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Roberson (1989)

Non-tolerance: causes, avoidance, opportunity

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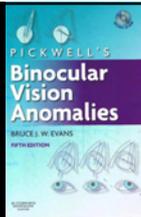
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DISCLOSURE

- Paid lectures, KOL/product feedback, research funding:
 - Alcon, American Academy of Optometry (UK), Association of Optometrists, Birmingham Focus on Blindness, Black & Lizards, British Contact Lens Association, Central (LOC) Fund, Cerium Visual Technologies, College of Optometrists, CooperVision, ESRC, General Optical Council, Hoya, Institute of Optometry, Iris Fund for Prevention of Blindness, Johnson & Johnson, Leightons, MRC, Norville, Optos, Paul Hamlyn Trust, Perceptive, Scrivens, Specsavers, Thomas Pocklington Trust.
 - Lecture content always my own
- Author of Pickwell's Binocular Vision Anomalies, editions 3-5
- Community optometric practice in Brentwood, Essex



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Classification of spectacle non-tolerance

- Two main types (Priest, 1979)
 - Dispensing non-tolerance – main causes (Farrell, 2005):
 - Incorrect frame fitting
 - Optical centration problems
 - Spectacle magnification problems
 - Cosmetic reasons
 - Mis-communication
 - Prescription non-tolerance
 - "a prescription that the patient finds so hard to tolerate that they return to the prescriber" (Freeman & Evans 2010)

Classification of Rx non-tolerance (Ball, 1977)

Practitioner orientated	Dispensing errors and associated problems Faulty refraction and prescription Undetected or subsequently developed abnormality
Patient orientated	Management of initial examination Adaptation problems Psychology Motivation; expectation; dissatisfaction
Practitioner/patient relationship	Attitudes; personality patterns Practice environment

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Goal of subjective refraction (Duke-Elder & Abrams, 1970)

- “to provide the patient with the optical correction nearest to the optical ideal with which he sees best and is most **comfortable**”
- Non-tols are really an “adverse effect of an optical prescription”

Adverse effects of optical Rx's (Ball, 1977)

Symptom-type	Adverse effects or presenting symptom	Examples of possible aetiology
Sympathetic or relaxed	Headaches and/or discomfort referred to ocular adnexa Mild vertigo or dizziness	High presbyopic additions Faulty lens centration Decompensated heterophoria New prismatic corrections Relative prismatic effects
Disorders of visual perception and binocular vision	Micropsia Macropsia General spatial distortions Peripheral spatial distortion Blurred vision Diplopia	Recently corrected myopia Base out prism Recent presbyopic additions Base in prism Corrected anisometropia Change of lens form Unaccustomed cylinders Some multifocals Incorrect effective power Incorrect positioning of bifocals/multifocals Off axis blur from high index lenses Inappropriate vocational use Residual uncorrected errors Faulty lens centration
Others	Dysmetropsia Photophobia Ghost images	High additions in some fused bifocals Omission of previously worn lens Reflection from lens or other surfaces

Are some non-tols inevitable? (Evans, 2012)

- 95% limits of repeatability of subjective refraction are circa $\pm 0.50D$ to $0.75D$
MacKenzie (2008); Shah et al. (2009)
- in spectacle non-tols the final Rx is within $\pm 0.50D$ of the not tolerated one in 84% of cases
Freeman & Evans (2010)
- a significant number of wearers notice errors in distance vision, as small as $+0.25D$ in sphere and cylinder
Miller et al. (1997)
- So, some non-tols are inevitable

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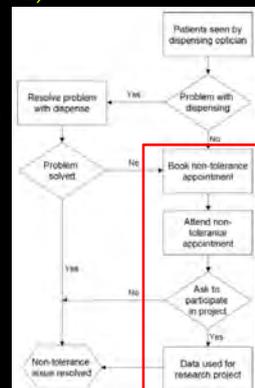
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Prevalence of prescription non-tols (Freeman & Evans, 2010; Evans, 2012)

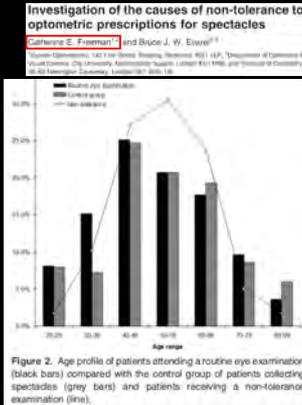
- Non-tols occur in 1.8% of eye exams
 - Range (7 optoms) 1.3% to 3.3%
Freeman & Evans (2010)
- This has been estimated to be 2.8% of those who are prescribed spectacles
Howell-Duffy et al. (2010)
- But, this research excluded cases that had been dealt with by a dispensing optician
Freeman & Evans (2010)



Demographics of prescription non-tols

(Freeman & Evans, 2010)

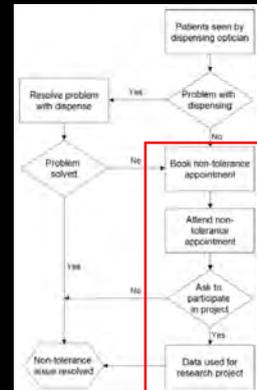
- 3091 eye exams in 6/12
 - Large independent optometric practice, 11 optoms in 5 consulting rooms
 - 62 non-tols; 59 included
- Most common in 50-59y
- 88% of non-tols presbyopes
- Male = female
- None were neophytes (not significantly different to control group)
- All could be resolved with an adjustment of 1.00D
 - 84% with 0.50D adjustment



Reasons for non-tol examinations

(Freeman & Evans, 2010)

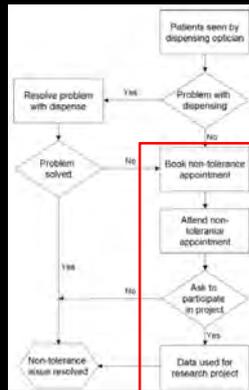
1. Prescription related 61%
2. Dispensing related 22%
3. Pathology 8.5%
4. Data entry error 6.8%
5. Binocular vision 1.7%



Prescription related non-tols (61%)

(Freeman & Evans, 2010)

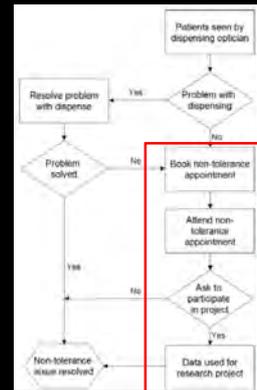
1. Error measuring the sphere
 - 20% of all non-tols
 - Half plus – all over-plussed
 - Half minus – most under-minussed
2. Error with NV/IV addition
 - 17% of all non-tols
 - 2/3 of these over-plussed
3. Errors with cyl
 - 10% of all non-tols
4. Errors with sphere & cyl (3%)
5. Errors relating to adaptation
 - 10% of all non-tols
 - For 1/3 returned to old Rx



Dispensing related non-tols (22%)

(Freeman & Evans, 2010)

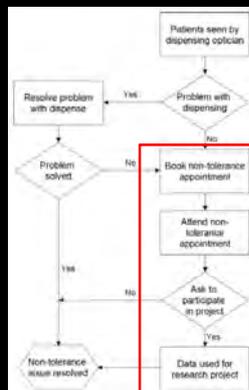
1. PAL adaptation
2. PAL heights
3. SV lens type
4. Frame adjustment
5. PAL prism thinning
 - A total of 1938 lenses were dispensed during the 6 month period.
 - In this study, the lenses that were most often not tolerated were
 - PALs (7.4%)
 - Vocational lenses (4.8%)
 - Single vision lenses (2.0%)
 - Bifocal lenses (0.8%)



Pathology related non-tols (8.5%)

(Freeman & Evans, 2010)

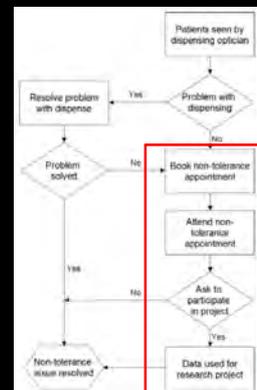
- Cataract in nearly all cases
 - Typically, large Rx change from nuclear sclerosis that caused non-tol when full Rx prescribed
- One case of dry eye



Data entry non-tols (7%)

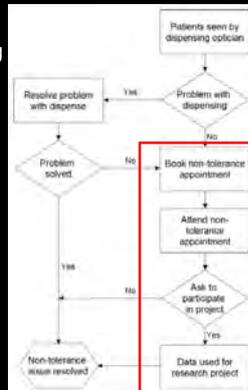
(Freeman & Evans, 2010)

- Entering incorrect reading addition
- Entering incorrect spherical Rx
- Using intermediate prescription instead of a distance prescription,
- Making up near vision glasses instead of bifocals



Binocular vision anomalies (2%)

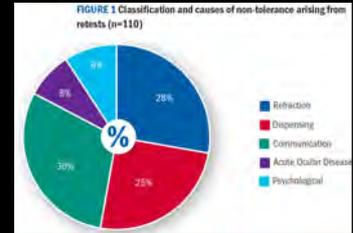
- Beware of convergence insufficiency associated with ageing
Freeman & Evans (2010)
- Don't prescribe multifocals to patients with a superior oblique palsy
Evans (2007)
- Don't prescribe monovision to patients with marked incomitancy
Evans (2007)



Causes of non-tolerance

(Farrell, Optician, 2016)

- 1 practice, survey of 110 patients returning for retest
- Retests 5.2% of eye exams
- Check the OCs of old glasses before prescribing new
- Beware anisometropia
- Establish patient's visual requirements
- Give patients realistic expectations
- Prevention is better than cure



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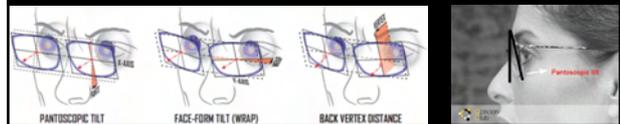
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Avoidance – dispensing

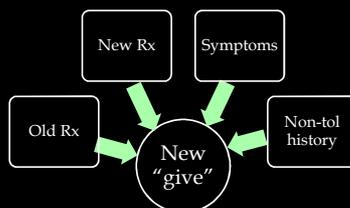
- Wrong product dispensed correctly or right product dispensed incorrectly?
- Many PAL issues can be corrected by frame adjustment
- Warn new aspheric wearers that need to adapt
- Be alert to issues relating to aniseikonia from anisometropia
- Off-axis blur in larger frames: consider
 - Frame tilt
 - Face form angle (bow)
 - Vertical lens centration

Bates, Optometry Today, Jan 2016



Avoidance – prescribing

- Applying "If it ain't broke don't fix it" rule would prevent 1/4 of non-tols
(Elliott & Howell-Duffy, 2015)
- Measure working distance & don't over-plus
- Experienced practitioners modify their Rx to reduce risk of non-tol – partial prescribing



Avoidance – modifying (partial prescribing)

- Howell-Duffy et al. (2011):
- The likelihood of partial prescribing increased by 34% for every 10y of experience
 - After a 40y career, practitioners would be 3x more likely to modify
- Practitioners underestimate problems from cyl axis, especially if oblique
- Examples of partial prescribing
 - If find less myopia than current glasses, don't prescribe full reduction
 - If large cyl axis change, partially prescribe
 - First time hyperopic prescription, partially prescribe
 - Partially prescribe large changes in sphere or cyl

Avoidance – communicate

- Warn patients that the average time to adjust to spectacles is 1 week Strang et al. (1998)
- Adaptation can take 1-2 weeks for large changes, especially in astigmatism Elliott & Howell-Duffy (2015)
- Give extra warning if problems more likely
 - E.g., first pair of PAL lenses
- Discourage patient from alternating between old & new glasses Elliott & Howell-Duffy (2015)

Introduction to communication skills

- The speaker's personal perspectives from 30 years in practice
- Advanced communication is about customising what you ask and explain accordingly
 - Some people are naturally better at communication, but everyone can learn and can improve
 - An empathic disposition helps
 - Think about what people are thinking
 - What fears, anxieties, and other motivation underlay what we say?

Challenging patient 6: the non-tol

- Set the scene
 - Greet as warmly as usual
 - "I'm sorry that you are having problems. The purpose of today is for me to find out what's going on and to come up with a solution."
- Interpretation:
 - Rare for there to be smoke without fire
- Strategies
 - Be extra thorough
 - Make sure that you have solved the problem
 - Explain what you can and can't do



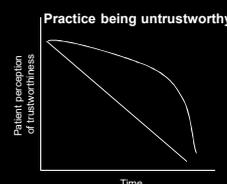
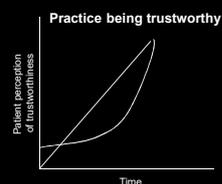
Other considerations

- One study found increased risk of falls when Rx changed
 - Many of the changes in this study were $>0.75D$ Cummings et al. (2007)
- Nearly 10% of non-tols result from pathology
- A "recheck appointment" should not be rushed
 - Look upon this as an opportunity (see next slide)



Are you a trusted source?

- What is a trusted source?
- Why you should want to be a trusted source?
 - Patients follow recommendations
 - Attract new referrals
 - Longevity of relationship
- Personal view
 - Gaining trust is non-linear
 - Losing trust is non-linear



Becoming a trusted source

- Assure the patient you know what they want
 - Assure the patient you want what they want
 - Give the patient what they want
 - Explain you are giving the patient what they want
 - Don't con, don't distort, don't over-sell
- Repeat 1-5 for many years

Service excellence via non-tols

- Johnston (2004): the "recovery paradox"
 - ◆ The creation of more delight through good recovery than normal service
 - ◆ "What makes excellent service "excellent" and poor service "poor" is very much about how the organisations dealt with problems and queries."
- Non-tols are a culture-defining moment
 - ◆ Give them more time
 - ◆ Most thorough exam
 - ◆ Listen more carefully
 - ◆ "We have two ears and one mouth so that we can listen twice as much as we speak"

Epictetus (55-135AD)
- Start with:
 - ◆ Listen – repeat – listen
- End with:
 - ◆ Explain – listen – explain



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Conclusions

- Over 80% of non-tols are presbyopes
- Don't over-plus or under-minus
- The accuracy of refraction (± 0.75) is worse than the mean adjustment needed to correct a non-tol (± 0.50)
 - ◆ Discourage patients separating prescribing/supply
- Partially prescribe
- Demonstrate the change
- Warn about adaptation
- Consider non-tols as an opportunity by excelling at dealing with these challenging patients



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