



# Benefits of High Profile Yoga Research

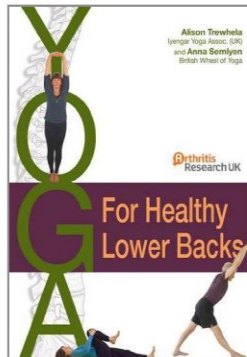
BY ALISON TREWHELA AND OTHERS AT THE  
YOGA FOR HEALTHY LOWER BACKS INSTITUTE

# YOGA for Healthy Lower Backs (YHLB)

Specialised 12-week Course - Evidence-based  
Arthritis Research UK / University of York Research

- \*Gentle \*Effective \*Enjoyable
- \*Quality \*Small Group Classes
- \*Unique \*Specific \*Individualised
- \*Beginner-friendly \*Cost-effective
- \*Teaches and Motivates

Health & Wellbeing Promotional Self-  
management



# What do We Mean by High Profile?

- ▶ **Good Quality**
- ▶ **Rigorous Research**
- ▶ **Robust Analysis/Results/Findings/Research Conclusions**
- ▶ **Publications in Top Journals, i.e. noticed by others and the target audience**
- ▶ **Years later, Research still Highly-Rated**
- ▶ **Knowledge Transfer**
- ▶ **Citations and Systematic Reviews**

# Who Benefits?

**From this University of York / Arthritis Research UK  
'Yoga for Healthy Lower Backs' research =**

- 1. General Public - Those with Back Pain**
- 2. Yoga Teachers**
- 3. Yoga Community**
- 4. NHS and Public Sector**
- 5. Workplaces (staff and employers)**

# Stages of a Research Project...

## **A Design Phase (From December 2005)**

- ▶ **1. Idea – Discussions (York Trials Unit instigated idea = key)**
- ▶ **2. Trial Team Set-Up (included BWY / IYUK reps)**
- ▶ **3. Trial Design Phase**
- ▶ **4. Design Yoga Programme**
- ▶ **5. Proposal Bid (research calls)**

# Stages of a Research Project...

## **B Planning Phase after Grant Success (from March 2007)**

- ▶ **6. Independent Steering Committee Set-Up (Large Team)**
- ▶ **7. Trial Steering Committee Meetings (lead, co-ordinator)**
- ▶ **8. Methodology Design (Measures, statistics, economic, blind)**
- ▶ **9. Ethics Approvals**
- ▶ **10. Pilot Trial (processes)**
- ▶ **11. Compile Yoga Educational Resources**

# Stages of Research Project...

## **C Recruitment and Randomisation to Groups**

- ▶ **12. Recruit Yoga Teachers**
- ▶ **13. Train Yoga Teachers (n=20)**
- ▶ **14. Recruit GP Surgeries (n=39)**
- ▶ **15. Recruit Patients / Participants / Students (n=1000+)**
- ▶ **16. Participant Eligibility (n=313)**
- ▶ **17. Randomisation (Control / Intervention)**
- ▶ **18. Collate Baseline Data and Outcome Measures**

# Stages of Research Project...

## **D Yoga Intervention Begins (from November 2007)**

- ▶ **19. Implementation of Yoga Intervention (2 cohorts)**
- ▶ **20. Gathering Follow-Up Outcome Measure Data (BL, 3/6/12 months)**
- ▶ **21. Adverse Event Reporting**
- ▶ **22. Final Outcome Measure Data Collation (Primary / Secondary)  
(p-value 0.05; 'significant' / missing data - trends)**
- ▶ **23. Data Analysis and Sensitivity Analyses  
(preference/education/region/teacher +++)**
- ▶ **24. Initial Results (confidential to Trial Team)**



# Stages of Research Project...

## **D Paper Writing and Publication (2010-2012)**

- ▶ **25. Compile papers – a. Protocol (methodology) b. Pilot re recruitment and processes c. Yoga effectiveness**
- ▶ **26. First Draft Review and Editing Process (Trial Team)**
- ▶ **27. Submit paper to Journal(s)**
- ▶ **28. Peer-review Process leading to Q&A, more manuscript editing and re-runs of statistics**

# Stages of Research Project...

**E Main Paper Publication Acceptance (1<sup>st</sup> Nov. 2011)**

**i.e. 6 Years until YHLB Could be Shared!**

- ▶ **29. Prepare Publication Supplement (YHLB Video) for Annals of Internal Medicine**
- ▶ **30. Plan Embargoed Press Release (University of York/ Arthritis Research UK / Annals of Internal Medicine)**
- ▶ **31. More research papers / publications a. Cost-effectiveness paper (Spine Journal 2012) b. Compliance paper (Physiotherapy Journal 2012) = 5 papers**
- ▶ **32. Applications for more yoga research (depression, OA)**

# Citations and Systematic Reviews

- ▶ Citations in other papers (YHLB - approx. 300 end of 2017)
- ▶ Systematic Reviews and Meta-Analyses (always included in back pain, as most significant)
- ▶ NICE Review Process (313 participant; cost-effectiveness; robust)
- ▶ Cochrane Review (wording)
- ▶ University of York / Arthritis Research UK largest and most significant because...
- ▶ N. B. For reviews - all relevant trials available; sift via inclusion criteria; add all together for overall report on efficacy

# Is All Yoga Research Helpful?

**Not necessarily...**

- ▶ **Participant Numbers and Statistical Power**
- ▶ **Good Research often Proves Something does NOT work**
- ▶ **Mid-quality research (sham acupuncture; stretching v yoga)**
- ▶ **Not comparative to past research**
- ▶ **Who leads the research is important – team of experts**
- ▶ **Bias (participants, lead researchers, trial team, author of papers)**
- ▶ **Quantitative versus Qualitative**
- ▶ **Bad Publicity**

# Yoga for Healthy Lower Backs Institute

- ▶ **Evidence-Based Ethos – unique**
- ▶ **Training New YHLB Teachers (same tutor)**
- ▶ **Apply to NHS / Public Health**
- ▶ **Network / Education / Conferences /**
- ▶ **Collaborate with other Yoga Organisations for Mutual Benefit**
- ▶ **Recognition of High Standards of Training (ICNM/ BWY/ CNHC)**

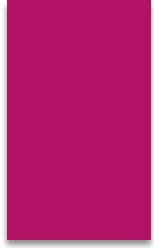
# Knowledge Transfer

- ▶ Edits to Educational Resources for Publication and Future Use (agreements)
- ▶ Set up of social enterprise (Agreements; Altruistic; EBM)
- ▶ Working with Yoga Organisations
- ▶ YHLB Taster Days BWY
- ▶ [www.yogaforbacks.co.uk](http://www.yogaforbacks.co.uk) Website Launch 1/11/2011
- ▶ Education (yoga world, more media attention)
- ▶ Training more Yoga Teachers
- ▶ Supporting YHLB Institute Registered Teachers
- ▶ NICE stakeholder involvement (from 2011)
- ▶ Challenge = “Another paper...”; “A new yoga study...” (LH Chuang et al links to H. Tilbrook et al)

# Benefits of YHLB Research - General

- ▶ **'Gift' from University of York and Arthritis Research UK**
- ▶ **Take advantage of background knowledge, investment, work, efforts, passion (PPX Link .....**
- ▶ **Specificity = A Strength = 'Keep to Evidence-Base' Ethos**
- ▶ **'Generalisability'**
- ▶ **'Biopsychosocial' Approach to Prevalent Condition**
- ▶ **YHLB is being Generously Shared**

# Large Nationwide Project



## YHLB represents:

- ▶ **'Generalizable' evidence-based yoga** intervention designed by Alison Trehwela (20 teachers from multiple yoga schools; 2 cohorts; 5 centres)
- ▶ **11+ years** of 'best practice design', research, post-research development;
- ▶ **500++** people have put in effort, work, passion (researchers, charities, publisher, CD developers, national bodies, and yoga teachers)
- ▶ **£438,500++** investment (£285,000 = charity funding, plus estimated £180,000+) University of York pilot trial (H Cox et al 2011) paper editing, educational resource accessibility, teachers travelling and paying for training courses, teachers attending CPD courses, presentations +++
- ▶ **Social Enterprise and nationally-accredited Yoga Training School**

## Currently (2017):

- ▶ **6000+** people benefitted from YHLB programme since 2007
- ▶ **350+** Experienced UK Yoga teachers trained
- ▶ **Performing well and available** throughout UK (including NHS / workplaces)
- ▶ **Support** from NHS, AHSNs, Public Health England +



# Benefits... to Those with Back Pain

- ▶ **Confidence - It works!**
- ▶ **EBM – Exactly what it says on the packet**
- ▶ **Quality-assured – Teaching, Educational Resources**
- ▶ **Appropriate Specialised yoga with knowledgeable experienced teachers**
- ▶ **Gentle, beginner-friendly**
- ▶ **Gradual learning that progresses as they learn**
- ▶ **Learn how to improve comfort, health and well-being for now and the future (+ ‘side-effects’ = NOT just back pain benefits)**
- ▶ **Life-long tool-kit - Empowering – 63% improvement in self-coping**

# Benefits... to Yoga Teachers

- ▶ Rewarding, skilled work
- ▶ Increased Knowledge of Specialised/ Therapeutic Yoga + CPD
- ▶ Programme has: a. Depth of Knowledge behind it b. Perhaps the largest form of Accreditation = RCT c. Multiple inputs = 'a best practice' programme
- ▶ Be part of Ground-breaking, Exciting Project + Respect for Evidence-base
- ▶ Professional Supportive Team-working approach
- ▶ Teach Standardised Programme (12 class plans) with wealth of Pose Adaptations/ Variations for Helping Individuals Optimally
- ▶ Reaches New People; Teaches Good Yoga Foundation (all aspects)
- ▶ Helping Raise Yoga's Profile – 'Take Yoga to the Next Level' (Acceptance)

# Benefits... to the Yoga Community

- ▶ **Raises Yoga's Profile (international - Karolinska Inst; national - PHE)**
- ▶ **Shows Unity - Partnership-working**
- ▶ **Kudos to Organisations and Teachers involved (= reassurance)**
- ▶ **Exciting - Academics / Healthcare Professionals (esp. GPs) / Government Departments now Interested in Yoga**
- ▶ **Yoga students know yoga works, but can persuade their friends to try this specialised gentle programme**

# Benefits... to NHS and Public Sector

- ▶ Referrers - NICE recommends 'exercise as a first step to managing back pain' and 'advice and support for self-management at all stages of care pathway' (Not many EBM programmes)
- ▶ GPs (appreciative, happy patients), Physios (next stage), Pain Clinic/Spinal Consultants. Improves Multi-morbidities
- ▶ Back Pain Care Pathway / HWB Providers (fills gap in pathway)
- ▶ Commissioners (STPs/ACOs) (fits NHS 5-Year Forward View; budgets; 'Dominant treatment for society'). Mind-Body.
- ▶ Public Health England lists YHLB in report and online 'tool' as one of 7 MSK interventions offering ROI (£10 return for £1 investment)
- ▶ CEO of NHS England quote "This is just the kind of gold standard programme that could be commissioned."

# Benefits... to Workplaces

- ▶ **70% Reduction in Work Absenteeism**
- ▶ **Value Staff by Subsidizing YHLB**
- ▶ **Multiple Benefits**
- ▶ **Especially good for NHS staff**
- ▶ **First Year Cost Savings (£800 pp over 12 months after paying £292 YHLB course cost)**
- ▶ **Subsequent Years Cost Savings – Long-Term plus YHLB helps other Conditions**

# Post-Research YHLB Development Work Continues...

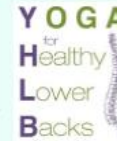
- ▶ **Gathering Data / Evaluation YHLB Programme (Studies, UEMS, NHS England SW Deanery, NHS Pilots, NHS Staff Pilots, Outperforming original research; mental health benefits); Uni. Exeter Med. Sch. Scientific Posters**
- ▶ **CPD for Teachers / Mail-Outs**
- ▶ **Cornwall YHLB Steering Group**
- ▶ **National YHLB Steering Group**
- ▶ **Schemes (NHS Staff, Pilot, Workplaces)**
- ▶ **YHLB Hubs and YHLB Teaching Teams**
- ▶ **Working with Public Health England, Arthritis Research UK, ARMA, NHS England, NICE +++**
- ▶ **Alison Trehwela continues to educate, e.g. chapter in CAM Research Methodology; review; articles; websites; blogs; media**

**N.B. Project Began in 2005 !!! Still challenges / obstacles.**



## The implementation of the evidence-based 'Yoga for Healthy Lower Backs' - course as a treatment option for patients with back pain

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YHLB Registered Teacher  
Quality Improvement Project - Cornwall Pilots August 2017



### Introduction

Back pain is a common and often chronic condition that is costly both for the NHS and our society as a whole. The Yoga for Healthy Lower Backs programme (YHLB) is a gentle evidence-based [1] and cost-effective [2] 12-week program that enables patients to self-manage their chronic back pain in the long-term.

### Aims

- Make YHLB available to NHS patients of Penryn +/- other Cornish surgeries and evaluate outcomes
- Educate health care professionals about YHLB
- Evaluate obstacles to implementation

### Methods

Support for pilots gathered by presenting at clinical meetings at Penryn, Perranporth and Hayle surgery.

Referral through GPs, physiotherapists and self-referral using waiting room posters / fliers.

Funded through patient contribution £56-100, SW Deanery scholarship, subsidized by A. Trehwela & Perranporth surgery.

Pilot 1 (n=9/12) & Pilot 2 (n=10) courses were taught to Penryn patients. Pilot 3 (n=12) was delivered to patients of Perranporth and St Agnes surgeries.

Pre-and post-course questionnaires were used to measure outcomes.

Further GP education through presentations at RCGP CPD evening at the Duchy hospital & SWAHSN 'Sharing best practice' conference, PPTs to GP ST3s / ST2s & Kerrier CMHT.

Foundation of 'YHLB Steering group' and liaison with Kernow CCG, Kernow Health, RCHT Pain Clinic, local MP.

Draft created for new local back pain pathway incorporating new NICE guidelines.

### Main obstacle - Funding

Course evaluated at £292 in 2008 [2], currently offered for £224 in the private sector incl. course book, CD & handouts.

Exclusion of socially deprived patients even with reduced patient contribution towards total course cost.

Possible funding from Cornwall Community Foundation through Age UK.

Currently preparing application to another UK charity.

### Acknowledgments

I would like to thank A. Trehwela, E. Campbell, J. Katz, J. Huddy, E. Berry, J. Munro, R. Beckley, L. Fogg, Perranporth Surgery, Penryn surgery, St Agnes surgery, Hayle surgery, the Cornish TPOs, the YHLB steering group and the South West Deanery for all their efforts, kind support and encouragement.

**References** [1] Yoga for Chronic Low Back Pain: A Randomized Trial' Annals of Internal Medicine 2011 H. E. Tilbrook, H. Cox, C.Hewitt et al. [2] 'A Pragmatic Multi-centred Randomized Controlled Trial of Yoga for Chronic Low Back Pain: Economic Evaluation' Spine Journal 15th August 2012 Chuang LH, Soares MO, Tilbrook H et al.

### Results

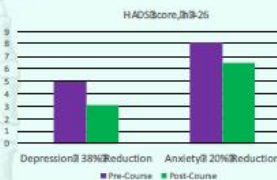
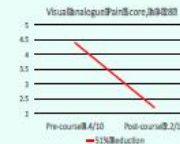
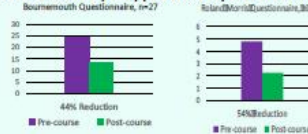
Feedback from RCGP CPD evening – 100% of 21/22 GPs would consider suggesting or referring patients to YHLB & would support its inclusion as a fully funded NHS service.

### Patient quotes

*'The course got me back to work after 6 ½ month, my recovery had plateaued and I was feeling desperate.'*  
*'I'm firmly convinced that empowering people to tackle things themselves is the best way forward.'* *'It's great to see the NHS taking a proactive approach to back issues.'*

### Outcomes

(28 pre- & post-course patient questionnaires)  
Reduction in analgesia and antidepressants was noted - 5 patients reduced / stopped their Opioid medication



### Conclusion

These YHLB Pilots show impressive outcomes with regards to back pain & function as well as mental health.

Funding remains the main obstacle to implementation alongside lack of familiarity amongst GPs.

NICE wants it, patients want it, GPs who know it want it: It is time to de-medicalise back pain & facilitate self-management with the help of innovative treatment options such as 'Yoga for Healthy Lower Backs'.

# Yoga for Healthy Lower Backs Research and Benefits

## ▶ Q&As?

**View Powerpoint Presentation for GPs on YHLB  
research, NHS Pilot projects at Health Professionals  
Page at...**

**[www.yogaforbacks.co.uk](http://www.yogaforbacks.co.uk)**

**[YHLBInstitute@gmail.com](mailto:YHLBInstitute@gmail.com)**



Thank You for Your Time  
and Support

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