

INSIDE

- Understanding scleral topography: p.5
- A handy guide to ophthalmic medications: p. 6
- When is neuroimaging necessary: p. 8

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Pacific University College of Optometry

EYE ON PACIFIC

As vision subspecialties continue to grow, we can ensure that patients continue to get the care they deserve.

Spring | 2016

When It's Not Obvious: Finding Ocular Surface Disease

TRACY DOLL, OD, FAAO | DRY EYE SOLUTIONS CLINIC COORDINATOR

Characteristics of frank meibomian gland dysfunction (MGD) are very easy to spot: thickened eyelid margins with telangiectasia, capped gland openings, and toothpaste-like secretions on expression. A thorough medical history may show underlying acne rosacea or sebaceous gland disorder. Common symptoms include burning, stinging, vision fluctuation, reflex tearing, and fatigue. However, there is a distinct subset of patients who suffer from MGD that do not display the above characteristics. The dysfunction is happening deeper inside the gland and is not displayed on the surface. In fact, the eyelid margins can be largely unremarkable. In these cases, the meibomian glands are either not producing lipid or the oil is trapped deep in the glands. You can still identify this subtle MGD if you are looking for the signs. Proper screening tools can lead to a clinical explanation of MGD symptoms despite the lack of classic signs.



Ocular Surface Disease (continued)

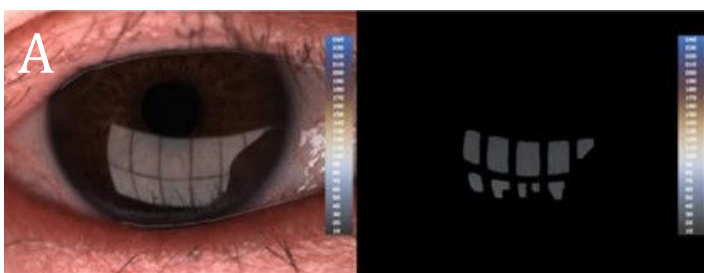
The Korb Meibomian Gland Evaluator™ (Figure 1) is a handheld device that can be used to gently express the glands with the same pressure as an average blink. The practitioner can apply this gentle pressure to the eyelids and screen for low secretion of the glands in under a minute.

Figure 1: The Korb Meibomian Gland Evaluator™

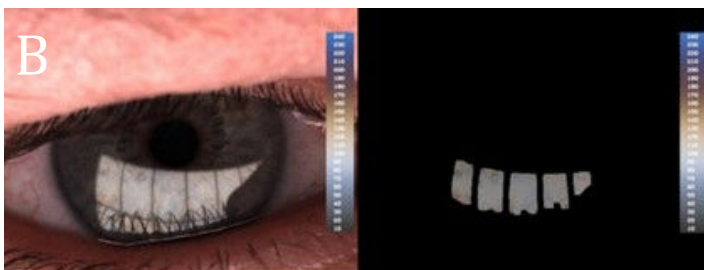


A more advanced diagnostic device available at our new Pacific Dry Eye Solutions clinic is the LipiView II® (Figure 2). This instrument confirms subtle MGD by measuring the thickness of the lipid layer using noninvasive, white light interferometry. A lipid layer thinner than 60 nm correlates well with symptomatic MGD.

Figure 2: A. Dull appearance of a decreased lipid layer (38 nm). B. Normal lipid layer (greater than 100 nm) produces a bright reflection.



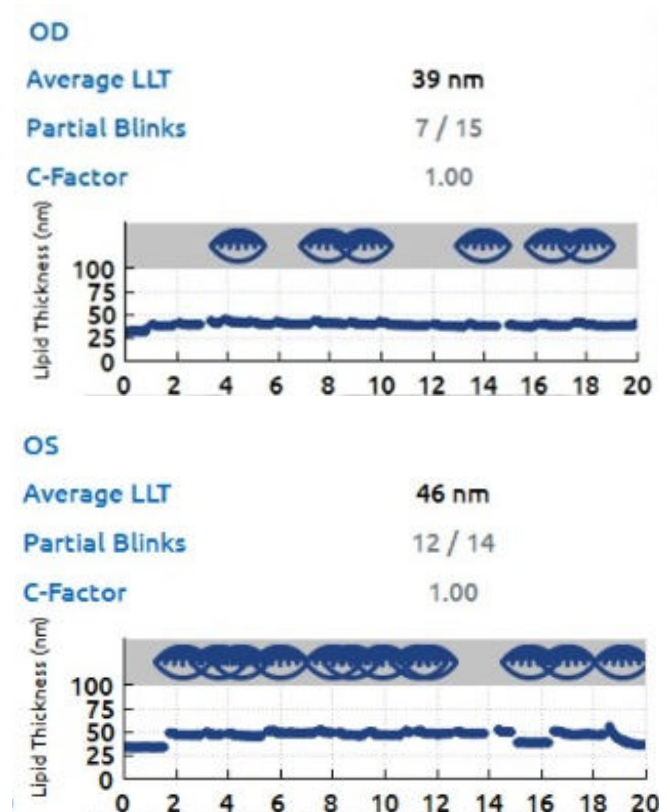
Average LLT:	38 nm	Partial Blinks:	0 / 7
Maximum LLT:	51 nm @ frame 119	CFactor:	1.00
Minimum LLT:	31 nm @ frame 54	Standard Dev:	3



Average LLT:	100+ nm	Partial Blinks:	0 / 2
Maximum LLT:	100+ nm @ frame 370	CFactor:	1.00
Minimum LLT:	94 nm @ frame 595	Standard Dev:	12

A complete blink is necessary to stimulate the release of the meibum and spread the oily tear layer evenly across the eye. Greater than a 40% partial blink rate is indicative of daytime exposure and stagnation of the lipids on the eyelid margin. The LipiView® II can quantify incomplete or partial blink rates (Figure 3).

Figure 3: LipiView® II printout showing a greater rate of partial blinks in the left eye (86%) compared to the right eye (47%).



An incomplete blink can occur as a side effect of certain medications or as a result of occupational demands. The overall blink rate can drop up to 75% when looking at a computerized device. Patients with a low blink rate and high number of incomplete blinks can benefit from blink training. Pacific Dry Eye Solutions provides blink training regimens to patients with poor blink rates via the use of commercially available computer and smart phone apps.

Ocular Surface Disease (continued)

Imaging of the meibomian glands themselves can show underlying blockage, as well as damage and loss of the glands. At Pacific Dry Eye Solutions we offer Dynamic Meibomian Imaging™ (DMI™) utilizing infrared photography combined with transillumination (Figure 4). Meibomian glands should appear as two lines of adjacent clusters. Obstruction causes the bases of the glands to separate and widen. This is known as duct dilation. Chronic obstruction and inflammation lead to gland dropout. Because gland dropout is irreversible, early diagnosis and management is crucial to avoid permanent meibomian gland damage.

New treatment options are available for MGD. Pacific Dry Eye Solutions offers treatment with the LipiFlow®. This treatment method uses a disposable activator to deliver vectored thermal pulse therapy. The activator is placed between the globe and the eyelid (Figure 5), while the cornea is protected by a shell that is similar in diameter to a scleral contact lens. The activator applies constant heat and pulsatile pressure to the eyelids. It is important to note that the activator heats through the back side of the eyelid, closer to where the meibomian glands are located. The 12-minute treatment is painless due to the combination of heat, pressure, and corneal protection. Fully expressing stagnant gland content allows restoration of the normal meibomian gland function, improving tear quality and reducing the inflammatory cascade.

Excellent news for patients: the cost of the LipiFlow® activators dropped significantly at the end of 2015, resulting in savings being passed on to patients. LipiFlow® is superior to classic meibomian gland expression (use of paddles and forceps) in that it is complete and painless.

It is important to note that MGD can affect any portion of the population, which is why having the necessary diagnostic equipment is crucial. The following cases demonstrate that point.

Figure 4: Images from Dynamic Meibomian Imaging. A. Healthy glands extending the entire length of the eyelid (blue arrow). B. Dilation of the meibomian ducts (yellow arrow). C. Impaction of the meibomian glands (orange arrows), best imaged with transillumination meibography. D. Dropout of the meibomian glands (red arrow).

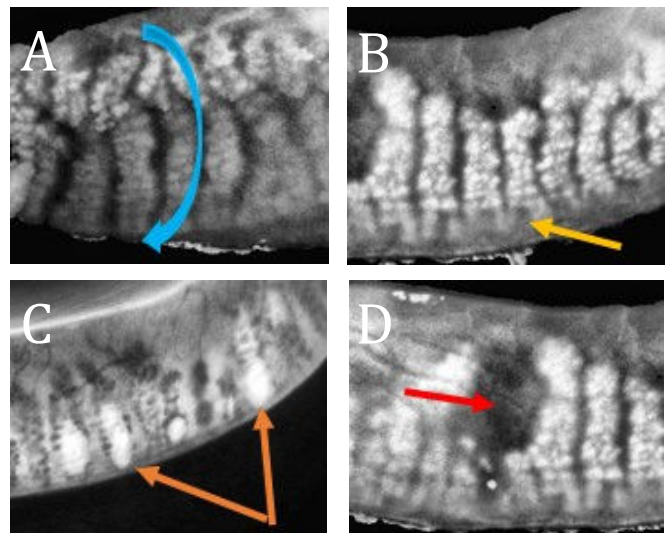


Figure 5: Setup of the LipiFlow®



Illustrative Cases:

Case 1: Figure 6 shows gland dropout and a very low lipid layer measured on a 56-year-old male with acne rosacea. After initial diagnosis and confirmation of severe gland loss, he was placed on a home therapy regimen that included hot compresses, lid scrubs, and vegetarian-based omega-3 fatty acid

Ocular Surface Disease (continued)

supplementation in order to lower inflammation and achieve a clean ocular surface. On this therapy, the patient achieved decreased symptoms and clearing of his lids of scurf debris. His gland loss remained stable, as did the lipid layer thickness and incomplete blink rate demonstrated with the LipiView® II. MGE scores had increased by two glands in each eye, and LipiFlow treatment was performed to further improve the meibomian gland function.

Figure 6: Case 1



Figure 7: Case 2

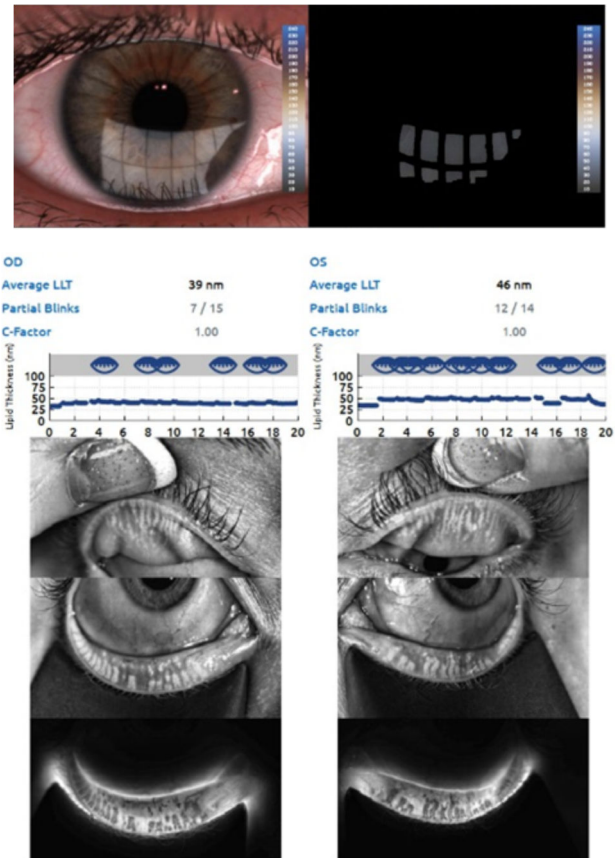
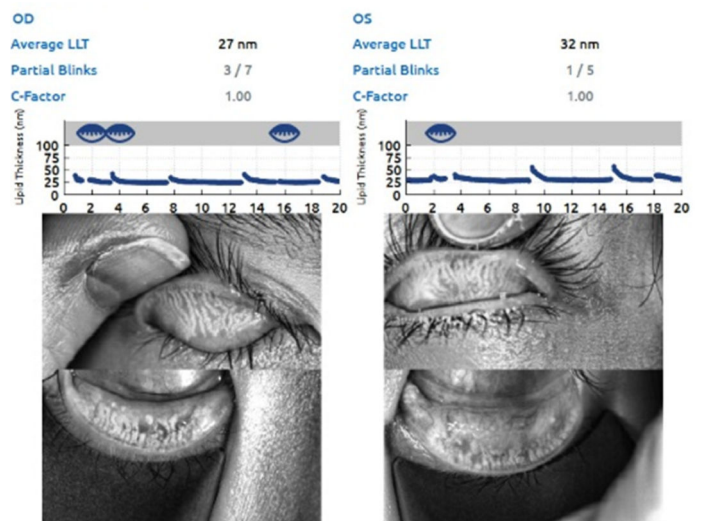


Figure 8: Case 3



Case 2: Figure 7 shows a similarly poor lipid layer and gland dropout in a 24-year-old professional student. The high incomplete blink rate was a large area of concern. Her treatment regimen varied, in that blink training with computer apps were prescribed. She also was able to undergo LipiFlow treatment with dramatic improvement in symptoms.

Ocular Surface Disease (continued)

Case 3: Figure 8 demonstrates a 12-year-old patient with symptoms of fatigue with near work that could not be explained by a binocular or refractive disorder. He was referred to Pacific Dry Eye Solutions with suspected dryness. His lipid layer thickness was 27 nm OD and 32 nm OS, less than 1/3 of normal. Meibography showed moderate to advanced gland loss of the lower eyelids. He has been scheduled for LipiFlow treatment and referred for Vitamin A deficiency testing.

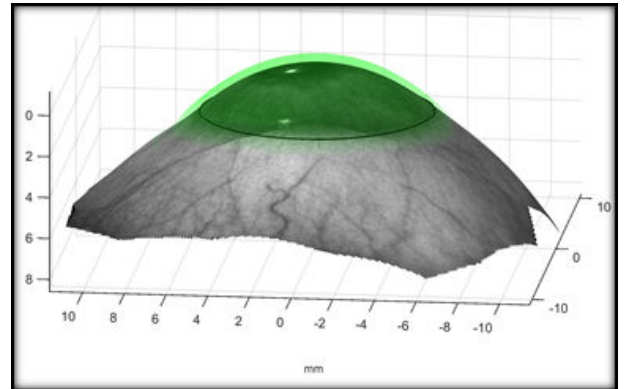
The modern practitioner has new tools to both discover and manage the underlying cause of ocular dryness associated with meibomian gland dysfunction. New methods of screening can help to find even subtle cases and allow for treatment prior to permanent damage to the glands.

Pacific Dry Eye Solutions offers advanced in-office diagnostic and treatment options. If we can be of service to you or your patients don't hesitate to call us at 503-352-1699.

Advances in Contact Lenses

SHEILA MORRISON, OD, MS | CORNEA AND CONTACT LENS RESIDENT

Innovations in contact lens lathing technology and contemporary contact lens materials have greatly improved the performance of modern scleral lenses. Scleral lenses are indicated when corneal disease or irregularity prohibit the use of traditional corneal gas permeable lenses. A scleral lens can vault the irregular corneal surface, allowing the full weight of the lens to rest on the sclera.



Scleral shape display generated by the sMap3D scleral topography system.

Understanding the scleral shape is imperative to successful fitting of these specialty contact lenses. This is possible using the anterior segment OCT (Zeiss), Scheimpflug imaging (Pentacam), and profilometry (sMap3D & Eaglet).

With the increasing use of scleral lenses, practitioners and researchers are beginning to understand the importance of further research elucidating the optimal fitting relationship between contact lenses and the corneo-scleral junction. Our studies at Pacific University

indicate that the sclera is asymmetric in most patients. The asymmetry increases as you move peripherally from the limbus.

Because of this asymmetry, scleral designs of 14.5 mm or less, which land close to the limbus, may benefit from traditional, rotationally symmetric scleral landing zones, whereas lens designs larger than 14.5 mm may benefit from a toric haptic and/or a quadrant specific design in an attempt to match the more asymmetric peripheral sclera.

Modifications available in modern scleral lens designs include the ability to create a toric periphery. These customizable scleral landing zones allow for better fitting lenses and offer greater comfort for patients.

Advances in Medical Eye Care

LORNE YUDCOVITCH, OD, MS, FAAO | MEDICAL EYE CARE SERVICE CHIEF

Ophthalmic medications are an integral part of optometric practice, and each year drug updates occur. Recent highlights from 2015 include the introduction of Pazeo (olopatadine 0.7%), as well as the introduction of generic alternatives for Lumigan (bimatoprost 0.03%), Travatan (travoprost 0.004%), Vigamox (moxifloxacin 0.5%), and Pataday (olopatadine 0.2%). Currently, topical ophthalmic homatropine and scopolamine are unavailable; hopefully they will be re-introduced.

For an easy-to-use source for the main ophthalmic medications, please feel free to access the Ophthalmic Drugs 2016 chart (Figure). This chart showcases the most common ophthalmic

drugs, updated as of the beginning of 2016. Both topical ophthalmic and oral medications are included, with Food and Drug Administration/American Academy of Ophthalmology cap color representation when indicated. Common bottle sizes, concentrations, and dosages are included. Medications with generic versions are noted with an asterisk (*). Please download the chart for your personal use from Pacific University's CommonKnowledge. Go to <http://commons.pacificu.edu/coofac/38> and select "download."

We are happy to consult with you regarding ophthalmic medications. Please feel free to contact the Medical Eye Care Service at any of our Eye Clinics.



Ophthalmic Drugs 2016



Drs. Len Koh, Julie Helmus; updated by Dr. Lorne Yudcovitch

ANTIBIOTICS Fluoroquinolones	Besivance Besifloxacin 0.6% susp 5ml Tid X 7d	Ciloxan* Ciprofloxacin 0.3% sol/ung 5, 10 ml/3.5g Q2h X 2d Q4h X 5d	Moxeza Moxifloxacin 0.5% sol 3ml Bid X 7d	Ocuflax* Ofloxacin sol 5, 10 ml Q2-4h X 2d Qid X 5d	Vigamox Moxifloxacin 0.5% sol 3ml Tid X 7d	Zymaxid* Gatifloxacin 0.5% sol 2.5ml Q2h X 1d Bid-Qid X 6d	ANTIBIOTICS Aminoglycosides	Tobrex* Tobramycin 0.3% sol/ung 5ml/3.5g Q4h/Tid	Garamycin* Gentamicin 0.3% sol/ung 5ml/3.5g Q4h/Tid
ANTIBIOTICS (+) Polymyxin B	Neosporin* polymyxinB/neomycin / gramacidin sol (bacitracin ung) 10ml (3-.5g) Q4h	Polysporin* polymyxinB/bacitracin 3.5g ung Q4h X 7-10d	Polytrim* polymyxinB/trimethop rim 10 ml sol Q3h X 7-10d	ANTIBIOTICS Macrolides	AzaSite Azithromycin 1% sol 2.5ml Bid X 2d Qd X 5d	Ilotycin Erythromycin 0.5% ung 3.5g Qid	ANTIBIOTICS Cell Wall Inhibitor	Bacitracin Bacitracin ung 3.5g Qid	Zigan Ganciclovir 0.15% gel 5g Q3h, 5x/d X 7d Tid X 7d (tip)
ANTIBIOTIC + STEROID Susp/ung	Blephamide* Pred acetate 0.2% Na-sulfacetamide 10% 5, 10ml/3.5g Q4h/Qid	Cortisporin* Hydrocortisone 1% Neomycin 0.35% Polymyxin B 10KU/ml 7.5ml Q4h/Qid	Maxitrol* Dexamethasone 0.1% Neomycin 0.35% Polymyxin B 10KU/ml 5ml/3.5g	Poly-Pred Pred acetate 1% Neomycin 0.35% Polymyxin B 10KU/ml 5, 10ml Qid	Tobradex* Dexamethasone 0.1% Tobramycin 0.3% 5ml/3.5g Q4-6h	Tobradex ST Dexamethasone 0.05% Tobramycin 0.3% 5ml/3.5g 2.5, 5, 10ml Q4-6h	Zylet Loteprednol 0.5% Tobramycin 0.3% 5, 10ml Q4-6h	ANTIVIRALS	Viroptic Trifluridine 1% 7.5ml sol Q2h, 9 gtt max/d X 7d Q4h X 7d
STEROIDS Strong	Durezol Difluprednate 0.05% emul 5ml Bid-Qid X 14d Bid	Pred Forte* Prednisolone acetate 1% 5, 10, 15ml susp Bid-Qid Bid	Lotemax Loteprednol etab 0.5% 5, 10, 15 ml susp 5 gel / 3.5 ung Qid	Vexol Rimexolone 1% susp 5, 10ml Qid	STEROIDS Moderate	Alex Loteprednol 0.2% 5, 10ml Qid	Flarex* Fluorometholone acetate 0.1% susp 5, 10ml	FML* Fluorometholone alcohol 0.1% susp/ung 5, 10, 15ml/3.5g	Pred Mild* Prednisolone acetate 0.12% 5, 10ml susp Qid
GLAUCOMA Beta Blockers	Betagan* Levobunolol HCl 0.25%: 5,10ml 0.5%: 5, 10, 15ml Qd-bid	Betimol Timolol hemihydrate 0.25%: 5ml 0.5%: 5, 10, 15ml Bid	Betoptoc-S Betaxolol HCl 0.25% 5, 10, 15ml Bid	Istalol Timolol maleate 0.5% 2.5ml, 5ml qAM	Timoptic* Timolol maleate 0.25%: 5, 10, 15ml 0.5%: 5, 10, 15ml Bid	Timoptic (PF) Timolol maleate 0.25%/0.5% Unit-dose Bid	Timoptic-XE* Timolol maleate gel 0.25%/0.5% 2.5, 5ml qAM	GLAUCOMA Docosanol	Rescula Unoprostone isopropyl 0.15% 5ml Bid
GLAUCOMA Prostaglandins	Lumigan* Bimatoprost 0.01% 2.5, 5, 7.5 ml Qd	Travatan Z* Travoprost 0.004% 2.5, 5ml Qd	Xalatan* Latanoprost 0.005% 2.5ml Qd	Zioptan Tafluprost 0.0015% Unit-dose Qd	GLAUCOMA Alpha Agonists	Alphagan P* Brimonidine 0.1%: 5, 10, 15ml 0.15%: 0.2%: 5, 10, 15ml Tid	Iopidine Apraclonidine 0.5% 5, 10ml 1gtt b4 LPI 1gtt p/o	GLAUCOMA Miotic	Isopto-carpine* Pilocarpine 1%, 2%, 4% 15ml Qid
GLAUCOMA CAIs	Azopt Brinzolamide 0.1% 5, 10, 15ml Tid	Trusopt* Dorzolamide 2% 5, 10ml Tid	GLAUCOMA Combinations	Combigan Brimonidine 0.2% Timolol 0.5% 5, 10ml Bid	Cosopt* Dorzolamide 2% Timolol 0.5% 5, 10ml Bid	Cosopt PF Dorzolamide 2% Timolol 0.5% Unit-dose Bid	Simbrinza Brinzolamide 1% Brimonidine 0.2% 8ml susp Tid (shake)	DRY EYE	Restasis Cyclosporine 0.05% 30 x 0.4ml Bid
NSAIDs	Acular LS Ketorolac 0.4% 5ml Qid	Ilevro Nepafenac 0.3% 1.7ml Qd	Prolensa Bromfenac 0.07% 1.6, 3 ml Qd	Voltaren* Diclofenac 0.1% 5ml Qid	Refresh Optive Advance Lipid-based 10 ml Bid-prn	Soothe XP Lipid-based 15ml Bid-prn	Systane Balance Aqueous-based 10ml emulsion Bid-prn	Optive Aqueous-based 15ml Bid-prn	ALLERGY Mast cell stabilizer
Alaway (OTC) Ketotifen fumarate 0.025% 10ml Bid	Bepreve Bepotastine besilate 1.5% 5, 10ml Bid	Lastacft Alcaftadine 0.25% 3ml Qd	Pataday Olopatadine HCl 0.2% 2.5ml Qd	Pazeo Olopatadine HCl 0.7% 2.5ml Qd	Zaditor (OTC) Ketotifen fumarate 0.025% 5ml Bid	Alamast Pemirolast-K 0.1% 10ml Bid/Qid	Alocril Nedocromil-Na 2% 5ml Bid	Crolom Cromolyn-Na 4% 10m Bid	ORAL MEDICATIONS
Augmentin Amoxicillin/Clavulanic 250mg/125mg Tid 500mg/125mg Bid	Bactrim DS Trimethoprim/ Sulfamethoxazole 160mg/800mg Bid X 10-14d	Cipro Ciprofloxacin 250, 500mg 500mg Bid 7-14 d	Doxycycline 50, 75, 100mg 250, 500, 750mg 100mg qd X 6d	Keflex Cephalexin Acid 500, 750mg 500mg Bid	Prednisone 2.5, 5, 10, 20, 50mg 5-60mg per day	Ultram Tramadol HCl 50mg 50-100mg q4-6h 400mg max/d	Vicodin APAP 500mg Hydrocodone 5 mg Q4-6h 8 tab max/d	Valtrex Valacyclovir 500, 1000mg 1g tid X 7d	Zovirax Acyclovir 200, 400, 800mg 200mg/5ml susp 800mg 5 times d X 7d

Advances in Binocular Vision

HANNU LAUKKANEN, OD, MEd, FAAO | VISION THERAPY/PEDIATRICS SERVICE



Irene Arroyo, Forest Grove VT Coordinator

In this issue we would like you to meet two of the most important people in our Vision Therapy Services. Megan and Irene, our vision therapy patient and schedule coordinators, serve as our public representatives. Without these two wonderfully capable people, our Vision Therapy Services would not function well. We asked Irene and Megan to write a brief introduction.

My name is Irene Arroyo, and I am the Vision Therapy Coordinator for our Forest Grove Clinic. I started with Pacific University in 2002 as the Medical Records Coordinator and moved to the VT Coordinator position four years ago.

My favorite part of the vision therapy job is working closely with the doctors and interns, as well as getting to know the patients on a personal level. I love to see how involved the parents are in their children's success. I have to be honest and say that the other best part of my job is the little treats I get from the kids and interns at the end of the semester. I have received homemade bookmarks, cards, cookies, candy, and an endless amount of love! The most challenging part of my job is having to wear many hats on any given day. I go from being the vision therapy coordinator to the credentialing

specialist, to translating or being the backup for the front desk staff. At times I'm even the cleaning lady! But, I wouldn't have it any other way.

When I am not at work, I love to spend time with my family, which includes my husband, my two daughters and their spouses, and my three granddaughters. I enjoy being involved in my church, playing softball and kickball, long walks, the beach, and happy hour with friends.

You can always reach me via e-mail @ iarroyo@pacificu.edu or by phone @ 503-352-2174. Please feel free to contact me if you ever have any questions about our services!



Megan Chapman-Rexford, Portland VT Coordinator

My name is Megan Chapman-Rexford, and I am the Vision Therapy Coordinator for our Portland Clinic. I started at Pacific Eye Trends in 2010 as a floating optician and did this throughout my undergraduate years. I accepted this position in September of 2015. My goal is to become an optometry student next autumn.

I have been deeply moved by how hard our wonderful attending doctors and interns work to rehabilitate our patients. I would have to say that my favorite aspect of this position is the detective work I witness from everyone involved in the care

of our patients. Conversely, the most challenging aspect is the fact that I have to eventually watch our patients and interns leave. We get to know them - their successes and challenges - and watch them grow. It is truly difficult saying goodbye.

When I'm not at work, I care for my elderly parents, binge-watch TV shows, and crochet some mean afghans! I enjoy spending time with

my new family, which includes my husband and my nine-year old stepdaughter.

I keep my door open to everyone, not just the VT crew, and I provide tasty candy when I can. It is pretty easy to contact me via email at chap9064@pacificu.edu. Calling me at 503-352-2504 is a little more difficult as I am always running around. Please feel free to contact me if you ever have a question about our services!

Advances in Neuro-Ophthalmic Disease

DENISE GOODWIN, OD, FAAO | NEURO-OPHTHALMIC DISEASE CLINIC

To Image or Not to Image

Whether or not to perform neuroimaging on a patient with an isolated extraocular motor nerve palsy is controversial. An isolated cranial nerve (CN) palsy in an older patient is often vasculopathic in nature. However, some patients have a more serious underlying condition. We often face the dilemma of exposing the patient to the costs of neuroimaging or risk missing a serious and potentially treatable condition.

A recent prospective, multicenter study suggested that up to 5% of patients thought to have a vasculopathic CN 4 or CN 6 palsy ended up having a non-vasculopathic cause, including aneurysm, tumor, or stroke. This increased to 16% if CN 3 palsies were included. In addition, vasculopathic risk factors were present in 61% of patients found to have a non-vasculopathic cause for the palsy. This tells us that just because a patient has vasculopathic risk factors does not mean that the palsy is always vasculopathic.

Advantages of imaging early include improved clinical outcome and psychological benefits. Treatment of demyelination, tumors, stroke, and other neurologic disease has improved greatly in recent years. This makes early diagnosis more critical in these patients. A normal MRI can also allay fears associated with



neurologic disease which, in turn, can impact social and psychological health.

Both complete and partial CN 3 palsies should be imaged due to the risk of aneurysm. Whether to image those with a CN 4 or CN 6 palsy is more debated. Although we live in a time where cost constraints are paramount, we must ask ourselves if we are willing to take the risk of missing a potentially serious cause that may be treatable. Ultimately the decision to obtain neuroimaging must be made on an individual basis. Performing a thorough history and recognizing subtle signs or symptoms are critical in determine if neuroimaging would be advantageous to the patient.

Feel free to contact us at 503-352-7300 if you have a question regarding whether or not to order neuroimaging for your patient.

Pacific EyeClinics Updates

CAROLE TIMPONE, OD, FAAO, FNAP | ASSOCIATE DEAN OF CLINICAL PROGRAMS



Cindi Rapp, Director of Clinic Operations

Our newest addition to the Pacific University EyeClinic team is Cindi Rapp, RDH, Director of Clinical Operations. Cindi brings energy and a new perspective to our clinical system, having spent her earlier career at Kaiser Permanente in the Dental Care Program. There she had opportunities to be in clinical practice, work as consultant and trainer, and serve as area manager for Kaiser's many dental offices. Although new to the College of Optometry, Cindi became involved with Pacific University during the initial development phase of its dental hygiene degree program, having been asked to serve on its advisory board. Cindi recalls, "It was exciting to see the work of the advisory/curriculum committee come to fruition when the Dental Hygiene Studies Program opened with the first class, in 2007." She was subsequently recruited as an adjunct clinic faculty member and thoroughly enjoyed her years working with the students.

Her new role in clinical operations for the College of Optometry enables her to continue to interact with students, while returning to her passion of healthcare administration. In Cindi's own words, "It is a privilege to continue working with students, staff and faculty and to oversee the

operations of our eye clinics. I am delighted to be part of the College of Optometry! Having spent many years in dentistry, both in management and as a registered dental hygienist, I am excited to learn about the world of vision. I can already feel the positive energy and see a committed, cohesive team which is so important, as we can all achieve so much more together than what we can accomplish alone. I look forward to being a contributing member of the optometry team!"

When not at work, Cindi enjoys spending time with her family—husband, Greg, of 25 years; her daughter, Meg (a junior at Gonzaga University); and her son, Chris (a junior at Valley Catholic HS). She likes to garden, cook, enjoy the outdoors, and watch her kids play sports.

Our clinical faculty and staff are here to help you with patient consultations and referrals. Please let us know how we can best serve your needs!

CE Opportunities

April 2016:

-Coeur d'Alene CE; Coeur d'Alene Golf and Spa Resort, Coeur d'Alene, ID; Apr. 15-16.

-Teplick Vision's 22nd Annual Blockbuster 5 hour CE Event; NVision Eye Center, Portland, OR; April 30, 7:30-2:30. [Click here to register.](#)

May 2016:

-Oregon's Meeting; Sunriver Resort; Sunriver, OR; May 19-22.

June 2016:

-Northwest Residents Conference; Jefferson Hall, Forest Grove, OR; June 10-11.

July 2016:

-Victoria Conference; Delta Victoria Ocean Pointe Resort, Victoria, Canada; July 21-24.

Referral Service Contact Numbers

Pacific EyeClinic Forest Grove

2043 College Way, Forest Grove, OR 97116

Phone: 503-352-2020

Fax: 503-352-2261

Vision Therapy: Scott Cooper, OD; Graham Erickson, OD; Hannu Laukkanen, OD; JP Lowery, OD

Pediatrics: Scott Cooper, OD; Graham Erickson, OD; Hannu Laukkanen, OD; JP Lowery, OD

Medical Eye Care: Ryan Bulson, OD; Tracy Doll, OD; Lorne Yudcovitch, OD

Low Vision: Karl Citek, OD; JP Lowery, OD

Contact Lens: Mark Andre; Tad Buckingham, OD; Patrick Caroline; Amiee Ho, OD; Beth Kinoshita, OD; Hannah Shinoda, OD

Pacific EyeClinic Cornelius

1151 N. Adair, Suite 104 Cornelius, OR 97113

Phone: 503-352-8543

Fax: 503-352-8535

Pediatrics: JP Lowery, OD

Medical Eye Care: Tad Buckingham, OD; Sarah Martin, OD; Caroline Ooley, OD; Lorne Yudcovitch, OD

Pacific EyeClinic Hillsboro

222 SE 8th Avenue, Hillsboro, OR 97123

Phone: 503-352-7300

Fax: 503-352-7220

Pediatrics: Ryan Bulson, OD

Medical Eye Care: Tracy Doll, OD; Dina Erickson, OD; Michela Kenning, OD; Caroline Ooley, OD

Neuro-ophthalmic Disease: Denise Goodwin, OD

Pacific EyeClinic Beaverton

12600 SW Crescent St, Suite 130, Beaverton, OR 97005

Phone: 503-352-1699

Fax: 503-352-1690

3D Vision: James Kundart, OD

Pediatrics: Alan Love, OD

Medical Eye Care: Susan Littlefield, OD

Contact Lens: Matt Lampa, OD

Dry Eye Solutions: Tracy Doll, OD

Pacific EyeClinic Portland

511 SW 10th Ave., Suite 500, Portland, OR 97205

Phone: 503-352-2500

Fax: 503-352-2523

Vision Therapy: Bradley Coffey, OD; Ben Conway, OD; Scott Cooper, OD; James Kundart, OD

Pediatrics: Bradley Coffey, OD; Ben Conway, OD; Scott Cooper, OD; James Kundart, OD

Medical Eye Care: Ryan Bulson, OD; Candace Hamel, OD; Scott Overton, OD; Carole Timpone, OD

Contact Lens: Mark Andre; Candace Hamel, OD; Matt Lampa, OD; Scott Overton, OD; Sarah Pajot, OD

Neuro-ophthalmic Disease/Strabismus: Rick London, OD

Low Vision: Scott Overton, OD

When scheduling an appointment for your patient, please have the patient's name, address, phone number, date of birth, and insurance provider, as well as the type of service you would like Pacific University eye clinics to provide.