A celebration of individuals who have made a difference to the world of ophthalmology and the 50th anniversary of the Bausch + Lomb Minims range

Prescribing information can be found on page 24 onwards.
Adverse event reporting instructions can be found on page 32
As Bausch + Lomb’s Business Director for Pharmaceuticals in the UK and Ireland, my role allows me to really understand just how important eye health is. It makes me proud to be able to say that through our Minims range we enable eye care professionals to perform procedures which improve the lives of patients – and it’s been doing so for the last fifty years.

To mark the fiftieth anniversary of our Minims range, we launched the *Icons of Ophthalmology* initiative. A celebratory campaign designed to shine a spotlight on the importance of eye health in general, and specifically to showcase and honour ophthalmic practitioners who over the last five decades, have advanced eye health and care through their contributions and endeavours.

I am delighted to share with you not only the *Icons of Ophthalmology* winners for each decade, but also the nominees. Each of which has been put forward by our Expert Panel - made up of ophthalmologists all of whom are very much at the top of their game. The winners have been voted for by eye care professionals across the UK.

All of those nominated embody our mission at Bausch + Lomb, namely, to help people to see better and live better, and through this book we recognise their individual contributions, be it advances in regards to technique, training or technology; many of which remain relevant in 2020.

It seems to me timely, at the start of a new decade, especially 2020, to also cast our eyes forward to the next 50 years of innovation within ophthalmics. Who are the icons of the future we wonder as we survey the cutting edge of the industry: robotic-assisted surgeries, diagnostic AI, personalised wearables and pharmaceuticals?


*Jenni White*

*Bausch + Lomb Business Unit Director*
About the Icons of Ophthalmology and Minims

Bausch + Lomb’s Minims range has been enabling ophthalmic innovation since its inception some 50 years ago, supporting extraordinary individuals deliver life and sight saving treatments with confidence. 2019 marked the 50th anniversary of the first Minims product range.

Developed to celebrate what could be described as the ‘iconic’ Minims range’s milestone 50th anniversary, the Icons of Ophthalmology initiative centred around celebrating individuals within the world of ophthalmology. Those who have made a lasting difference not only to their patients but to the advancement of eye health care too.

Bringing together a panel of ophthalmologists from across the UK, we examined best in class innovations and innovators within ophthalmics spanning the last five decades. We then handed it over to you and asked you to decide who you thought was most deserving of the Icon of Ophthalmology moniker.
The Icons of Ophthalmology Panel
Icons of Ophthalmology Panel

Richard Haynes  
MBBch, FRCOphth, MD

Specialising in vitreoretinal (VR) and cataract surgery, Richard Haynes has been a consultant ophthalmic surgeon at Bristol Eye Hospital since 2001. He has an active research portfolio and is currently the Chief Investigator of a multi-centre-controlled trial of genetic factors that predispose to severe postoperative eye infections.

He has an interest in surgical training having set up a VR Surgical Simulation Course for BEAVRS and the RCOphth. He was elected Lead for Professional Standards in the British Association of Vitreoretinal Surgeons in 2018.

Emma Hollick  
MD, FRCOphth

With a special interest in cornea, including modern corneal transplant surgery (lamellar surgery and descemets membrane endothelial keratoplasty), Emma Hollick is a consultant ophthalmic surgeon and currently practises in London and the South East.

Hollick qualified at Oxford University and trained in ophthalmology predominantly at Moorfields Eye Hospital. She gained her research MD (higher degree) at St Thomas’ Hospital and started as a consultant ophthalmic surgeon at King’s College Hospital in 2004.
Colin Vize

MBBS, FRCOphth, FHEA

Based in the north of England, Colin Vize is a consultant ophthalmic surgeon with special interests in high volume micro-incisional cataract surgery and oculoplastics.

Vize has managed Hull and East Yorkshire Eye Hospital for over a decade and is a Medical Director at Hull University Teaching Hospitals. He is also an Honorary Senior Lecturer at Hull York Medical School.

He leads the Quality and Safety Group of the RCO and is Honorary Secretary of the British Oculoplastic Surgery Society (BOPSS).

Zac Koshy

MBBS, DNB, FRCS (Glas), MRCOphth

Zac Koshy has more than 20 years of experience in ophthalmology with special interests in surgical and medical retina, having gained fellowships in both these fields from Glasgow and Newcastle respectively.

After completing his basic ophthalmic training at the Aravind Eye Network in India, Dr Koshy underwent higher specialist training in Glasgow before undertaking his fellowships.

He currently is the Clinical Director of his department and has a keen interest in training, being on the surgical faculty at the RCOphth and ESASO. He oversees postgraduate ophthalmic training at his hospital and sits on the West of Scotland Training Committee.
Firstly, before we reveal the nominees and the winners, we want to thank everyone who took part in the campaign and voted for who they thought should be recognised as Icons of Ophthalmology.

In advance of looking back, let’s start by spending a moment, at the start of this new decade, by future gazing and looking forward to the next 50 years of innovation within ophthalmics. Who are the Icons of Ophthalmology of the future, and what advances are on the horizon?

We are interested in what you think might be the most significant innovations in ophthalmics over the next 50 years. From technology, to training advances or techniques. Let us know where you are looking in the future by emailing icons@bausch.co.uk

To get the ball rolling, we asked the Icons of Ophthalmology Expert Panel what hopes they had for the next 50 years of ophthalmology:

“Quite simply, I’d like to see more ophthalmologists. We’re under great pressure at the moment, and in the next decade we’re probably going to have to achieve 20 per cent more cataract surgeries. That is not going to be achieved with the current staffing levels that we have so consequently, we need to train more ophthalmologists to do the job.”

Colin Vize

“I would like to see an expansion of the work that has been done for gene therapy because I feel that that is what’s going to get to the bottom of a lot of the conditions we struggle with today.”

Zac Koshy

“I’d like to see the eradication of preventable blindness across the world and particularly in developing countries due to treatable causes of blindness such as cataracts and infections.”

Emma Hollick

“I’d like to see new technologies such as gene therapy being used for common conditions such as macular degeneration, and I’d also like to see machine learning and artificial intelligence being used to personalise treatment for individual patients.”

Richard Haynes
The nominees and winners
Charles Kelman

Charles Kelman’s story of inspiration is well-known. During a visit to the dentist and a routine teeth-cleaning, he realised that the ultrasonic technology could be used for cataract surgery.¹

After one month, Kelman had adapted the probe for ocular use, and the result was the invention of phacoemulsification. The procedure remains one of the most significant advances in ophthalmic surgery and is still widely used to treat cataracts today.²

Kelman led ophthalmology to embrace the concept of small-incision surgery, which resulted in shortened hospital stays and a rapid return to normal activities for patients.

Anecdotally, Charles Kelman was known for being a true pioneer who urged a move away from traditional thinking in ophthalmology into the future. So much so that in 1994, the American Academy of Ophthalmology named him ‘Ophthalmologist of the 20th Century.’³

Robert Machemer

Robert Machemer, also known as the ‘father of modern retinal surgery’, is famed for inventing the vitrectomy machine aspirating cutter, and the pars plana technique as a whole, to remove vitreous humor from the posterior segment of the eye.

With his invention, Machemer gave ophthalmologists the opportunity to treat the posterior segment of the eye with removal of the vitreous humor allowing direct access to the retina. This opened the door for multiple vision restoring procedures. Machemer was the epitome of a clinician-inventor, managing an active clinical practice while creating revolutionary technologies, such as the vitrectomy cutter in his garage workshop. Additionally, he was a great educator with a vast archive of publications.

His work has been acknowledged through a number of international awards including the Ernst Jung Prize in 1993, the Helen Keller Prize for Vision Research in 1997, the Gonin Medal of the International Council of Ophthalmology in 1998 and the American Academy of Ophthalmology Laureate Award in 2003.⁴
Sir Harold Ridley, the pioneer who developed the intraocular lens (IOL) used in cataract procedures, is the winner of the 1970s category and is a true Icon of Ophthalmology.

During the Battle of Britain ophthalmologist Ridley was posted from Moorfields Hospital, London to Emergency Medical Services to treat injured service personnel. Observing that Perspex from the canopy of a Royal Airforce Hurricane fighter did not cause an inflammatory reaction within the eye of its pilot, the concept of the intraocular lens was born.

In the years following World War II, Ridley was ridiculed and became a pariah of the ophthalmic community. His first procedures were undertaken clandestinely at St. Thomas’ Hospital, London, where he was trained. His concept was rejected by many of the leading ophthalmologists of the time, particularly Sir Stewart Duke-Elder, the ‘doyen’ of British ophthalmology. The then mantra of ‘always remove foreign objects from the eye’ applied, notwithstanding the gap of 200 years since Jacques Daviel had surgically extracted the lens of an eye.

The reason why Sir Harold Ridley is celebrated in this decade, is that in the 1970s the revolutionary intraocular lens came to prominence. With FDA approval in 1981, the IOL became a staple of cataract treatments and has since benefited 200 million people worldwide.

Along with the IOL, Ridley was an extraordinary clinician and researcher in many ophthalmic fields, discovering, amongst others, nutritional amblyopia, river blindness (onchocerciasis) and snake venom ophthalmia through his international work.

Characteristically, Ridley worked with extraordinary persistence to forge new frontiers in ophthalmic innovations. Despite his unpopularity at the time, he has since been celebrated as ‘one of the most outstanding ophthalmologists of the 20th century’, according to the American Society of Cataract and Refractive Surgery. Notably, he was awarded the Gonin Medal of the International Council of Ophthalmology in 1994 and was made a Knight Bachelor in 2000.

Sir Harold Ridley could fit into any one of these five decades due to his lasting legacy, a true pioneer.”

Colin Vize
MBBS, FRCOphth, FHEA
José Barraquer MD

José Barraquer is widely considered to be the ‘father of refractive surgery’.

Barraquer developed two techniques, keratomileusis and keratophakia, that laid the groundwork for many modern lamellar procedures including LASIK, the most common refractive surgery today.

The Barraquer Institute of America in Bogota, Colombia, has trained many thousands of refractive surgeons from across the world and hosted five International Forums that were attended by some of the most influential refractive surgeons of the time.

As a founding member of the International Society of Refractive Surgery (ISRS), the Barraquer Award Medal continues to be a prestigious achievement for refractive surgeons since it was first presented in Barraquer’s honour in 1987.5

Govindappa Venkataswamy MD

Govindappa Venkataswamy, or ‘Dr V’ as he was popularly known, made significant contributions to the accessibility of eye care across the world.

The Aravind Eye Care System has changed the way eye care is performed at scale. From an 11-bed hospital in 1976, Aravind has grown to a network of 14 hospitals, 80 rural vision centres, an eye care consulting group working with 335 hospitals globally, a manufacturing division, and a medical research facility. Aravind has also trained over 5,600 ophthalmologists from all six WHO regions.

Dr V pioneered the concept of ‘high quality, high volume, low cost care,’ which has enabled the network to deliver 61 million out-patient visits and perform 7.3 million surgeries. Aravind’s focus on compassion, high quality care, clinical excellence and ruthless efficiency is driven by his vision of a world without needless blindness.

That vision has unconventional roots. On a visit to the US, Dr V was inspired by McDonald’s – a hamburger available at a low cost and accessible across the country but exactly the same quality every time. He thought, “Why can’t we do the same for cataract surgery?” and the Aravind model was born.
Jack Kanski

MD, MS, FRCS, FRCOphth

Jack Kanski is a name known to ophthalmologists across the world, and for many of whom, is the starting point of their ophthalmic training. His first book Clinical Ophthalmology was published by Saunders Ltd. in 1984 and has subsequently educated thousands of ophthalmologists.

This iconic textbook contains clinical photography and a series of interesting cases captured by Kanski, a significant achievement and effort based on the technology available at the time. It remains the best-selling ophthalmology textbook, with the 9th edition published in December 2019.

The Royal College of Optometrists’ library reports that Clinical Ophthalmology accounts for more than 10 per cent of all library loans.

Kanski published over 30 further books covering all aspects of ophthalmology and remained a prolific author until his death in 2019.

In 1974, Kanski took a position as consultant ophthalmic surgeon at King Edward VII Hospital in Windsor where he established a centre of educational excellence, attracting students from around the world.

“Kanski epitomised the 80s to me, he is everyone’s introduction to the speciality. A truly worthy winner whose legacy will continue for decades to come.”

Colin Vize

MBBS, FRCOphth, FHEA
Stephen Trokel

Stephen Trokel is another exemplary leader in refractive surgery. He is widely acknowledged as the first person to use an excimer laser on a cornea. Working with a team of researchers, Trokel developed the concept of using lasers to reshape the cornea to change vision and correct refractive problems like myopia. Throughout the 1990s, Trokel refined and perfected the excimer laser which gained FDA approval in 1998.

Through his vision and research, he has brought the possibility of laser eye surgery to millions of people worldwide and established the basis of a multi-billion-dollar industry.

Donald Gass

Throughout Donald Gass’ career he named more than 20 macular disorders, none of which are eponymous, a mark of his modesty. His legacy remains apparent in retinal ophthalmology today.

Gass developed a keen interest in the macula early on in his ophthalmic career. His study of macular cross-sectional histology allowed Gass to conceptualise the way macular holes form, decades before OCT was invented. His concepts became the foundation of macular hole surgery enabling repair of this previously untreatable condition.

Gass developed and popularised fluorescein angiography as a diagnostic tool for macular diseases. The technique remains clinically relevant today for the diagnosis of macular edema, diabetic retinopathy, macular degeneration, and ocular melanoma, among others.

David Spalton

Professor David Spalton has made a renowned contribution to the world of cataract surgery, the leading cause of blindness around the world.

Spalton’s research on Posterior Capsule Opacification (PCO) - scar tissue causing vision problems following cataract surgery - remains significant. Throughout the 1990s his work focused on developing a protocol for detecting and quantifying PCO through retroillumination imaging and analysis.

Carol Shields

MD

Carol Shields is the Director of the Ocular Oncology Service at Wills Eye Hospital in Philadelphia. Since her time as an ophthalmic resident, Shields realised that ocular oncology was a field with a huge potential for advancement and innovation. Of note is her expertise in retinoblastoma. In her active clinical practice, Shields treats around 50 per cent of all retinoblastoma cases, a cancer that almost exclusively presents in young children. Shields’ team at Wills Eye Hospital has made extraordinary progress over the last 20 years. Shields reports that when she began her practice, 30–40 per cent of all retinoblastoma cases resulted in the removal of the eye, today that figure sits at between 5–10 per cent. Not only has she made significant strides in how many eyes are saved, but also to the vision of those children. Around half of her retinoblastoma cases that are treated with chemotherapy see vision quality of between 20/20 to 20/40.

Alongside her expertise in retinoblastoma, Shields is a leader in ocular melanoma, reported to treat a third of all cases in the United States. Shields is continually working to advance the treatment of the condition, with research projects that are expected to lead to significant discoveries and advancements over the next ten years. In addition, she has a sub-specialty of treating conjunctival tumours with topical chemotherapies and surgical reconstructions.

Alongside her role at Wills Eye Hospital, Shields has written extensively on ocular oncology; authoring or co-authoring 12 textbooks, over 1,800 articles in major journals, and over 300 textbook chapters.

Shields is also a Professor of Ophthalmology at Thomas Jefferson University in Philadelphia, training more than 100 fellows since the late 1980s who now practice ocular oncology worldwide.

“Carol Shields is an incredible physician who has made big changes in the field of ocular oncology, and through her educational work she has disseminated her expertise across the world.”

Emma Hollick

MD FRCOphth
Icon of Ophthalmology

Richard Collin
MA, MB B.Chir, FRCS, DO, FRCOphth

Professor Richard Collin, or ‘JROC’ as he’s popularly known, is the leading educator in oculoplastic surgery in the UK. Publishing three textbooks, over 200 articles and book chapters, and giving more than 20 named lectures on the topic of oculoplastics, Collin has inspired a legion of surgeons.

Collin co-founded the British Oculoplastic Surgery Society (BOPSS) to advance the speciality which has grown to over 130 consultant oculoplastic surgeon members. A significant growth from the 1990s when only three UK ophthalmologists specialised in the field.

A former President of the European Society of Oculoplastic and Reconstructive Surgery (ESOPRS) and ex-Council member and master of the Oxford Ophthalmological Congress, Collin’s expertise is renown.

John Forrester
MB ChB, MD (Hons), FRCS(E), FRCOphth, FRCS(G), FRCP(E), FMedSci, FRSE, FIBiol, FARVO

Professor John Forrester built the world’s leading department for ocular inflammatory disease in Aberdeen and has established global networks through the International Ocular Inflammation Society (IOIS) and international uveitis study group.

In addition to surgical ophthalmology, he is a keen advocate of medical ophthalmology as a subspecialty. Working with the Royal College of Physicians he launched and led the process of developing a training program in this specialty and chaired the RCOphth Medical Ophthalmology Training Sub Committee.

Advancing clinical practice, with Professor Andrew Dick, he developed treatments for ocular inflammation that have been adopted world wide, including monoclonal antibody anti-TNF therapies.

Gerrit Melles
MD, PhD

Gerrit Melles is the pioneer of modern corneal lamellar surgery. His minimally-invasive corneal surgical techniques have transformed the way that surgeons operate on the surface of the eye.

Melles founded the Netherlands Institute for Innovative Ocular Surgery (NIIOS) in 2000, and since this time an estimated 20 million people have been successfully treated with NIIOS-developed surgeries and instruments.

In addition to his milestone surgical techniques, such as DMEK (Descemet membrane endothelial keratoplasty) for corneal transplants, Melles developed instruments, devices and dyes that have become fundamental tools in many surgeries.

Melles has grown NIIOS to include a tissue bank, cornea clinic, academy and research and development unit to continually advance the field.
Philip Rosenfeld

**MD, PhD**

Professor Philip Rosenfeld is a pioneer of anti-VEGF (vascular endothelial growth factor), which is now the mainstay of many ophthalmic treatments. Significantly, anti-VEGF is currently the most ‘common and effective’ treatment for wet age-related macular degeneration (AMD)\textsuperscript{10}, which is the largest cause of blindness in the western world.\textsuperscript{11}

In the 2000s while practising at the Bascom Palmer Eye Institute, Rosenfeld researched the use of bevacizumab to treat AMD. The drug had previously been approved by the FDA for the treatment of colorectal cancer and was designed to block the VEGF which typically causes neovascularization and exudation to develop.

Rosenfeld believed that this drug, in small quantities, could have a similar effect in the eye. He found that bevacizumab could treat the neovascularization and exudation that caused rapid severe vision loss in neovascular and exudative retinal diseases, particularly in neovascular AMD patients and that some patients regained significant vision lost to these diseases.

In addition to his advances in the clinical treatment of neovascular AMD, Rosenfeld devised optical coherence tomography (OCT) guided therapy to improve the management of the condition. His work on using OCT-guided therapy reduced the number of injections required to treat exudative ocular diseases, such as wet AMD, by improving the cost-effectiveness of the protocols.

Rosenfeld’s breakthrough has had a huge impact on clinical practice today, enabling clinicians to treat AMD and other exudative and neovascular conditions affecting the back of the eye, and ultimately saving vision in millions of people while saving the healthcare systems worldwide billions of dollars. In the US alone, it has been estimated that Dr. Rosenfeld’s contributions have saved over $50 billion in healthcare costs.

“The 2000s were exemplified by treating the posterior segment disease of the eye with anti-VEGF therapy, and Rosenfeld was the pioneer in this arena. Many of the therapies we continue to use today are based on his revolutionary research at that time.”

Zac Koshy

**MBBS, DNB, FRCS (Glas), MRCOphth**
Sir Peng Khaw
PhD FRCP FRCS(Glasgow) FRCS(Eng) FRCOphth FCOptom CBiol FSB FRCPath FMedSci FARVO

Sir Peng Khaw is Professor of Glaucoma and Ocular Healing and consultant ophthalmic surgeon at Moorfields Eye Hospital and UCL Institute of Ophthalmology.

Khaw has demonstrated extraordinary clinical, academic and altruistic work throughout his career. Clinically, he has developed major surgical techniques such as the Moorfields’ Safer Surgery System, transforming glaucoma procedures. He continues to develop new surgical techniques and anti-scarring therapies, together with stem cell therapy for glaucoma.

In 2012, Khaw was appointed the first UK President of the global Association for Research in Vision and Ophthalmology (ARVO). Additionally, he has raised grants of over £120 million, including funding for the world’s largest Children’s Eye Hospital and translational research clinical centre.

In 2013, he was knighted in the Queen’s Birthday Honours list for services to ophthalmology, one of only two ophthalmologists in the last hundred years.

Robin Ali
PhD, FMedSci

A leader in gene therapy for retinal conditions, Professor Robin Ali has made some of the most significant advances in this speciality over the last decade. His major breakthroughs have resulted in validated treatment for hitherto untreatable conditions and will go on to form the basis for continued advances in this field.

Ali and his team led the first clinical trial of gene therapy for retinal dystrophy, demonstrating the safety of the treatment and highlighting potential for future innovations of this nature.12

Robert MacLaren
FMedSci FRCOphth FRCS FACS VR

Robert MacLaren, Professor of Ophthalmology at the University of Oxford, has been consistently developing gene therapies and surgical innovations for retinal conditions throughout the last decade.

Since 2011, MacLaren has been leading the largest gene therapy clinical trial for any disease to date, operating in seven countries across Europe and North America.

In addition to his extensive gene therapy research, MacLaren has made a vast array of surgical advances. He introduced electronic retinal implants into the UK as part of a trial designed to restore some functional vision to patients with end-stage retinal disease. He also performed the world’s first robot-assisted ocular procedure to lift a membrane, 100th of a millimetre thick, from the retina of a patient experiencing distorted vision.
Rob Johnston
FRCOphth

Rob Johnston was a visionary of the ‘big data generation’. Selected by both our Expert Panel and voted for by eye care professionals, Johnston’s influence will endure for the next 50 years of ophthalmology.

His landmark work was the introduction of the Electronic Patient Record (EPR) software designed with his brother David13. The EPR allowed for the continuous collection of data to improve and audit surgical outcomes, one of the most broad-reaching innovations to come out of ophthalmology to date.

Johnston recognised the need to re-examine surgical governance and how patient outcomes are monitored, as well as the possibilities for the use of such significant data sets. The system that Johnston created was designed to be a by-product of routine clinical activities, enabling the recording and collecting of masses of data at the press of a button.

Advancing on previous audit systems, Johnston’s process allowed clinicians to take into account the complexity of cases and amass huge data sets. The first of his 45 publications on the topic included 6,000 patients, followed by a second paper with 55,000 patients13.

“Rob had an extraordinary amount of vision, creativity and drive, to bring big data and analytics into ophthalmology. He’s fondly remembered by those who knew him and his legacy of brilliant academic endeavour will have a lasting impact for years to come. The enormous datasets paved the way for potential artificial intelligence and machine learning.”

Richard Haynes
MBBch, FRCOphth, MD
The Expert Panel’s selections

While shortlisting the nominees included in this book, the *Icons of Ophthalmology* panel selected their personal winners for each decade, with six extraordinary clinicians making the panel’s final list.

Here our expert panel members explain their *Icons of Ophthalmology*:

**60s - 70s**

**Charles Kelman, MD**

*Colin Vize says about Kelman:*

“The late 60s was a time of ophthalmic advances, and Charles Kelman epitomised that generation of innovation and those who were willing to push boundaries.”

**Robert Machemer, MD**

*Zac Koshy says about Machemer:*

“Robert Machemer invented an incredibly disruptive technology, with game-changing clinical benefits, but also ensured those using the technique were properly trained for the optimal patient outcomes.”

**80s - 90s**

**Govindappa Venkataswamy, MD**

*Zac Koshy says about Dr V:*

“Dr V’s concept of high-volume, high-quality, low-cost care feels very relevant in the current health economic climate where the demand for ophthalmic surgery is at an all-time high.”

**Professor John Forrester**

*Richard Haynes says about Forrester:*

“John Forrester was a true multi-disciplinary leader in ophthalmology, from establishing the first ocular immunology department, to monoclonal antibodies, to his educational programmes on medical ophthalmology – he advanced many different aspects of the field.”

**00s - 10s**

**Gerrit Melles, MD, PhD**

*Emma Hollick says about Melles:*

“Gerrit Melles was an extraordinary ophthalmologist, developing all the current corneal transplant procedures, completely changing the way we operate. Having trained with him at the Netherlands Institute for Innovative Ocular Surgery (NIIOS), I can say confidently, he is a genuine icon of the 21st century.”

**Rob Johnston, FRCOphth**

*Richard Haynes says about Johnston:*

“Rob built a legacy of brilliant academic endeavours that will have a lasting impact on the world of ophthalmology. A true visionary who paved the way for artificial intelligence and machine learning through a programme that fits seamlessly with everyday clinical practice.”
The Minims Range

LOCAL ANAESTHETICS

MIOTICS

IRRIGATING SOLUTION

ARTIFICIAL TEAR SOLUTION

Why Minims?

PRESERVATIVE FREE
All Minims products are free from preservatives

SINGLE DOSE
Designed and licensed for single use, to reduce potential risk of cross contamination

STERILE
Either auto-clave end sterilised or manufactured through a fully aseptic process

DOUBLE WRAPPED
Sterile single use dropper inside sterile over-wrap ensuring sterility at point of use

COLOUR CODED PACKAGING
Minimise risk of dispensing errors
The first Minims products were born out of an infection control requirement, at the behest of the UK Government following two eye infection outbreaks in a hospital setting. The result was a whole host of changes to the ways in which eye health was managed, such was the severity of the outbreaks.

Limiting infection risks became the leading principle by which all eye healthcare advice and guidelines were driven. Clearly, one way to limit risk was to make sure that medicines had to be introduced into the vulnerable eye in a sterile, bacteria-free way – and so the single dose Minim evolved. Eliminating the risk of passing infection from one patient to another.

The infection control measures brought in over fifty years ago have stood the test of time and remain part of the protocol when it comes to treating patients’ eyes diagnostically or clinically.

The simple concept of single use, sterile, accurate dosage, in easy to administer packaging – the founding propositions of the Minims range remains as pertinent to eye health in today’s world as it did five decades ago. Managing risk is an imperative, particularly with such a virus as deadly as SARS-CoV-2.

- **Patient outcomes maintained**
- **Clinical governance observed**
- **Limits micro-organism transmission**
- **Infection management costs minimised**
- **Medicinal efficacy uncompromised**

At Bausch + Lomb we invest in professional training grounded in infection control best practice, because we know how important it is in terms of patient safety outcomes.

If you would like to arrange training for any of your team on the recommended use of Minims, please contact 0208 781 5500 to arrange a call.
As part of our commitment to ocular health, Bausch + Lomb manufactures a large range of Minims single-use, preservative free formulations that are used either therapeutically or diagnostically.

Single dose units are optimally designed to avoid cross-contamination and deliver the exact amount needed every time.

In the fifty years of Minims, Bausch + Lomb has supplied millions of carefully calibrated drops to eye health care professionals and their patients across the world.

The current range is already extensive, but at Bausch + Lomb, our product development team is always reviewing what we offer, and as such, would be very interested to learn if there are any products which you think are missing from the Minims range?

Let us know by emailing: icons@bausch.co.uk
Minims® Proxymetacaine Hydrochloride 0.5% w/v single dose, eye drops, solution

Prescribing Information
Please refer to Summary of Product Characteristics before prescribing. Further information about this product can be requested from the Marketing Authorisation Holder or may be found in the Summary of Product Characteristics.

Contains:
Proxymetacaine hydrochloride 0.5% w/v.

Main Indications, Dosage and Administration:
To be used as a topical ocular anaesthetic. Adults (including the elderly) and children: Deep anaesthesia: Instil 1 drop every 5 - 10 minutes for 5 - 7 applications. Removal of sutures: Instil 1 or 2 drops 2 to 3 minutes before removal of stitches. Removal of foreign bodies: Instil 1 or 2 drops prior to operating. Tonometry: Instil 1 or 2 drops immediately before measurement. Do not use if the solution is more than pale yellow in colour. Each Minims unit should be discarded after a single use. A period of at least one minute should be allowed after administration of Minims Proxymetacaine hydrochloride 0.5%, before subsequent administration of other topical agents.

Contraindications, Precautions and Warnings:
Do not use in patients with a known hypersensitivity to any component of the preparation. In view of the immaturity of the enzyme system which metabolises the ester type local anaesthetics in premature babies, this product should be avoided in these patients. This product should be used cautiously and sparingly in patients with known allergies, cardiac disease or hyperthyroidism because of the increased risk of sensitivity reactions. This product is not intended for long term use. Regular and prolonged use of topical ocular anaesthetics e.g. in conjunction with contact lens insertion, may cause softening and erosion of the corneal epithelium, which could produce corneal opacification with accompanying loss of vision. Minims Proxymetacaine hydrochloride is not miscible with fluorescein, however, fluorescein can be added to the eye after it has been anaesthetised with Minims Proxymetacaine hydrochloride. Protection of the eye from rubbing, irritating chemicals and foreign bodies during the period of anaesthesia is very important. Patients should be advised to avoid touching the eye until the anaesthesia has worn off. Tonometers soaked in sterilising or detergent solutions should be thoroughly rinsed with sterile distilled water prior to use. Systemic absorption may be reduced by compressing the lacrimal sac at the medial canthus for a minute during and following the instillation of the drops. (This blocks the passage of the drops via the naso-lacrimal duct to the wide absorptive area of the nasal and pharyngeal mucosa. It is especially advisable in children). Use with caution in an inflamed eye as hyperaemia greatly increases the rates of systemic absorption through the conjunctiva.

Interactions: None stated.

Pregnancy and Lactation:
Safety for use in pregnancy and lactation has not been established, therefore, use only when considered essential by the physician.

Undesirable Effects:
May cause transient blurring of vision on instillation. Warn patients not to drive or operate hazardous machinery unless vision is clear. Pupillary dilation or cycloplegic effects have rarely been observed with Proxymetacaine hydrochloride preparations. Irritation of the conjunctiva or other toxic reactions have occurred only rarely. A severe, immediate-type apparently hyperallergic corneal reaction may rarely occur. This includes acute, intense and diffuse epithelial keratitis; a grey ground-glass appearance; sloughing of large areas of necrotic epithelium; corneal filaments and sometimes, iritis with descemetitis.

This Minims Product Requires Refrigerated Storage.

Minims® Oxybuprocaine Hydrochloride 0.4% w/v, eye drops, solution

Prescribing Information
Please refer to Summary of Product Characteristics before prescribing. Further information about this product can be requested from the Marketing Authorisation Holder or may be found in the Summary of Product Characteristics.

Contains:
0.4% w/v solution of Oxybuprocaine Hydrochloride Ph.Eur.

Main Indications, Dosage and Administration:
Topical ocular anaesthetic. Adults (including the Elderly) and Children: One drop is sufficient when dropped into the conjunctival sac to anaesthetise the surface of the eye to allow tonometry after one minute. A further drop after 90 seconds provides adequate anaesthesia for the fitting of contact lenses. Three drops at 90 second intervals provide sufficient anaesthesia for a foreign body to be removed from the corneal epithelium or for incision of a meibomian cyst through the conjunctiva. Corneal sensitivity is normal again after about one hour. Instil dropwise into the eye according to the recommended dosage. Each Minims unit should be discarded after use.

Contraindications, Precautions and Warnings:
Not to be used in patients with a known hypersensitivity to the product. Transient stinging and blurring of vision may occur on instillation. The anaesthetised eye should be protected from dust and bacterial contamination. When applied to the conjunctiva, oxybuprocaine is less irritant than amethocaine in normal concentrations. The cornea may be damaged by prolonged application of anaesthetic eye drops. Systemic absorption may be reduced by compressing the lacrimal sac at the medial canthus for a minute during and following the instillation of the drops (This blocks the passage of the drops via the naso-lacrimal duct to the wide absorptive area of the nasal and pharyngeal mucosa. It is especially advisable in children).

Pregnancy fertility and lactation:
This product should not be used in pregnancy or lactation, unless considered essential by the physician. Effects on ability to drive and use machines: Patients should be advised not to drive or operate hazardous machinery until normal vision is restored.

Undesirable Effects:
In very rare cases, uncontrolled use, i.e. long-term and/or too frequent use, may result in keratopathy, hypopyon, or central corneal erosion including central scarring. Corneal perforation may also be possible. Transient irritation, stinging and blurring of vision may occur on instillation. In rare cases, local anaesthetic preparations have been associated with allergic reactions (in the most severe instances, anaphylactic shock).


Legal Category: POM
UK PL No: PL 03468/00053
Basic NHS Price: £ 10.56
Marketing Authorisation Holder:
Bausch & Lomb UK Limited,
Bausch & Lomb House, 106 London Road,
Kingston-Upon-Thames,
Surrey, UK, KT2 6TN

Date of Revision: March 2018
Exemption Level: 1
Exemption Code: PROX 0.5
PIP Code: 236-8017

Legal Category: POM
UK PL No: PL 03468/00080
Basic NHS Price: £12.12
Marketing Authorisation Holder:
Bausch & Lomb UK Limited,
Bausch & Lomb House, 106 London Road,
Kingston-Upon-Thames,
Surrey, UK, KT2 6TN

Date of Revision: April 2020
Exemption Level: 1
Exemption Code: BNX 0.4
PIP Code: 018-0497
Minims® Tetracaine Hydrochloride

0.5% w/v and 1% w/v, eye drops, solution

Prescribing Information
Please refer to Summary of Product Characteristics before prescribing. Further information about this product can be requested from the Marketing Authorisation Holder or may be found in the Summary of Product Characteristics.

Contains:
tetracaine hydrochloride 0.5% w/v and 1.0% w/v solution.

Main Indications, Dosage and Administration:
Ocular anaesthetic for topical instillation into the conjunctival sac.
Adults and children: One drop or as required. Each Minims unit should be discarded after use.

Contraindications, Precautions and Warnings:
Not to be used in patients with a known hypersensitivity to the product. Tetracaine is hydrolysed in the body to p-amino-benzoic acid and should not therefore be used in patients being treated with sulphonamides. In view of the immaturity of the enzyme system which metabolises the ester type local anaesthetics in premature babies, tetracaine should be avoided in these patients. The anaesthetised eye should be protected from dust and bacterial contamination. The cornea may be damaged by prolonged application of anaesthetic eye drops. Systemic absorption may be reduced by compressing the lacrimal sac at the medial canthus for a minute during and following the instillation of the drops. (This blocks the passage of the drops via the naso lacrimal duct to the wide absorptive area of the nasal and pharyngeal mucosa. It is especially advisable in children. May cause transient blurring of vision on instillation. Warn patients not to drive or operate hazardous machinery unless vision is clear.

Pregnancy and Lactation:
TET 1% and 0.5- Safety for use in pregnancy and lactation has not been established, therefore, use only when considered essential by the physician.

Undesirable Effects:
Tetracaine may give rise to dermatitis in hypersensitive patients. On instillation an initial burning sensation may be experienced. This may last for up to 30 seconds. Corneal disorders such as superficial punctuate keratitis or edema may be observed following short-term application of Tetracaine (amethocaine) eye drops for topical anaesthesia. The cornea may be damaged by prolonged application of anaesthetic eye drops.

Legal Category: POM
Minims Tetracaine Hydrochloride 0.5%
UK PL No: 03468/0082
Basic NHS Price: £10.57
Minims Tetracaine Hydrochloride 1.0%
UK PL No: 03468/0083
Basic NHS Price: £10.57
Marketing Authorisation Holder:
Bausch & Lomb UK Limited,
Bausch & Lomb House, 106 London Road,
Kingston-Upon-Thames,
Surrey, UK, KT2 6TN
Date of Revision: March 2018
Exemption Level: 1
Evocative Code: TET 0.5, TET1.0
PIP Code: 018-0414, 018-0430

Minims® Lidocaine

4% w/v eye drops, solution

Fluorescein

0.25% w/v eye drops, solution

Prescribing Information
Please refer to Summary of Product Characteristics before prescribing. Further information about this product can be requested from the Marketing Authorisation Holder or may be found in the Summary of Product Characteristics.

Contains:
Lidocaine Hydrochloride 4% w/v and Fluorescein Sodium 0.25% w/v.

Main Indications, Dosage and Administration:
As a diagnostic stain and topical anaesthetic combined Minims Lidocaine & Fluorescein can be used in the measurement of intraocular pressure by Goldmann tonometry. Adults (including the elderly): One or more drops, as required. Children: As directed by the physician.

Contraindications, Precautions and Warnings:
Do not use in patients with a known hypersensitivity to fluoroarcine or lidocaine and other amide-type local anaesthetics. The anaesthetised eye should be protected from foreign body contamination, particularly in elderly patients in whom the duration of anaesthesia may exceed 30 minutes. Use with caution in an inflamed eye as hyperaemia greatly increases the rate of systemic absorption through the conjunctiva. Systemic absorption may be reduced by compressing the lacrimal sac at the medial canthus for a minute during and following the instillation of the drops. (This blocks the passage of the drops via the naso-lacrimal duct to the wide absorptive area of the nasal and pharyngeal mucosa. It is especially advisable in children.)

Pregnancy and Lactation:
use only when considered essential by a physician. This combination has been used for a number of years without apparent ill-consequence.

Undesirable Effects:
Symptoms of allergic-type reactions and anaphylaxis have been reported following topical ophthalmic administration of Fluorescein sodium (Eye disorders: allergic conjunctivitis, peri-orbital oedema. Immune system disorders: anaphylactic reaction. Skin and subcutaneous tissue disorders: urticaria, rash).

Legal Category: POM
UK PL No: 03468/0075
Basic NHS Price: £11.69
Marketing Authorisation Holder:
Bausch & Lomb UK Limited,
Bausch & Lomb House, 106 London Road,
Kingston-Upon-Thames,
Surrey, UK, KT2 6TN
Date of Revision: March 2018
Exemption Code: Not Available For Optometry Use
Evocative Code: LID FLN
PIP Code: 015-6141
Minims® Dexamethasone Sodium Phosphate
0.1% w/v, eye drops, solution

Prescribing Information
Please refer to Summary of Product Characteristics before prescribing. Further information about this product can be requested from the Marketing Authorisation Holder or may be found in the Summary of Product Characteristics.

Contains:
Dexamethasone sodium phosphate Ph Eur 0.1% w/v.

Main Indications, Dosage and Administration:
Non-infected, steroid responsive, inflammatory conditions of the eye. Adults (including the elderly): One or two drops should be applied topically to the eye up to six times a day. Note: In severe conditions the treatment may be initiated with 1 or 2 drops every hour; the dosage should then be gradually reduced as the inflammation subsides.

Contraindications, Precautions and Warnings:
Use is contra-indicated in herpes simplex and other viral diseases of the cornea and conjunctiva, fungal disease, ocular tuberculosis, untreated purulent infections and hypersensitivity to any component of the preparation. In children, long-term, continuous corticosteroid therapy should be avoided due to possible adrenal suppression. Care should be taken to ensure that the eye is not infected before Minims Dexamethasone is used. These drops should be used cautiously in patients with glaucoma and should be considered carefully in patients with a family history of this disease. This medicinal product contains phosphates which may lead to corneal deposits or corneal opacity when topically administered. It should be used with caution in patients presenting with compromised cornea and in instances where the patient is receiving polypharmacy with other phosphate containing eye medications (see section 4.5). Topical corticosteroids should not be used for longer than one week except under ophthalmic supervision, as prolonged application to the eye of preparations containing corticosteroids has caused increased intraocular pressure. The dose of anti-glaucoma medication may need to be adjusted in these patients. Prolonged use may also increase the hazard of secondary ocular infections. Contact lenses should not be worn during treatment with corticosteroid eye drops due to increased risk of infection. Systemic absorption may be reduced by compressing the lacrimal sac at the medial canthus for a minute during and following the instillation of the drops. (This blocks the passage of drops via the naso-lacrimal duct to the wide absorptive area of the nasal and pharyngeal mucosa. It is especially advisable in children.) Instillation of this eye drop may cause transient blurring of vision. Warn patients not to drive or operate hazardous machinery until vision is clear.

Interactions:
The risk of increased intraocular pressure associated with prolonged corticosteroid therapy may be more likely to occur with concomitant use of anticholinergics, especially atropine and related compounds, in patients predisposed to acute angle closure. The risk of corneal deposits or corneal opacity may be more likely to occur in patients presenting with compromised cornea and receiving polypharmacy with other phosphate containing eye medications. The therapeutic efficacy of dexamethasone may be reduced by phenytoin, phenobarbital, ephedrine and rifampicin. Glucocorticoids may increase the need for salicylates as plasma salicylate clearance is increased.

Fertility, Pregnancy and lactation:
Topically applied steroids can be absorbed systemically and have been shown to cause abnormalities of foetal development in pregnant animals. Although the relevance of this finding to human beings has not been established, the use of Minims Dexamethasone sodium phosphate 0.1% w/v Eye Drops, solution during pregnancy should be avoided. Topically applied dexamethasone is not recommended in breastfeeding mothers, as it is possible that traces of dexamethasone may enter the breast milk.

Undesirable Effects:
Administration of dexamethasone to the eye may rarely cause stinging, burning, redness or watering of the eyes. Prolonged treatment with corticosteroids in high dosage is, rarely, associated with sub-capular cataract. In diseases which cause thinning of the cornea or sclera, perforations of the globe have been known to occur. In addition, optic nerve damage and visual acuity and field defects may arise following long term use of this product. The administration of phosphates contained in dexamethasone eye drops has caused isolated cases of corneal deposits or corneal opacity when administered in patients presenting with compromised cornea. The systemic effects of corticosteroids are possible with excessive use of steroid eye drops. Cases of corneal calcification have been reported very rarely in association with the use of phosphate containing eye drops in some patients with significantly damaged corneas.

Legal Category: POM.
UK PL No: 03466/0079.
Basic NHS Price: £ 11.46
Marketing Authorisation Holder:
Bausch & Lomb UK Limited,
Bausch & Lomb House, 106 London Road,
Kingston-Upon-Thames,
Surrey, UK, KT2 6TN

Date of Revision: March 2018
Exemption Level: Not Available For Optometry Use
Evocative Code: PRED 0.1
PIP Code: 015-5671

Minims® Prednisolone Sodium Phosphate
0.5% w/v, eye drops, solution

Prescribing Information
Please refer to Summary of Product Characteristics before prescribing. Further information about this product can be requested from the Marketing Authorisation Holder or may be found in the Summary of Product Characteristics.

Contains:
Prednisolone Sodium Phosphate 0.5% w/v.

Main Indications, Dosage and Administration:
Non-infected inflammatory conditions of the eye. Adults and the elderly: One or two drops as required. Paediatric population: At the discretion of the physician.

Contraindications, Precautions and Warnings:
Use is contraindicated in viral, fungal, tuberculous and other bacterial infections. Prolonged application to the eye of preparations containing corticosteroids has caused increased intraocular pressure and therefore the drops should not be used in patients with glaucoma. In children, long-term, continuous topical corticosteroid therapy should be avoided due to possible adrenal suppression. Hypersensitivity to the active substance or to any of the excipients. Care should be taken to ensure that the eye is not infected before prednisolone is used. Systemic absorption may be reduced by compressing the lacrimal sac at the medial canthus for a minute during and following the instillation of the drops. (This blocks the passage of drops via the naso-lacrimal duct to the wide absorptive area of the nasal and pharyngeal mucosa. It is especially advisable in children.) Visual disturbance may be reported with systemic and topical corticosteroid use. If a patient presents with symptoms such as blurred vision or other visual disturbances, the patient should be considered for referral to an ophthalmologist for evaluation of possible causes which may include cataract, glaucoma or rare diseases such as central serous chorioretinopathy (CSCR) which have been reported after use of systemic and topical corticosteroids. Avoid long-term use in children due to possible adrenal suppression. Instillation of eyedrop may cause temporarily blurred vision and photosophobia. Patients should be advised not to drive or operate machinery until vision is clear.

Interactions:
Corticosteroids are known to increase the effects of barbiturates, sedative hypnotics and tricyclic antidepressants and decrease the effects of anticholinesterases, antiviral eye preparations and salicylates. Co-treatment with CYP3A inhibitors, including cobicistat-containing products, is expected to increase the risk of systemic side-effects. The combination should be avoided unless the benefit outweighs the increased risk of systemic corticosteroid side-effects, in which case patients should be monitored for systemic corticosteroid side-effects.

Use in Pregnancy and Lactation:
Should be avoided during pregnancy.

Undesirable Effects:
Prolonged treatment with corticosteroids in high dosage is occasionally associated with cataract. The systemic effects of steroids are possible following the use of Minims Prednisolone, but are, however, unlikely due to the reduced absorption of topical eye drops. Cases of corneal calcification have been reported very rarely in association with the use of phosphate containing eye drops in some patients with significantly damaged corneas. Instillation of eye drops may cause temporarily blurred vision.

Legal Category: POM.
UK PL No: 03466/0079
Basic NHS Price: £ 12.25
Marketing Authorisation Holder:
Bausch & Lomb UK Limited,
Bausch & Lomb House, 106 London Road,
Kingston-Upon-Thames,
Surrey, UK, KT2 6TN

Date of Revision: March 2018
Exemption Level: Not Available For Optometry Use
Evocative Code: PRED 0.1
PIP Code: 015-5671
Minims® Chloramphenicol
0.5% w/v, eye drops, solution

Prescribing Information
Please refer to Summary of Product Characteristics before prescribing. Further information about this product can be requested from the Marketing Authorisation Holder or may be found in the Summary of Product Characteristics.

Contains:
Minims Chloramphenicol 0.5%.

Main Indications, Dosage and Administration:
Chloramphenicol is a broad spectrum bacteriostatic antibiotic. It is active against a wide variety of gram-negative and gram-positive organisms as well as rickettsiae and spirochaetes. It is indicated for use as a topical antibacterial in the treatment of superficial ocular infections. Chloramphenicol is indicated in adults and children. Adults (including the Elderly): One to two drops applied topically to each affected eye up to six times daily or more frequently if required. (Severe infections may require one to two drops every fifteen to twenty minutes initially, reducing the frequency of instillation gradually as the infection is controlled). Paediatric population: As for adults however dosage adjustment may be necessary in newborn infants because of reduced systemic elimination due to immature metabolism and the risk of dose-related adverse effects. The maximum duration of treatment is 10 - 14 days.

Contraindications, Precautions and Warnings:
Hypersensitivity to chloramphenicol or any component of the preparation. In severe infections topical use of chloramphenicol should be supplemented with appropriate systemic treatment. Aplastic anemia has, rarely, followed topical use of chloramphenicol eye drops and, whilst this hazard is an uncommon one, it should be borne in mind when the benefits of the use of chloramphenicol are assessed. Prolonged use should be avoided as it may increase the likelihood of sensitisation and the emergence of resistant organisms. Contact lenses should be removed during the period of treatment. Systemic absorption may be reduced by compressing the lacrimal sac at the medial canthus for a minute during and following the instillation of the drops. (This blocks the passage of the drops via the naso-lacrimal duct to the wide absorptive area of the nasal and pharyngeal mucosa. It is especially advisable in children.) Chymotrypsin will be inhibited if given simultaneously with chloramphenicol. May cause transient blurring of vision on installation. Warn patients not to drive or operate hazardous machinery unless vision is clear.

Pregnancy and Lactation:
Safety for use in pregnancy and lactation has not been established, therefore, use only when considered essential by the physician.

Undesirable Effects:
Local: Sensitivity reactions such as transient irritation, burning, stinging, itching and dermatitis, may occur. Systemic: Occasionally, a transient increase in the frequency of instillation is required to control the infection. Rarely, cases of major adverse haematological events (bone marrow depression, aplastic anaemia and death) have been reported. Local: Sensitivity reactions such as transient irritation, burning, stinging, itching and dermatitis, may occur. Systemic: Usually, the systemic absorption is negligible and only occasionally is increased by reduced lacrimal drainage. Undesirable local effects have been reported very rarely. Fertility: No effects on fertility are anticipated, since systemic exposure to chloramphenicol is negligible.

Minims® Povidone Iodine
5% w/v, eye drops, solution

Prescribing Information:
Please refer to Summary of Product Characteristics before prescribing. Further information about this product can be requested from the Marketing Authorisation Holder or may be found in the Summary of Product Characteristics.

Contains:
Each single dose container provides 20 mg of iodinated Povidone in 0.4 ml of solution. One milliliter of solution contains 50 mg iodinated Povidone.

Main Indications, Dosage and Administration:
Minims® Povidone Iodine 5% w/v eye drops, solution should be used with caution in patients suffering from thyroid dysfunction and in elderly patients, who are at increased risk of thyroid dysfunction development. Monitoring of thyroid function should be considered particularly during regular repeated use of the medicinal product.

Pregnancy and Lactation:
Pregnancy: No effects during pregnancy are anticipated, since systemic exposure to iodine is negligible. Minims® Povidone Iodine 5% w/v eye drops, solution can be used during pregnancy. Breast-feeding: No effects on the breastfed newborn/infant are anticipated since the systemic exposure of the breast-feeding woman to iodine is negligible. Fertility: No effects on fertility are anticipated, since systemic exposure to iodine is negligible.

Undesirable Effects:
See the product SmPC for all details. The most serious adverse reaction that occur with Minims® Povidone Iodine 5% w/v eye drops, solution is hypersensitivity reaction. Immune System Disorders: Not known: hypersensitivity, anaphylactic reactions (urticaria, Quincke’s oedema, anaphylactic shock and anaphylactoid reaction). Endocrine Disorders: Not known: Regular and prolonged application may lead to toxic levels of iodine likely to develop abnormal thyroid function, particularly in pre-term infants and neonates. Exceptional cases of hypothyroidism have been reported. Eye disorders: Not known: conjunctival hyperemia, superficial punctate keratitis, eye irritation, superficial punctate epitheliopathy, keratoconjunctivitis sicca, residual yellow coloration of the conjunctiva. Cases of corneal calcification have been reported very rarely in association with the use of phosphate containing eye drops in some patients with significantly damaged corneas. Skin and subcutaneous tissue disorders: Not known: contact dermatitis (with such symptoms as erythema, blisters, itching), angioedema cases of reversible, transient brown coloration of the skin have been reported.
Minims® Tropicamide
0.5% w/v and 1% w/v, eye drops, solution

Prescribing Information
Please refer to Summary of Product Characteristics before prescribing. Further information about this product can be requested from the Marketing Authorisation Holder or may be found in the Summary of Product Characteristics.

Contains:
Tropicamide Ph. Eur. 0.5 % and 1% w/v.

Main Indications, Dosage and Administration:
As a topical mydriatic and cycloplegic. Adults (including the elderly): 1 drop followed by a second drop after an interval of 5 minutes. A further 1 drop may be instilled after 30 minutes, if required. Children: At the discretion of the physician.

Contraindications, Precautions and Warnings:
Do not use in patients with a known hypersensitivity to tropicamide. Tropicamide is contraindicated in narrow angle glaucoma and in eyes where the filtration angle is narrow, as an acute attack of angle closure glaucoma may be precipitated. Use with caution in an inflamed eye, as hyperaemia greatly increases the rate of systemic absorption through the conjunctiva. Care should be exercised in small children.

Systemic absorption may be reduced by compressing the lacrimal sac at the medial canthus for a minute during and following the instillation of the drops. (This blocks the passage of drops via the naso-lacrimal duct to the wide absorptive area of the nasal and pharyngeal mucosa. It is especially advisable in children.) Tropicamide may cause increased intraocular pressure. The possibility of undiagnosed glaucoma should be considered in some patients, such as elderly patients. Determine the intraocular pressure and an estimation of the depth of the angle of the anterior chamber prior to initiation of therapy. Patient warning: Patients who receive a mydriatic may suffer from photophobia and this may impair their ability to drive under certain circumstances.

Pregnancy and Lactation:
There is no evidence as to the drug’s safety in human pregnancy; nor is there evidence from animal work that it is free from hazard. This product should only be used in pregnancy if considered essential by the physician.

Undesirable Effects:
Transient stinging, dry mouth and blurred vision may occur following the use of this product.

Legal Category: POM
Minims Tropicamide 0.5%:
UK PL No: PL 03468/0084
Basic NHS Price: £11.18

Minims Tropicamide 1.0%:
UK PL No: PL 03468/0085
Basic NHS Price: £11.31

Marketing Authorisation Holder:
Bausch & Lomb UK Limited,
Bausch & Lomb House, 106 London Road,
Kingston-Upon-Thames,
Surrey, UK, KT2 6TN
Date of Revision: March 2018
Exemption Level: 1
Evocative Code: TRO 0.5, TRO 1.0
PIP Code: 015-2702, 015-2710

Minims® Phenylephrine Hydrochloride
2.5% w/v, eye drops, solution

Prescribing Information
Please refer to Summary of Product Characteristics before prescribing. Further information about this product can be requested from the Marketing Authorisation Holder or may be found in the Summary of Product Characteristics.

Contains:
Clear, colourless, sterile eye drops containing Phenylephrine Hydrochloride Ph. Eur. 2.5% w/v.

Main Indications, Dosage and Administration:
Phenylephrine is a directly acting sympathomimetic agent used topically in the eye as a mydriatic. It may be indicated to dilate the pupil for diagnostic or therapeutic procedures. Adults, including the elderly population: Apply one drop topically to each eye. If necessary, this dose may be repeated once only, at least one hour after the first drop. Paediatric population: Apply one drop topically to each eye. It is not usually necessary to exceed this dose. Phenylephrine 2.5%w/v eye drops may be combined with other mydriatics/cycloplegics to produce adequate mydriasis/cycloplegia. Heavily pigmented irides may require larger doses and caution should be exercised to avoid oversedation. The use in preterm and newborn infants is not recommended unless clearly necessary and only with caution because of safety concerns associated with the risk of systemic adverse reactions including transient increases in blood pressure. If treatment is medically justified the lowest possible concentration and dose should be used and instillation of more than one drop per eye must be avoided. Method of administration: The use of a drop of topical anaesthetic a few minutes before instillation of phenylephrine is recommended to prevent stinging. Especially in infants, children and the elderly, it is advised to minimise systemic absorption and the risk for systemic adverse reactions by compressing the lacrimal sac at the medial canthus or gently closing the eye for a few minutes after instillation. To minimise cutaneous absorption, excess fluid should be wiped away from the periocular area.

Contraindications, Precautions and Warnings:
Infants, children and elderly, because of the increased risk of systemic toxicity. Patients with cardiac disease, hypertension, aneurysms, thyrotoxicosis, long-standing insulin dependent diabetes mellitus and tachycardia. Patients on monoamine oxidase inhibitors, tricyclic antidepressants and anti-hypertensive agents (including beta-blockers). Patients with closed angle glaucoma (unless previously treated with iridectomy) and patients with a narrow angle prone to glaucoma precipitated by mydriatics. Newborns and infants with cardio- and cerebrovascular disease. Elderly adults with severe arteriosclerotic, cardiovascular or cerebrovascular disease. Hypersensitivity to the active substance or to any of the excipients. Special warnings and precautions for use: Use with caution in elderly or in patients with sympathomimetic denervation (e.g. patients with insulin dependent diabetes), orthostatic hypotension, hypertension, hyperthyroidism. Use with caution in patients with cerebral arteriosclerosis or long-standing bronchial asthma. To reduce the risk of precipitating an attack of narrow angle glaucoma, evaluate the anterior chamber angle before use. Ocular hyperaemia can increase the absorption of phenylephrine given topically. Corneal clouding may occur if phenylephrine 10% is instilled when the corneal epithelium has been denuded or damaged. Use of a drop of topical anesthetic a few minutes before the instillation of phenylephrine is recommended to avoid eye pain. Systemic absorption may be minimised by compressing the lacrimal sac at the medial canthus for one minute during and after the instillation of the drops. (This blocks the passage of the drops via the naso-lacrimal duct to the wide absorptive area of the nasal and pharyngeal mucosa. It is especially advisable in infants, children and the elderly). Paediatric population: Use with caution in children. The lowest dose necessary to produce the desired effect should always be used. Parents should be warned not to get this preparation in their children’s mouth or cheeks and to wash their hands and the child’s hands or cheeks following administration. Both full-term, but especially low birth weight and premature infants may be at an increased risk for systemic adverse reactions including transient increases in blood pressure which potentially increases the risk of intraventricular haemorrhage. The infant should be monitored after instillation and routines to adequately deal with emergency situations should be in place.

Fertility, Pregnancy and Lactation:
Safety for use during pregnancy and lactation has not been established. This product should only be used during pregnancy if it is considered by the physician to be essential.

Interactions:
Anti-hypertensive Agents: Topical phenylephrine should not be used as it may reverse the action of many anti-hypertensive agents with possibly fatal consequences. Monoamine Oxidase Inhibitors: There is an increased risk of adrenergic reactions when used simultaneously with, or up to three weeks after, the administration of MAOIs. Tricyclic Antidepressants: The pressor response to adrenergic agents and the risk of cardiac arrhythmia may be potentiated in patients receiving tricyclic antidepressants (or within several days of their discontinuation). Halothane: Because of the increased risk of ventricular fibrillation, phenylephrine should be used with caution during general anaesthesia with anaesthetic agents which sensitize the myocardium to sympathomimetics. Cardiac Glycosides or Quinidine: There is an increased risk of arrhythmias.

Undesirable Effects:
The frequency of the undesirable effects are not known (cannot be estimated from the available data). Immune System Disorders: Hypersensitivity, Eye Disorders: Eye pain, eye irritation, blurred vision, photophobia, conjunctivitis allergic. Cardiac disorders:Palpitations, tachycardia, extrasystoles, arrhythmias, arteriospasm coronary, ventricular arrhythmia and myocardial infarction. These sometimes fatal reactions have usually occurred in patients with pre-existing cardiovascular disease. Vascular disorders: Hypertension. Serious cardiovascular reactions including arteriospasm coronary, ventricular arrhythmia and myocardial infarction have occurred following topical use of 10% phenylephrine. These sometimes fatal reactions have usually occurred in patients with pre-existing cardiovascular disease. Paediatric population: Periorbital pallor in preterm patients.

Legal Category: P
2.5% w/v: PL 03468/0076
Basic NHS Price: £11.87
Marketing Authorisation Holder:
Bausch & Lomb UK Limited,
Bausch & Lomb House, 106 London Road,
Kingston-Upon-Thames,
Surrey, UK, KT2 6TN
Date of Revision: March 2018
Exemption Level: 1
Evocative Code: PHN 2.5
PIP Code: 037-7192
Minims® Phenylephrine Hydrochloride
10% w/v, eye drops, solution

Prescribing Information
Please refer to Summary of Product Characteristics before prescribing. Further information about this product can be requested from the Marketing Authorisation Holder or may be found in the Summary of Product Characteristics.

Contains:
Clear, colourless, sterile eye drops containing Phenylephrine Hydrochloride Ph. Eur. 10% w/v.

Main Indications, Dosage and Administration:
Phenylephrine is a directly acting sympathomimetic agent used topically in the eye as a mydriatic. It may be indicated to dilate the pupil for diagnostic or therapeutic procedures. Adults: Apply one drop topically to each eye. If necessary, this dose may be repeated once only, at least one hour after the first drop. Paediatric and elderly population: The use of phenylephrine 10% solution is contraindicated in these groups because of the increased risks of systemic toxicity. Method of administration: The use of a drop of topical anaesthetic a few minutes before instillation of phenylephrine is recommended to prevent stinging.

Contraindications, Precautions and Warnings:
Infants, children and elderly, because of the increased risk of systemic toxicity. Patients with cardiac disease, hypertension, aneurysms, thyrotoxicosis, long-standing insulin dependent diabetes mellitus, and tachycardia. Patients on monoamine oxidase inhibitors, tricyclic antidepressants and anti-hypertensive agents (including beta-blockers). Patients with closed angle glaucoma (unless previously treated with iridectomy) and patients with a narrow angle prone to glaucoma precipitated by mydriatics. Elderly adults with severe arteriosclerotic, cardiovascular or cerebrovascular disease. Hypersensitivity to the active substance or to any of the excipients. Special warnings and precautions for use: Use with caution in the presence of diabetes, cerebral arteriosclerosis or long standing bronchial asthma. To reduce the risk of precipitating an attack of narrow angle glaucoma evaluate the anterior chamber angle before use. Ocular hyperaemia can increase the absorption of phenylephrine given topically. Corneal clouding may occur if phenylephrine 10% is instilled when the corneal epithelium has been denuded or damaged. Systemic absorption may be minimised by compressing the lacrimal sac at the medial canthus for one minute during and after the instillation of the drops. This blocks the passage of the drops via the naso-lacrimal duct to the wide absorptive area of the nasal and pharyngeal mucosa.

Fertility, Pregnancy and Lactation:
Safety for use during pregnancy and lactation has not been established. This product should only be used during pregnancy if it is considered by the physician to be essential. Interactions: Anti-hypertensive Agents: Topical phenylephrine should not be used as it may reverse the action of many anti-hypertensive agents with possibly fatal consequences. Monoamine Oxidase Inhibitors: There is an increased risk of adrenergic reactions when used simultaneously with, or up to three weeks after, the administration of MAOIs. Tricyclic Antidepressants: The pressor response to adrenergic agents and the risk of cardiac arrythmias may be potentiated in patients receiving tricyclic antidepressants (or within several days of their discontinuation). Halothane: Because of the increased risk of ventricular fibrillation, phenylephrine should be used with caution during general anaesthesia with anaesthetic agents which sensitise the myocardium to sympathomimetics. Cardiac Glycosides or Quinidine: There is an increased risk of arrhythmias.

Undesirable Effects:
The frequency of the undesirable effects are not known (cannot be estimated from the available data). Immune System Disorders: Hypersensitivity, Eye Disorders: Eye pain, eye irritation, blurred vision, photophobia, conjunctivitis allergic. Cardiac disorders: Palpitations, tachycardia, extrasystoles, arrhythmias. arteriospasms coronary, ventricular arrythmia and myocardial infarction. These sometimes fatal reactions have usually occurred in patients with pre-existing cardiovascular disease. Vascular disorders: Hypertension. Paediatric population: Respiratory, thoracic and mediastinal disorders, Pulmonary oedema.

Legal Category: P
10% w/v: PL 03468/0077
Basic NHS Price: £11.87

Marketing Authorisation Holder:
Bausch & Lomb UK Limited,
Bausch & Lomb House, 106 London Road,
Kingston-Upon-Thames,
Surrey, UK, KT2 6TN
Date of Revision: March 2018
Exemption Level: 1
Evocative Code: PHNL10
PIP Code: 018-0737

Minims® Atropine Sulphate
1% w/v, eye drops, solution

Prescribing Information
Please refer to Summary of Product Characteristics before prescribing. Further information about this product can be requested from the Marketing Authorisation Holder or may be found in the Summary of Product Characteristics.

Contains:
Atropine Sulphate Ph Eur 1% w/v.

Main Indications, Dosage and Administration:
Topical mydriatic and cycloplegic. Adults (including the elderly): One drop to be instilled into the eye, or as required.

Contraindications, Precautions and Warnings:
Hypersensitivity to any ingredient in the product. Due to the risk of precipitating an acute attack, do not use in cases of confirmed narrow-angle glaucoma or where latent narrow angle glaucoma is suspected. If in doubt it is recommended that an alternative preparation is used. The protracted mydriasis which is difficult to reverse, may be a disadvantage. Systemic absorption may be reduced by compressing the lacrimal sac at the medial canthus for a minute during and following the instillation of the drops. (This blocks the passage of the drops via the naso-lacrimal duct to the wide absorptive area of the nasal and pharyngeal mucosa. It is especially advisable in children.) May cause transient blurring of vision on instillation. Warn patients not to drive or operate hazardous machinery until vision is clear.

Fertility, Pregnancy and Lactation:
The safety for use in pregnancy and lactation has not been established, therefore, use only when directed by a physician.

Undesirable Effects:
Side effects rarely occur but include anticholinergic effects such as dry mouth and skin, flushing, increased body temperature, urinary symptoms, gastrointestinal symptoms and tachycardia. These effects are more likely to occur in infants and children.

Legal Category: POM
UK PL No: PL 03468/0068
Basic NHS Price: £15.10
Marketing Authorisation Holder:
Bausch & Lomb UK Limited,
Bausch & Lomb House, 106 London Road,
Kingston-Upon-Thames,
Surrey, UK, KT2 6TN
Date of Revision: March 2018
Exemption Level: 2
Evocative Code: ATR 1.0
PIP Code: 018-0455
Minims® Cyclopentolate Hydrochloride

0.5% w/v and 1% w/v, eye drops, solution

Prescribing Information

Please refer to Summary of Product Characteristics before prescribing. Further information about this product can be requested from the Marketing Authorisation Holder or may be found in the Summary of Product Characteristics.

Contains:

Cyclopentolate Hydrochloride BP 0.5% and 1.0% w/v.

Main Indications, Dosage and Administration:

topical mydriatic and cycloplegic. Adults (including the elderly): Instil dropwise into eye according to the recommended dosage. One or two drops as required. Maximum effect is induced in 30 - 60 minutes after instillation. For refraction and examination of the back of the eye: 1 drop of solution, which may be repeated after five minutes, is usually sufficient. For anterior and posterior uveitis (if associated with signs of anterior uveitis) and for the breakdown of posterior synechiae: 1 - 2 drops are instilled every 6 - 8 hours. Resistance to cyclopia can occur in young children, in patients with dark skin and/or patients with dark irides, therefore, the strength of cyclopentolate used should be adjusted accordingly. Children: < 3 months: Not recommended. 3 months - 12 years: 1 drop of a 1% solution to each eye. 12 years - adult: 1 drop of 0.5% solution to each eye repeated after 10 minutes if necessary. Children should be observed for 45 minutes after instillation.

Contraindications, Precautions and Warnings:

Do not use in patients with a known hypersensitivity to any component of the preparation. Should not be used in neonates except where, on expert evaluation, the need is considered to be compelling. Do not use in patients with confirmed or suspected narrow-angle glaucoma as an acute attack may be precipitated. Recovery of accommodation occurs within 24 hours. Use with caution in very young children and other patients at special risk, such as debilitated or aged patients. Caution is also advised in hyperthyroidism as increased systemic absorption may occur. Systemic absorption may be reduced by compressing the lacrimal sac at the medial canthus for a minute during and following the instillation of the drops. (This blocks the passage of the drops via the naso lacrimal duct to the wide absorptive area of the nasal and pharyngeal mucosa. It is especially advisable in children.) May cause transient blurring of vision on instillation. Warn patients not to drive or operate hazardous machinery until vision is clear.

Pregnancy and Lactation:

The safety for use in pregnancy and lactation has not been established, therefore, use only when considered essential by the physician.

Undesirable Effects:

Local Effects: Local irritation may result following the use of this product. The frequency of this effect occurring is dependent on the concentration instilled. Increased intraocular pressure may occur in predisposed patients. Allergic reactions may rarely occur, manifesting as diffusely red eyes with lacrimation and stringy white mucus discharge. Systemic Effects: Systemic cyclopentolate toxicity is dose-related and is uncommon following administration of 1% solution and would not be expected to occur following instillation of 0.5% solution. Children are, however, more susceptible to such reactions than adults. Toxicity is usually transient and is manifest mainly by CNS disturbances. Any CNS disturbances are characterised by signs and symptoms of cerebellar dysfunction and visual and tactile hallucinations. Peripheral effects typical of anti-cholinergics, such as flushing or dryness of the skin and mucous membranes, have not been observed with topical cyclopentolate in children or adults. Temperature, pulse and blood pressure are not normally affected.

Legal Category: POM.

Minims Cyclopentolate Hydrochloride 0.5%:
UK PL No: PL 03468/0070
Basic NHS Price: £1.14

Minims Cyclopentolate Hydrochloride 1.0%:
UK PL No: PL 03468/0071
Basic NHS Price: £1.16

Marketing Authorisation Holder:
Bausch & Lomb UK Limited,
Bausch & Lomb House, 106 London Road,
Kingston-Upon-Thames,
Surrey, UK, KT2 6TN

Date of Revision: March 2018
Exemption Level: 1
Evocative Code: CYC 0.5, CYC 1.0
PIP Code: 018-0562, 018-0558

Minims® Pilocarpine Nitrate

2% w/v, eye drops, solution

Prescribing Information

Please refer to Summary of Product Characteristics before prescribing. Further information about this product can be requested from the Marketing Authorisation Holder or may be found in the Summary of Product Characteristics.

Contains:

Pilocarpine Nitrate 2.0% w/v.

Main Indications, Dosage and Administration:

Pilocarpine is used as a miotic, for reversing the action of weaker mydriatics and in the emergency treatment of glaucoma. Adults (including the elderly): Instil dropwise into the eye according to the recommended dosage. To induce miosis, one or two drops should be used. In cases of emergency treatment of acute narrow-angle glaucoma, one drop should be used every five minutes until miosis is achieved. Paediatric population: Based on the infrequency of reports of adverse events in children, and the extensive experience of use of pilocarpine in childhood glaucoma, concentrations of up to 2% may be safely used in children. Treatment should be started with the lowest available dose and concentration in patients under 18 years of age. Depending on clinical response and tolerability, the dose may be increased up to the maximum recommended adult dosage of the 2% pilocarpine eye drop solution. Directly after administration of any dose, the lacrimal punctum should be occluded for one minute with a finger to limit systemic exposure.

Contraindications, Precautions and Warnings:

Conditions where pupillary constriction is undesirable e.g. acute iritis, anterior uveitis and some forms of secondary glaucoma. Patients with soft contact lenses should not use this preparation. Systemic reactions rarely occur when treating chronic simple glaucoma at normal doses. However, in the treatment of acute closed-angle glaucoma the possibility of systemic reactions must be considered because of the higher doses given. Caution is particularly advised in patients with acute heart failure, bronchial asthma, peptic ulceration, hypertension, urinary tract obstruction, Parkinson’s disease and corneal abrasions. Retinal detachments have been caused in susceptible individuals and those with pre-existing retinal disease; therefore, fundus examination is advised in all patients prior to the initiation of therapy. Patients with chronic glaucoma on long-term pilocarpine therapy should have regular monitoring of intraocular pressure and visual fields. Systemic absorption may be reduced by compressing the lacrimal sac at the medial canthus for one minute during and following the instillation of the drops. (This blocks the passage of the drops via the naso-lacrimal duct to the wide absorptive area of the nasal and pharyngeal mucosa. It is especially advisable in children.) Although clinically not proven, the miotic effects of pilocarpine may be antagonised by long-term topical or systemic corticosteroid therapy, systemic anticholinergics, antihistamines, pethidine, sympathomimetics or tricyclic antidepressants. Concomitant administration of two miotics is not recommended because of inter-drug antagonism and the risk that unresponsiveness may develop to both drugs. Caution is necessary when night driving and when hazardous tasks are undertaken in poor illumination. May cause accommodation spasm. Advised not to drive or use machinery if vision is not clear.

Pregnancy and Lactation:

Safety for use in pregnancy and lactation has not been established, therefore, use only when clearly indicated.

Undesirable Effects:


Gastrointestinal disorders (Not known): nausea, vomiting and diarrhoea.

Legal Category: POM.

UK PL No: 03468/0078
Basic NHS Price: £ 12.47

Marketing Authorisation Holder:
Bausch & Lomb UK Limited,
Bausch & Lomb House, 106 London Road,
Kingston-Upon-Thames,
Surrey, UK, KT2 6TN

Date of Revision: March 2018
Exemption Level: 2
Evocative Code: PIL 2.0
PIP Code: 018-0778
Minims® Saline
0.9% w/v, eye drops, solution

Prescribing Information
Please refer to Summary of Product Characteristics before prescribing. Further information about this product can be requested from the Marketing Authorisation Holder or may be found in the Summary of Product Characteristics.

Contains:
Sodium Chloride Ph Eur 0.9% w/v.

Main Indications, Dosage and Administration:
Topical ocular irrigating solution. Adults (including the elderly) and Children: Adequate solution should be used to irrigate the eye.

Legal Category: P
UK PL No: PL 03468/0060
Basic NHS Price: £7.43
Marketing Authorisation Holder:
Bausch & Lomb UK Limited, Bausch & Lomb House, 106 London Road, Kingston-Upon-Thames, Surrey, UK, KT2 6TN
Date of Revision: March 2018
Exemption Code: 1
Evocative Code: SALINE
PIP Code: 042-9688

Minims® Artificial Tears
0.35% w/w + 0.44% w/w, eye drops, solution Sodium Chloride + Hyetellose

Prescribing Information
Please refer to Summary of Product Characteristics before prescribing. Further information about this product can be requested from the Marketing Authorisation Holder or may be found in the Summary of Product Characteristics.

Contains:
0.35% w/w Sodium Chloride with Hyetellose 0.44% w/w.

Main Indications, Dosage and Administration:
For the relief of dry eye syndromes associated with deficient tear secretion. One or two drops instilled into the affected eye three or four times daily, or as required.

Contraindications, Precautions and Warnings:
Hypersensitivity to the active substances or to any of the excipients. If irritation persists or worsens or continued redness occurs, discontinue use and consult a physician or ophthalmologist. Instillation of eye drops may cause temporarily blurred vision. Keep out of sight and reach of children. Instillation of eye drops may cause temporarily blurred vision. Patients should be advised not to drive or operate hazardous machinery until vision is clear.

Undesirable Effects:
May cause transient mild stinging or temporarily blurred vision.

Legal Category: P
UK PL No: 03468/0067
Basic NHS Price: £9.33
Marketing Authorisation Holder:
Bausch & Lomb UK Limited, Bausch & Lomb House, 106 London Road, Kingston-Upon-Thames, Surrey, UK, KT2 6TN
Date of Revision: March 2018
Exemption Level: 1
Evocative Code: HECL 44
PIP Code: 033-4409

Minims® Fluorescein Sodium
1% w/v and 2% w/v, eye drops, solution

Prescribing Information
Please refer to Summary of Product Characteristics before prescribing. Further information about this product can be requested from the Marketing Authorisation Holder or may be found in the Summary of Product Characteristics.

Contains:
1% w/v and 2% w/v solution of Fluorescein Sodium.

Main Indications, Dosage and Administration:
diagnostic stain. Fluorescein does not stain a normal cornea but conjunctival abrasions are stained yellow or orange, corneal abrasions or ulcers are stained a bright green and foreign bodies are surrounded by a green ring. Fluorescein can be used in diagnostic examinations including Goldmann tonometry and in the frictions of hard contact lenses. For Adults, Children and the Elderly: Instil dropwise into the eye. Sufficient solution should be applied to stain the damaged areas. Excess may be washed away with sterile saline solution.

Contraindications, Precautions and Warnings:
Known allergy to Fluorescein Sodium. Not to be used with soft contact lenses. Special care should be taken to avoid microbial contamination. Each Minims unit should be discarded after a single use. Warn patients not to drive or operate hazardous machinery until vision is clear.

Pregnancy and Lactation:
Use only when considered essential by a physician.

Undesirable Effects:
May cause transient blurring of vision on instillation. Symptoms of allergic-type reactions and anaphylaxis have been reported following topical ophthalmic administration of Fluorescein sodium and may manifest as: Eye disorders: allergic conjunctivitis, peri-orbital oedema. Immune system disorders: anaphylactic reaction. Skin and subcutaneous tissue disorders: urticaria, rash.

Legal Category: P
Minims Fluorescein Sodium 1%
UK PL No: 03468/0073
Basic NHS Price: £9.25
Minims Fluorescein Sodium 2%
UK PL No: 03468/0074
Basic NHS Price: £9.25
Marketing Authorisation Holder:
Bausch & Lomb UK Limited, Bausch & Lomb House, 106 London Road, Kingston-Upon-Thames, Surrey, UK, KT2 6TN
Date of Revision: March 2018
Exemption Level: 1
Evocative Code: FLN1.0, FLN 2.0

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For more information on Bausch + Lomb Minims, please visit www.bausch.co.uk

For more information on the Bausch + Lomb Icons of Ophthalmology campaign, please visit www.bausch.co.uk/icons

To contact your Sales Representative please call:
0208 781 5500

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**Reporting Adverse Events**

**REPORTING SIDE EFFECTS**

Adverse events should be reported. Reporting forms and information can be found at:

www.mhra.gov.uk/yellowcard

or search “MHRA Yellow Card” in the Google Play or Apple App Store.

Adverse events should also be reported to Bausch + Lomb at UKMedInformation@bausch.com

or call 0208 781 2991

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**References**


**Note to reader:** References are included only for nominees who did not directly assist the writing of this book, with the exception of Philip Rosenfeld, MD where a statistic about prevalence is provided.
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Bausch + Lomb established in 1853 in Rochester, New York, as a small optical shop that grew to become a large healthcare company with over 10,000 employees in 100 plus countries around the world. Since our establishment, Bausch + Lomb has been at the forefront of visionary innovations in eye care dedicated to perfecting vision and enhancing life.

Now Bausch + Lomb is a part of Bausch Health, a diverse multinational healthcare company. As a company of Bausch Health, Bausch + Lomb is even better positioned to enrich its portfolio in eye care market sector while bringing its wealth of experience into new areas and diversifying in wider therapeutic areas in healthcare.

To find out more visit:

www.bausch.co.uk