

**PROTOCOL OF COMMUNITY BASED *YOGIC*  
LIFESTYLE INTERVENTION: A NATIONAL  
STRATEGY FOR PREVENTION AND EFFECTIVE  
MANAGEMENT OF TYPE 2 DIABETES AMONG  
ELDERLY IN INDIA**

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# INTRODUCTION

- Estimation increase of 69% of type 2 DM (T2DM) by 2030 in developing countries
- India – Projected as ‘diabetes capital of world’
- The prevalence of T2DM increases with age
- 30.42% of elderly in India have T2DM.

# INTRODUCTION

- Yoga as effective, safe, cost effective lifestyle intervention in elderly
- Need for translating into prevention programs at the national level

# AIM

- To develop and implement the community based protocol of yogic lifestyle intervention for prevention and effective management of T2DM in elderly

# METHODOLOGY

- Design
  - Exploratory study design
- Process of research
  - Literature review
  - In-depth interviews and focused group discussion with experts

# METHODOLOGY

- Literature review (2003 – 2013)
  - 22 Indian and 58 Non-Indian prevalence studies of T2DM
  - 14 Indian and 6 Non-Indian *yoga* intervention studies
- No comprehensive community based *yoga* protocol developed till date
- Interview guide developed based on the literature review

# METHODOLOGY

- Interview guide questions focusing on
  - Main aim of the study
  - Research protocol of the study
  - Research design for prevalence studies
  - Sample size for prevalence studies
  - Standard criteria for identifying pre diabetes/T2DM
  - Research design for intervention studies
  - Sample size for intervention studies
  - Others topics to be included in the protocol.

# METHODOLOGY

- Individual In-depth interviews followed by five focused group discussions with two to three experts at a time
- Sample – 6 experts  
(epidemiologist, medical physician, *yoga* expert, researchers and field survey analyst)



# Socio-Demographic details of experts

Experts (n=6)			
Variable	n [(% / mean (SD))]	Variable	n [(% / mean (SD))]
Age of the experts (years)*	48.2 (15.42)	Education (years)*	18.18 (2.77)
Occupation		Gender	
Epidemiologist	1 (16.66)	Male	4 (66.67)
Research Experts	2 (33.33)	Female	2 (33.33)
Yoga Expert	1 (16.66)		
Medical Physician	1 (16.66)	Experience in the field (Post formal education)*	24.09 (14.65)
Field survey analyst	1 (16.66)		

# DATA ANALYSIS

- Transcribed in a word processor manually
- Reviewed several times and was organized according to the order of the questions
- Manual content analysis as data generated was not too large
- Important and new suggestions (themes) were teased out

# PROTOCOL EMERGED

- Three phases
  - Pre-intervention Prevalence survey (5 sub-protocols)
  - Efficacy studies and training of Trainers
    - Efficacy studies of *yoga* module in DM
    - Training of the trainers in the local community
  - Post intervention Prevalence Survey (same as in phase 1)



# PILOT STUDY OF PHASE 1

- Pre- Prevalence study with  $n = 1602$
- Systemic random sampling
- Self reported prevalence of T2DM – 14.23% ( $n = 228$ )
- People at risk of T2DM ( qualifying diabetes risk test by ADA) – 12.42% ( $n = 199$ )
- Elderly with T2DM or at risk – 40% ( $n = 170$ )

# PILOT STUDY OF PHASE 2

- Training of local trainers
- Two 10 days camps
- n = 455 (elderly and non-elderly)
- yogic lifestyle intervention
- Significant improvement in Fasting Blood Sugar (FBS) levels ( $p < 0.05$ ; n = 180) among the elderly

# PILOT STUDY OF PHASE 3

- Long-term follow-up of the subjects and Phase 3 with re-assessment of prevalence is to be conducted.

# CONCLUSION

- The successful implementation and results of the above protocol at Rajkot shows that it is feasible to translate *yogic* lifestyle intervention in the community



# CONCLUSION

- The present protocol is planned to be implemented in two cities in each of the six zones of India as a pilot project. (north, south, east, west, central and north-east)

# CONCLUSION

- The successful implementation in the community would help to achieve the ultimate goal of prevention and management of T2DM among the elderly at national level.

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# THANK YOU

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