Non-tolerance: How to minimise them & turn defeat into victory! What can Epictetus tell us?

Prof Bruce Evans

BSc (Hons) PhD FCOptom FAAO FEAOO FBCLA DipCLP DipOrth
Director of Research Institute of Optometry
Visiting Professor London South Bank University
Private practice Cole Martin Tregaskis, Brentwood, Essex

© 2014-2018 Bruce Evans
Full handout from: www.bruce-evans.co.uk
for regular tweets on optometric research

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”

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)

Plan

Classification

Why

Prevalence

Avoidance

Conclusions

© 2018 Bruce Evans
Handout from www.bruce-evans.co.uk
for regular tweets on optometric research

Disclosure

- Paid lectures, KOL/product feedback, research funding:
  - Alcon, American Academy of Optometry (UK), Association of Optometrists, Birmingham Focus on Blindness, Black & Lizars, British Contact Lens Association, Central LOC Fund, Certain Visual
  - Optics, College of Optometrists, General Optical Council (UK), Institute of Optometry, Innovation Fund, Preservation of Blindness, Johnson & Johnson, Lions, Lublin, Optic Paul Hartley Trust, Perspex, Scrivens, Specavers, Thomas Pocklington Trust
- Lecture content always my own

Author of Pickwell’s Binocular Vision Anomalies, editions 3-5

Community optometric practice in Brentwood, Essex

© 2014-2018 Bruce Evans
Full handout from: www.bruce-evans.co.uk
for regular tweets on optometric research
Are some non-tols inevitable? (Evans, 2012)

- 95% limits of repeatability of subjective refraction are circa ± 0.50D to 0.75D (MacKenzie (2008); Shah et al. (2009))
- In spectacle non-tols the final Rx is within ±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

Epictetus (AD 55-135):
- Any person capable of angering you becomes your master; he can anger you only when you permit yourself to be disturbed by him
- It is impossible for a man to learn what he thinks he already knows

PREVALENCE

- Non-tols occur in 1.8% of eye exams (Freeman & Evans, 2010)
- Range (7 optoms) 1.3% to 3.3%

DEMOGRAPHICS

- 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
- 94% with 0.50D adjustment

REASONS FOR NON-TOL EXAMINATIONS

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%)

1. Error measuring the sphere
   - 20% of all non-tols
   - Half plus – all overplussed
   - Half minus – most underminussed
2. Error with NV/IV addition
   - 17% of all non-tols
   - 2/3 of these overplussed
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

CLASSIFICATION

WHY

PREVALENCE

AVOIDANCE

CONCLUSIONS

PLAN

PREVALENCE

CLASSIFICATION

WHY

AVOIDANCE

CONCLUSIONS

© 2018 Bruce Evans
Handout from www.bruce-evans.co.uk
for regular tweets on optometric research
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:
  - PAs (7.4%)
  - vocational lenses (4.6%)
  - 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

Could the non-tol be from pathology?

- Look for lens clouding
- May explain unexpected Rx change
- Warn of likely effects on vision: decreased VA/CS, glare/flare, needs more light when reading
- Is the VA as expected? If not:
  - Are there any macular changes?
  - Is the visual field normal?
  - Are there any corneal dystrophies?
  - Are there any symptoms suggestive of peripheral retinal problems?
    - A central float can cause variable VA & Rx
    - Dilated fundoscopy
- GH changes (e.g., diabetes)

Data entry non-tols (7%)
(Freeman & Evans, 2010)

- 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
  - Freeman used electronic records
- Arumugam et al. (2018)
  - Paper records associated with more data entry errors (11%)

Binocular vision anomalies (2%)
(Freeman & Evans, 2010)

- Beware of convergence insufficiency associated with ageing
- Don’t prescribe multifocals to patients with superior oblique paresis  Evans (2007)
- Check for prisms in old glasses
- Prescribe prisms when required
  - E.g., Mallett unit, EyeGenius

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
- Epictetus: Caretake this moment. Immerse yourself in its particulars. Respond to this person, this challenge, this deed.
**PLAN**

CLASSIFICATION

WHY

PREVALENCE

AVOIDANCE

CONCLUSIONS

---

**Avoidance – prescribing**

- Epictetus: “events do not just happen, but arise by appointment”
- 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
- Consider vocational/accomm support lenses (e.g., Sync III)
- Experienced practitioners modify their Rx to reduce risk of non-tol – partial prescribing

---

**Avoidance – communicating**

- 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)

---

**Avoidance – dispensing**

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

---

**Psychological approach to a 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.”
  - “Thou shalt not blame or flatter any” (Epictetus, 55-135AD)
- Interpretation:
  - Rare for there to be smoke without fire
- Strategies:
  - Be extra thorough – Epictetus: “no thing great is created suddenly”
  - Make sure that you have solved the problem
  - Epictetus: “only the educated are free”
  - Explain what you can and can’t do
Other considerations

- Beware of large changes
  - Cummings et al. (2007) found increased risk of falls when Rx changed
  - Many of the changes in this study were >0.75 D

- Look upon a re-check as an opportunity (see next slide)
  - Epictetus: “With every accident, ask yourself what abilities you have for making a proper use of it”

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.”
  - Epictetus: “It is difficulties that show what we are”

- Non-tols are a culture-defining moment
  - Give them more time
  - Meat thorough exam
  - Listen more carefully
  - Epictetus: “We have two ears and one mouth so that we can listen twice as much as we speak”
  - Start with:
    - Listen – repeat – listen
  - End with:
    - Listen – listen – explain
  - Epictetus: “only the educated are free”

Conclusions

- Over 80% of non-tols are presbyopes
  - Explore their working distances
- 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

Dr Optometry

- In 2008 the Institute of Optometry launched a Doctor of Optometry degree in collaboration with London South Bank University
- 5 year part time professional doctorate
  - Year 1 has 13 taught days & 2 assignments
  - Year 2 has 8 taught days & 2 assignments
  - Years 3-5 are supervised doctoral research
  - Research most likely to be clinical, in practice
  - “the ultimate HQ for UK optometrists”