. Now Adam can finally get his new eye to wear, and he can't wait to show everyone!



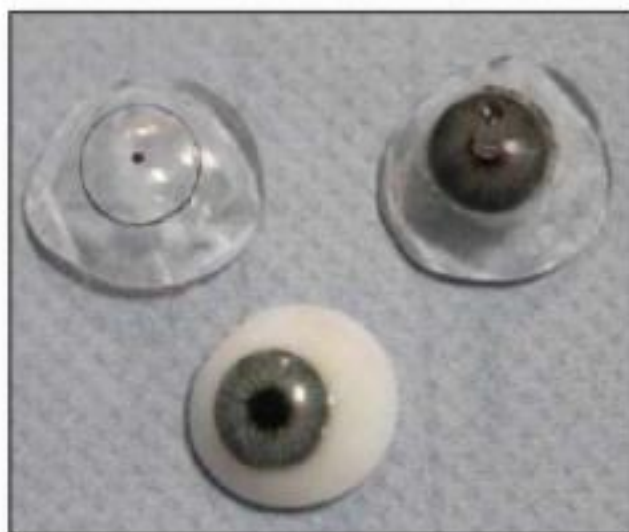


David advises that Adam takes the prosthesis out every day and washes it with soap and water.

At first Adam was given a little sucker to use. When he was younger he used to use it but very soon he learned to just use his fingers!

As Adam has grown over the years his Microphthalmic eye hasn't, meaning that in effect it has got smaller in proportion to his head.

Initially Adams Microphthalmic eye filled most of the socket so David fitted a cosmetic shell rather than a prosthetic eye. The process is basically the same as with a prosthetic eye, but they fit a clear plastic shell rather than a wax shape, and then paint the iris colour directly onto the shell.



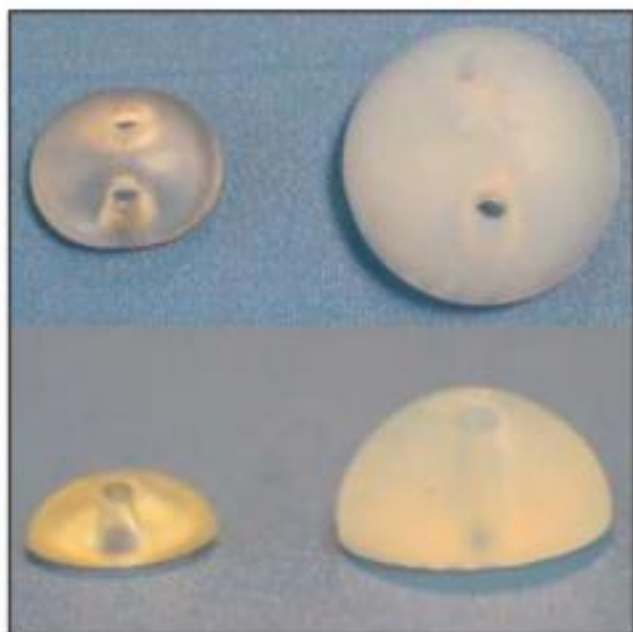
Adam got his first shell when he was about 2½ years old.

This is on the right of the photo. The prosthetic eye on the left is the new one he has just had made.

David has made each new eye larger by increasing the width, height and depth in order to open the socket up.

(If you are wondering what the dots are on the side of each of these eyes they enable the ocularist to know who made the eye and when it was made as part of their quality control management system. It also lets Adam know which way his eye should go in - these dots always have to be at the top. Not all ocularists use this dot system, so some prosthesis will not have these.)

When Adam was younger and growing faster the eyes were replaced very regularly, as he got older and his growth slowed then the eyes didn't need to be replaced as often.



Sometimes Hydrophilic Expanders are used on very small sockets to help create space and fornices that will then allow a prosthetic eye to be fitted.

They are inserted by the ophthalmologist either in clinic or in theatre while under anaesthetic.

The expander is very small when inserted (*the one on the left in the photo*) and it absorbs fluid from the socket and expands in size (*the one on the right in the photo*).

This expansion will happen quite quickly and the expander will normally be replaced with either a larger expander to continue expanding the socket or a solid shape to maintain the socket shape after a few weeks.

CLEAR ACRYLIC SHAPES

In this photo Lily is wearing clear acrylic shapes, the reason she has clear shapes as opposed to painted prosthesis is that Lily still has some form of vision in her Microphthalmic eyes.

It may only be perception of light but it is important to help maintain any vision a child has.

Making the prostheses clear allows the maximum amount of light to get to Lily's eyes.

As Lily grows more tests can be undertaken to assess Lily's vision more accurately and it may be decided to make her prostheses that are painted but with clear pupils to allow the light to pass through them still.



Frequently asked questions:

From what age can a child have a prosthetic eye?

If a child is born Anophthalmic or severely Microphthalmic then it would be recommended that a prosthesis be fitted as soon as possible. The reason for this is that the prosthetic shape helps to promote bone and tissue growth in and around the socket; the earlier this can be started the better.

At first these shapes may only be clear or white but as the child grows and the shapes get larger then we would look to include an iris.

Why does my child have to have a general anaesthetic to have a moulding taken?

With very young children it is better to take an impression under anaesthetic as the impression needs to be accurate and the socket relaxed, this is easier to achieve while the child is asleep. Also it is less traumatic both for the child and the parents when the process of fitting a prosthesis is new to them.

My child hates having their prosthesis taken in and out.

How can I stop this being so traumatic for them and me?

Unfortunately children dislike having things done to them such as their hair washed or their teeth brushed!

Removing their prosthesis is the same, it doesn't hurt them but they don't like the feeling.

Perseverance is the key, it is something that has to be done and, if treated like any other daily routine, they soon get used to it. You could try making a game out of it or if they are a bit older get them to help remove it so they feel more in control.

My child has started taking their prosthesis out at nursery.

How can I stop this?

This seems to be a faze that most children with prosthetics go through, once they have figured out how to remove the prosthesis it's a great game to remove it and

get attention from an adult who has to reinsert it. If the nursery are unwilling to insert the prosthesis there is no harm in leaving it out until you collect your child. Soon your child will learn another new trick and they will forget about taking their prosthesis out.

Should my child's prosthesis be taken out every day?

This is a very difficult question to answer; in the past we at Moorfields have recommended that the prosthesis is removed every day to clean it. By doing this the child gets used to having the prosthesis handled and if the socket produces a lot of discharge this can be cleaned before it causes any problems.

Having said that, there have been recent studies that show that leaving the prosthesis in place for prolonged periods can be better for the patient, as the socket gets accustomed to the prosthesis and then doesn't create discharge after a while.

However if your child wears a cosmetic shell over a very slight Microphthalmic eye then the shell should be removed at night.

If in doubt, talk to your ocularist who can advise you.

We thank David Carpenter, Chief Ocularist at Moorfields Eye Hospital, for answering these questions.



All By Myself!



This is me ... my name is Erin ...
I was born with one big eye and
one LITTLE eye!



Today, I am learning to put my
shell in ... all by myself.

First, I make sure I have cleaned
my hands. Then ...

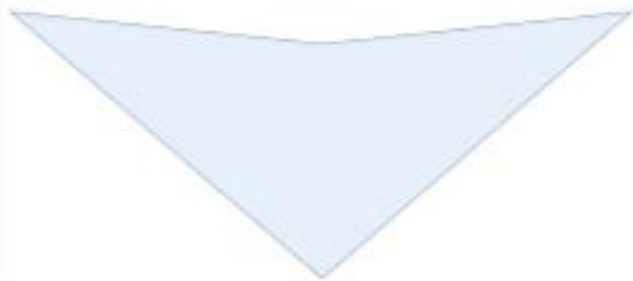


I insert it just like that





I remember to pull my top eyelid up, just like that



Nearly there ...



I quickly pull the bottom eyelid down to finish





“Look at me ...
I can do it ...
ALL BY MYSELF!”

THE MACS STORY... so far...

MACS was formed in 1993 by a group of parents, all of whom had children with Anophthalmia, Microphthalmia and Coloboma. Until then most of them didn't know of any other children like their own, and children with these conditions did not have the opportunity to meet each other, support each other and learn from each other.


MACS offers emotional and practical support to the children and families living with the daily challenges that accompany the MACS conditions.

We aim to:

- ***Raise the profile of these rare conditions.***
- ***Encourage families to support each other through: our membership scheme, newsletter, website, social networking sites and importantly via direct contact at our annual Family Weekend, regional events for families and events held specifically for young MACS adults.***
- ***Provide beneficial rest for parents, children and extended family members.***
- ***Provide financial assistance to MACS families who need to purchase equipment or services to help meet their specific needs.***
- ***To become the leading international resource on Anophthalmia, Microphthalmia and Coloboma, for parents and professionals.***

We gratefully acknowledge our friends and professionals in the medical field for their assistance in putting this leaflet together.

To find out more about our work, please visit www.macs.org.uk or follow us on Social Media

 [Twitter.com/MACStheCharity](https://twitter.com/MACStheCharity)

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