

“Nagarik Arogya Program” at urban health settings and its’ contribution in preventing NCDs



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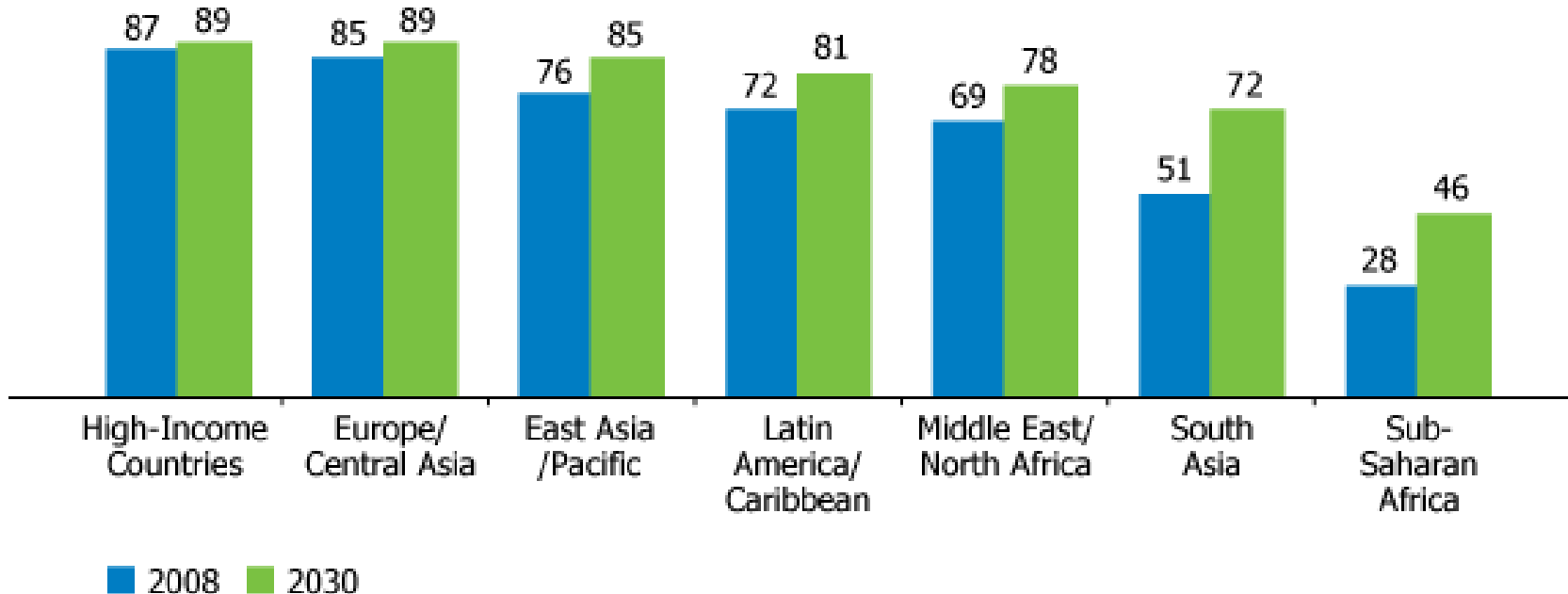
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Member – Tarkeshor Municipality Health committee

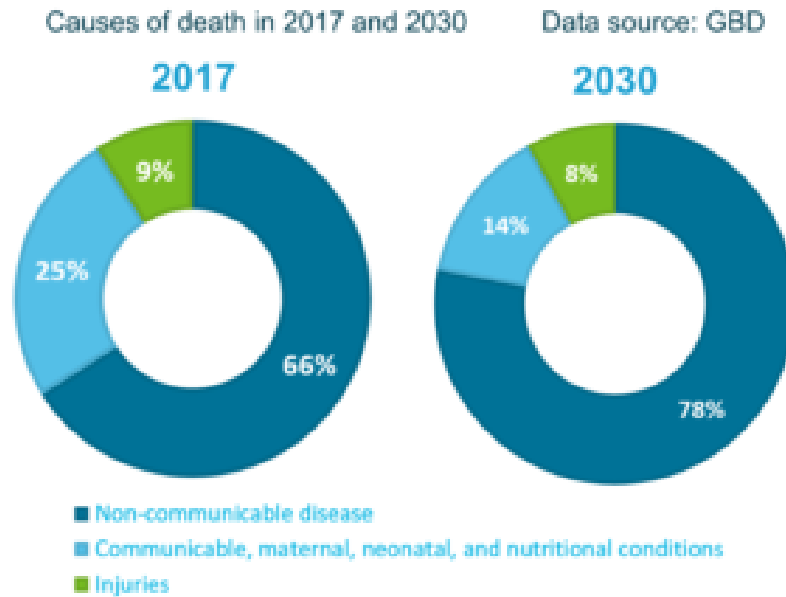
Global burden of NCDs

Percent of Total Deaths Attributed to NCDs, All Ages



Population reference bureau

NCDs burden in Nepal

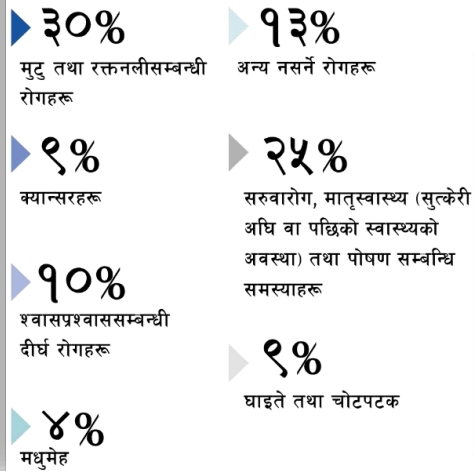


HERD international

Burden of diseases in Nepal

चित्र १ : मृत्युदरको अनुपात : नेपाल २०१८

मृत्युको अनुपात*



Multi- sectoral plan for prevention and control of NCDs 2021-2025, MOHP

Cause

COPD

Ischemic heart disease

Stroke

Lower respiratory infect

Risk

Air pollution

Malnutrition

Tobacco

High blood pressure

Global Burden of Disease (GBD) 2023

Country Profile: Nepal

Tuberculosis

Self-harm

Rheumatic heart disease

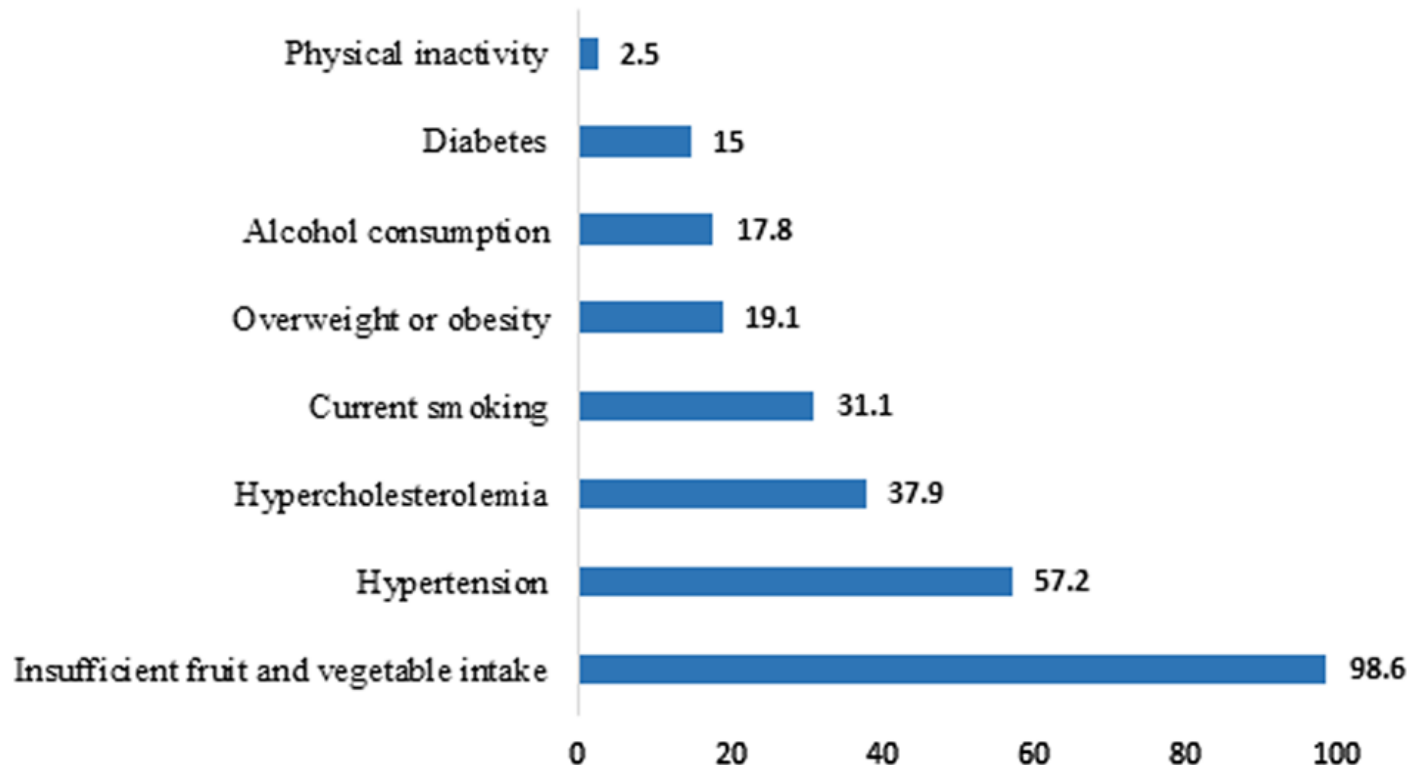
High body-mass index

Kidney dysfunction

Other environmental

NCD risk factors among older adults aged 60–69 years in Nepal

Ranking of the eight non-communicable disease risk factors (%)



STEPS survey 2013

NCDs and common risk factors

तालिका १ : नसर्ने रोगहरू र परिमार्जनीय साझा जोखिमकारक तत्त्वहरू (५ x५ मोडेलमा)

प्रमुख नसर्ने रोगहरू / जोखिम तत्त्वहरू	सुर्तीजन्य पदार्थ प्रयोग	अस्वस्थकर खानपान	शारीरिक सक्रियताको कमी	मादक पदार्थको हानिकारक प्रयोग	वायु प्रदूषण
मुटु तथा रक्तनलीसम्बन्धी रोग	√	√	√	√	√
मधुमेह	√	√	√	√	
क्यान्सर	√	√	√	√	√
श्वासप्रश्वाससम्बन्धी दीर्घ रोग	√				√
मानसिक स्वास्थ्य	√	√	√	√	

Multi- sectoral plan for prevention and control of NCDs
2021-2025, MOHP

Trends of NCDs risk factors in Nepal

Risk Factor	2007/08	2013	2019
Tobacco use	37.1 %	30.7 %	28.9 %
Alcohol use	28.5 %	17.4 %	20.8 %
Low fruit/veg intake	61.9 %	98.9 %	96.6 %
Physical inactivity	5.5 %	2.3 %	7.4 %
Overweight/obesity	7.2 %	21.6 %	24.3 %

STEPS survey 2008, 2013 & 2019

“Nagarik Arogya Program (NAP) “ (1)

- Government initiated community based citizen-centered health promotion program
- Implemented through Nagarik Arogya Centers
- Emphasizes healthy lifestyle and self-responsibility

“मेरो स्वास्थ्य, मेरो जिम्मेवारी”

- Focus on NCD prevention, health promotion

नागरिक आरोग्य कार्यक्रम
संचालन निर्देशिका, २०७६



नेपाल सरकार
स्वास्थ्य तथा जनसङ्ख्या मन्त्रालय
आयुर्वेद तथा वैकल्पिक चिकित्सा विभाग,
टेकु, काठमाडौं

“ Nagarik Arogya Program (NAP) “ (2)

Objectives

- Promote healthy behaviors
- Reduce risk factors of NCDs
- Increase health awareness
- Encourage community participation

“ Nagarik Arogya Program (NAP) “ (3)

Major activities

- Health education sessions
- Yoga, meditation, physical activity
- Lifestyle counseling
- Community awareness campaigns

नागरिक आरोग्य कार्यक्रम
Citizen Well-being program

हाते पुस्तिका

“ Nagarik Arogya Program (NAP) “ (4)

नागरिक आरोग्य कार्यक्रम

20

३. मेरो स्वास्थ्य, मेरो जिम्मेवारी My Health My Responsibility



बिहानै उठ्ने,
ध्यान गर्ने



प्रशस्त पानी पिउने
सन्तुलित आहार खाने



समय समयमा
स्वास्थ्य जाँच गर्ने



दैनिक योग,
व्यायाम गर्ने



तम्बाखु सेवन, धुम्रपान,
मद्यपान नगर्ने



स्वस्थ जीवनशैली
अपनाउने

“Nagarik Arogya Program (NAP) “ (5)



Community Center

Nagarik Arogya Program



Yoga training to FCHVs



Lifestyles modification session



Whole body steam



Yoga training to children



Healthy diet



Janu Vasti



Yoga and meditation with local people



Home visit and Community health camps

Yoga in NCD control and prevention



- **A Mechanistic Model for Yoga as a Preventive and Therapeutic Modality**
[Indranill Basu-Ray](#) ^{1, 2, 3}
- **Raising burden of non-communicable diseases: importance of integrating Yoga and Naturopathy at primary care level**
[Hyndavi Salwa](#) ¹, [Pradeep M K Nair](#) ²
- **Beyond the Badge: A Scoping Review Among Police Personnel in South India Exploring the Impact of Yoga and Health Education on Cardiovascular Health**
[Angusubalakshmi R](#) ¹, [Pooja Mary Vaishali](#) ¹, [Gomathy Parasuraman](#) ¹
- **The influence of hatha yoga on stress, anxiety, and suppression: A randomized controlled trial**
[Bence Szaszko](#) ¹, [Rebecca Rosa Schmid](#) ², [Ulrich Pomper](#) ², [Mira Maiworm](#) ², [Sophia Laiber](#) ², [Hannah Tschenett](#) ³, [Urs Markus Nater](#) ³, [Ulrich Ansorge](#) ⁴
- **Workplace interventions to improve well-being and reduce burnout for nurses, physicians and allied healthcare professionals: a systematic review**
[Catherine Cohen](#) ¹, [Silvia Pignata](#) ², [Eva Bezak](#) ³, [Mark Tie](#) ⁴, [Jessie Childs](#) ³
- **Reduce stress and the risk of burnout by using yoga techniques. Pilot study**
[Agnieszka Zok](#) ¹, [Monika Matecka](#) ², [Artur Bienkowski](#) ¹, [Magdalena Ciesla](#) ¹
- **Yoga in Obesity Management: Reducing cardiovascular risk and enhancing well-being- A review of the current literature**
[Ganagarajan Inbaraj](#) ¹, [Sarita Bajaj](#) ², [Puneet Misra](#) ³, [Nandini Kandimalla](#) ⁴, [Abhishek Thapa](#) ⁵, [Anit Ghosal](#) ⁶, [Urveesh Sharma](#) ⁷, [Pascal Charles](#) ⁸, [Harish Pobbati](#) ⁹, [Intkhab Hashmi](#) ¹⁰, [Bhavitt Bansal](#) ⁴, [Jacques de Vos](#) ¹¹, [Debasmita De](#) ⁴, [Omar Elshafei](#) ⁴, [Aditi Garg](#) ⁴, [Indranill Basu-Ray](#) ¹²
- **Research on Yoga for stress management: Bibliometric trends from 2000 to 2024**
[Juhi Kumawat](#) ¹, [Kashinath G Metri](#) ²
- **Effect of a single session of yoga and meditation on stress reactivity: A systematic review**
[Gandhar V Mandlik](#) ^{1, 2}, [George Siopis](#) ¹, [Binh Nguyen](#) ^{2, 3}, [Ding Ding](#) ^{2, 3}, [Kate M Edwards](#) ^{1, 2}
- **Role of Yoga in Cardiac Disease and Rehabilitation**
[Raviteja R Guddeti](#) ¹, [Geetanjali Dang](#), [Mark A Williams](#), [Venkata Mahesh Alla](#)
- **Role of yoga in management of essential hypertension**
[S Sundar](#), [S K Agrawal](#), [V P Singh](#), [S K Bhattacharya](#), [K N Udupa](#), [S K Vaish](#)



Results of Regular 1-Month Yoga Practice

(30–60 minutes/day, ≥5 days/week)

Domain	Observed Change
Physical activity	↑ Increased
Blood pressure	↓ Mild reduction
Blood glucose	↓ Improved control
Stress & anxiety	↓ Significant
Sleep quality	↑ Improved
Waist circumference	↓ Reduced
Alcohol/tobacco urge	↓ Reduced



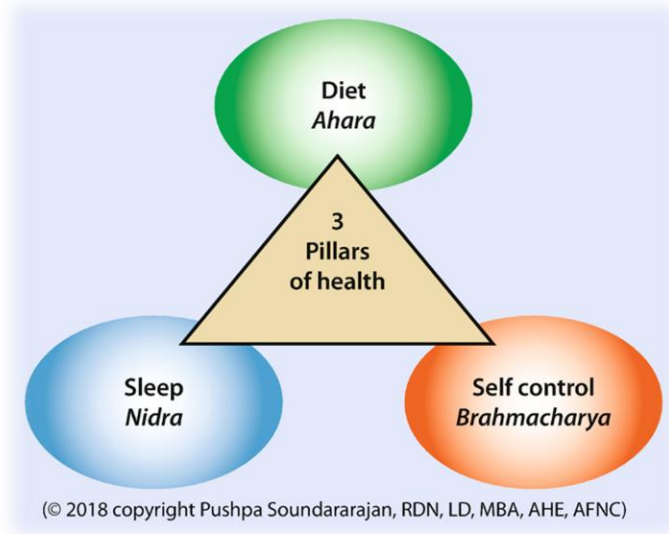
Healthy lifestyle in NCD control and prevention



- **The association between healthy lifestyle and multimorbidity of non-communicable chronic diseases trajectory: evidence from a perspective study in UK biobank**
[Jinrong Wu](#)¹, [Wenbo Jiang](#)², [Ce Ji](#)³, [Conghui Qiao](#)², [Wei Wei](#)², [Yupeng Wang](#)³
- **Healthy lifestyle decreases the risk of the first incidence of non-communicable chronic disease and its progression to multimorbidity and its mediating roles of metabolic components: a prospective cohort study in China**
[Chong Lai](#)¹, [Ruiyi Fu](#)², [Changzhen Huang](#)³, [Lu Wang](#)⁴, [Haiqing Ren](#)⁵, [Yimin Zhu](#)⁶, [Xuhui Zhang](#)⁷
- **Influence of healthy lifestyle on the incidence and survival of cancer and its comorbidities: evidence from a longitudinal cohort study**
[Xinran Cheng](#)^{#1}, [Yuelun Zhang](#)^{#1}, [Chenyu Luo](#)^{1,2}, [Bin Lu](#)^{1,2}, [Na Li](#)^{1,2}, [Yueyang Zhou](#)¹, [Yuging Chen](#)¹, [Min Dai](#)^{#2}, [Hongda Chen](#)^{#3}
- **Healthy lifestyles and risk of major non-communicable chronic diseases and mortality in individuals with metabolic syndrome**
[Xiang Gao](#)¹, [Jiali Zheng](#)¹, [Mengdan Liu](#)¹, [Chong Liu](#)¹, [Yixin Wang](#)¹, [Yan Li](#)¹, [Weihua Chen](#)², [Xiaoguang Li](#)³, [Hui Wang](#)⁴
- **Metabolic and lifestyle factors accelerate disease onset and alter gut microbiome in inflammatory non-communicable diseases**
[Nathalie Rohmann](#)^{#1}, [Theresa Geese](#)^{#2}, [Samantha Nestel](#)¹, [Kristina Schlicht](#)¹, [Corinna Geisler](#)¹, [Kathrin Türk](#)¹, [Fynn Brix](#)³, [Julia Jensen-Kroll](#)³, [Tobias Demetrowitsch](#)³, [Corinna Bang](#)⁴, [Andre Franke](#)⁴, [Wolfgang Lieb](#)⁵, [Dominik M Schulte](#)^{1,6}, [Karin Schwarz](#)³, [Anne-Kathrin Ruß](#)^{2,5}, [Arunabh Sharma](#)², [Stefan Schreiber](#)^{4,7}, [Astrid Dempfle](#)^{#2}, [Matthias Laudes](#)^{#8,9}
- **Eight Weeks of Lifestyle Change: What are the Effects of the Healthy Lifestyle Community Programme (Cohort 1) on Cortisol Awakening Response (CAR) and Perceived Stress?**
[Corinna Anand](#)^{1,2}, [Karin Hengst](#)¹, [Reinhold Gellner](#)¹, [Heike Englert](#)²

Healthy Lifestyles (1)

- Healthy diet
- Regular physical activity
- Avoidance of Tobacco
- Reduced alcohol consumption
- Stress management
- Adequate sleep



Healthy Lifestyles (2)

६. दिनचर्या क्रियाकलाप



४. गण्डुष/कवल

- ❖ एक चिया चम्चा तिल तैल / तोरीको तैल/ नारिवल तेल मुखमा राखी कुल्ला गर्ने तत्पश्चात मनतातो पानीले मुख कुल्ला गर्ने।
- ❖ नून र बेसार वा त्रिफला र जेठिमधु राखी मनतातो पानीले मुख कुल्ला गर्ने।



विहान सबै उठ्ने

दैनिक ३० मिनेट



प्रातः विहानमा गर्ने क्रियाकलाप



५. प्रतिमर्श नष्य

- ❖ दुवै नाकको प्वालमा २/२ थोपा तिल तेल वा गाईको घ्यु राख्ने।



तामाको भाडामा पानी

उठेपछि करिब १ गिलास मनतातो पानी पिउने

१. विहान सबै (सुर्योदय हुनुभन्दा करिब ४५ मिनेट पहिला) उठ्नुहोस्।
२. करिब १ गिलास मनतातो पानी पिउनुहोस् (सकभर तामाको भाडामा राखेको)।
३. दैनिक रुपमा शारीरिक कसरत, योगभ्यास, प्राणायाम तथा ध्यान कम्तिमा ३० मिनेट गर्ने।



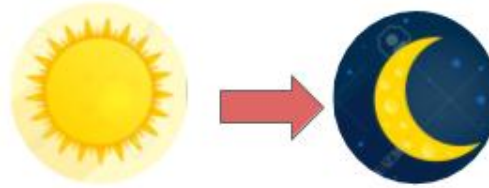
प्रदेश सरकार प्रदेश नं ५
सामाजिक विकास मन्त्रालय

Healthy Lifestyles (3)



प्रदेश सरकार प्रदेश नं ५
सामाजिक विकास मन्त्रालय

६. दिनचर्या



६.१. मध्यान्ह तथा अपरान्हमा गर्ने क्रियाकलाप

- ❖ दिवा समयमा नसुत्ने (गृष्म ऋतुबाहेक) ।
- ❖ दिउसोमा घरमा रचनात्मक कार्यहरु गर्ने जस्तै: अध्ययन, करेसाबारीमा काम गर्ने, खेल खेल्ने, बाल बच्चाहरुको उत्सुकता तथा कौतुहलता मेट्ने सह-साथित्व विकास गर्ने, साहित्य तथा संगीत श्रवण (राग सङ्गीत आदि), नृत्य र विद्युतिय सञ्चारमाध्यमद्वारा स्वस्थ सामाजिक सम्पर्क कायम राख्ने ।

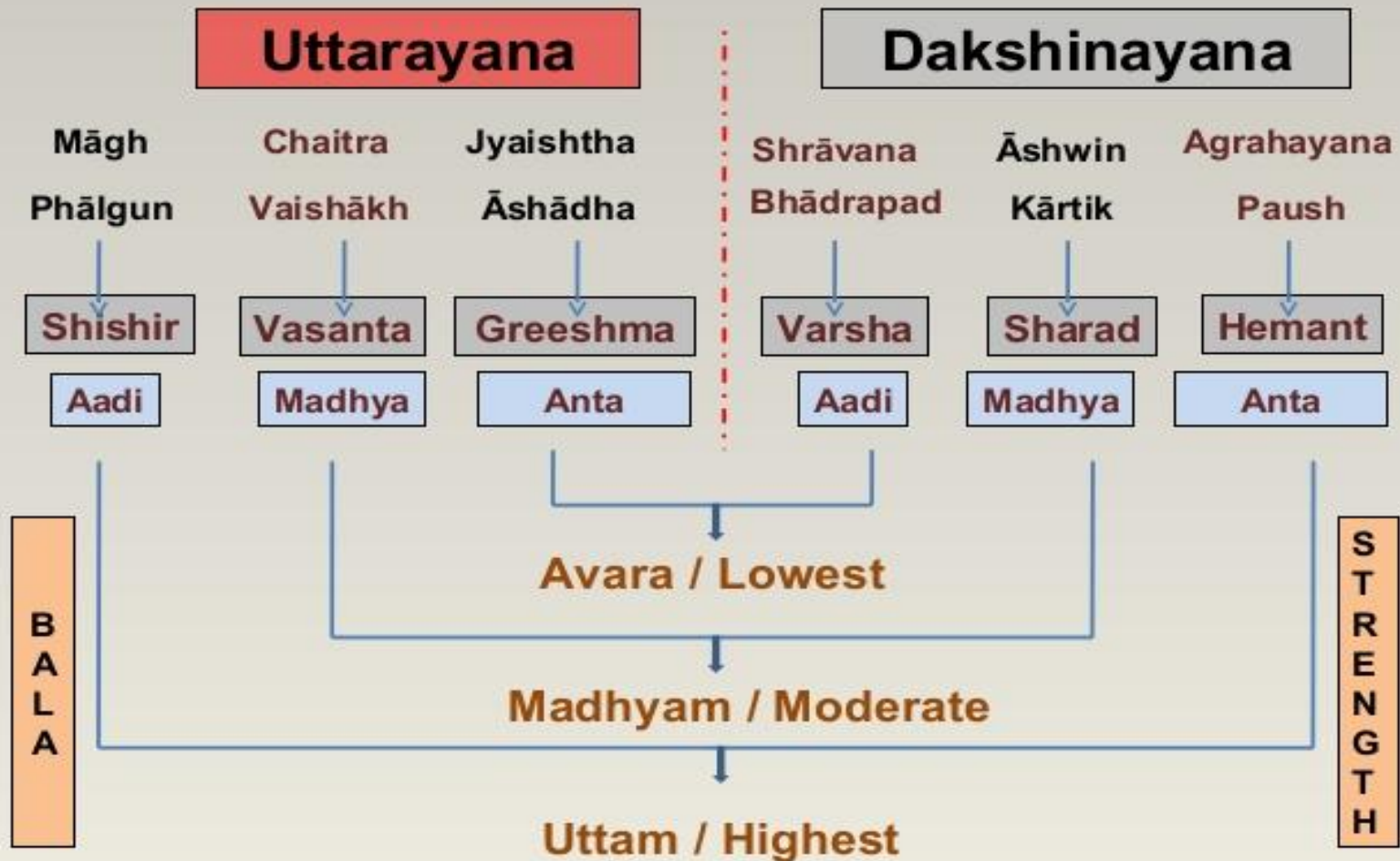
६.३ सन्ध्याकालिन क्रियाकलाप

- ❖ ध्यान/ प्राणायाम ।
- ❖ घरभित्रै गरिने आ- आफ्नो धर्ममा आधारित जप, भजन मन्त्रोच्चारण तथा मनोरञ्जनात्मक क्रियाकलाप गर्ने ।



Healthy Lifestyles (4)

Status of Bala (Strength) During Year



Healthy Lifestyles (5)

□ Seasonal Campaigning of Body Purification



Shatkarma : Cleansing Techniques



Objective

- ❑ To explore NAP initiatives in controlling NCD risk factors among adult populations in Nepal

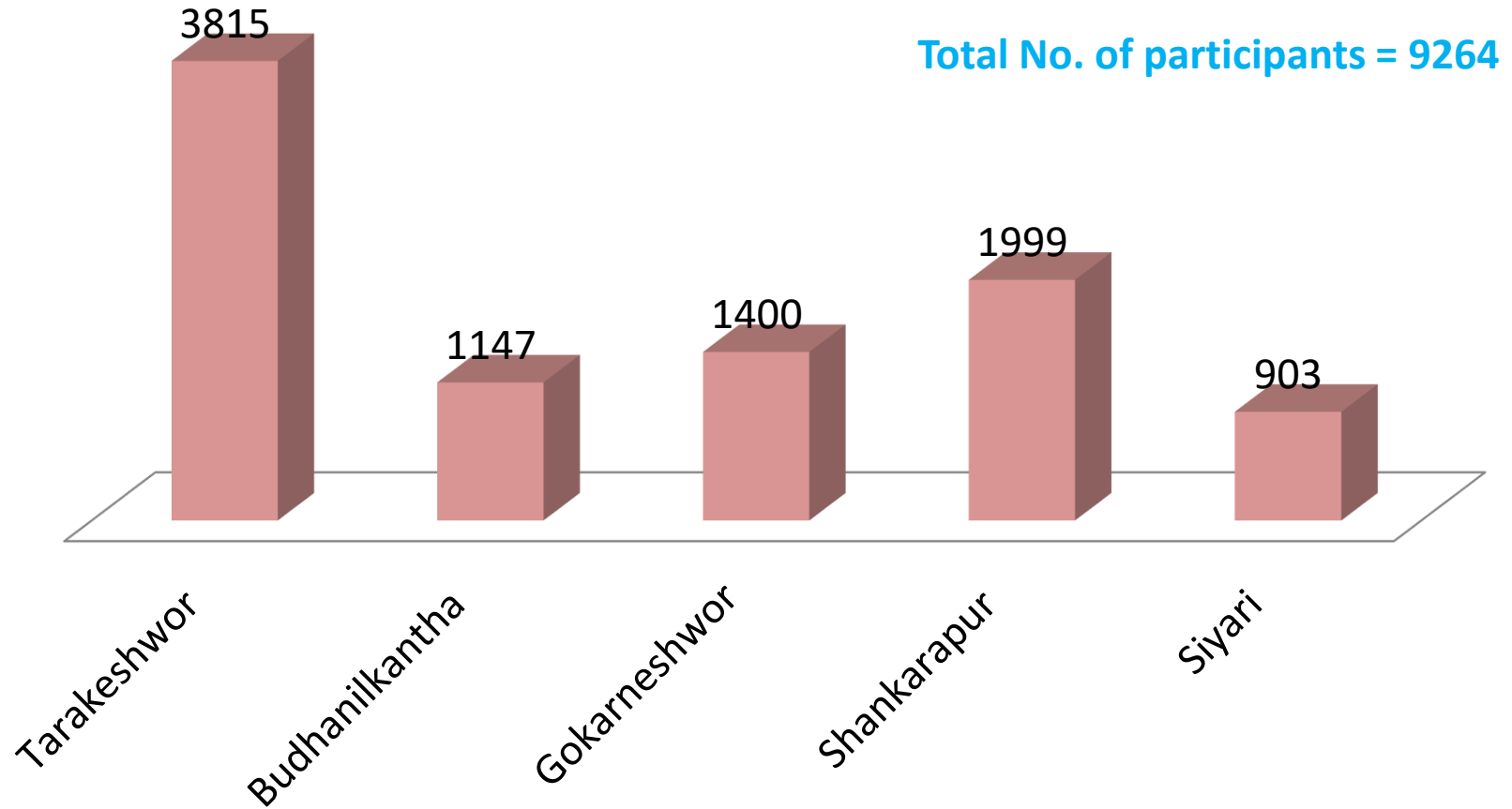
Methodology (1)

- Retrospective review of data from 5 Arogya centers
- FY 2080/81- 2081/82
- Tarakeshor Municipality, Budhanilkantha Municipality, Gokarneshor Municipality, Shankarapur municipality and Siyari rural municipality Lumbini
- Key indicators included participation rates in health education sessions in communities, lifestyle counselling, yoga, and kitchen improvement orientation to mothers
- Randomly selected Informants from programs are interviewed to check the outcome of the program

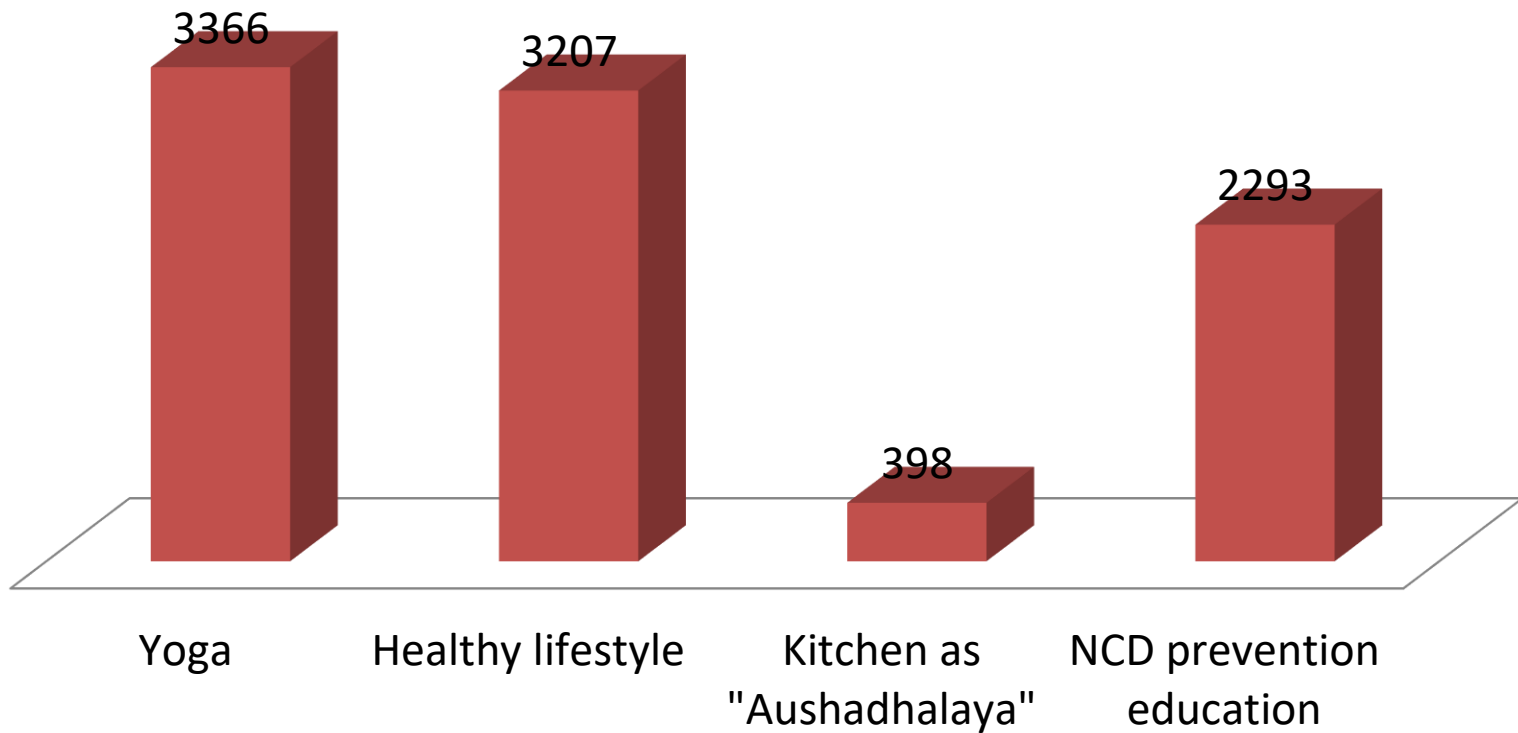
Methodology (2)

- **Population** - Attendants of 5 Nagarik arogya centers (9264)
- **Sample size** – 426
- **Sample selection** – random selection from the attendant list of 4 different programs
- **Technique** – Interview with semi structured questionnaire
- **Tools** - questionnaire format
- **Data collection method** – personal and telephone interview
- **Data entry and analysis** - SPSS

Frequency distribution of participants from 5 different institutions

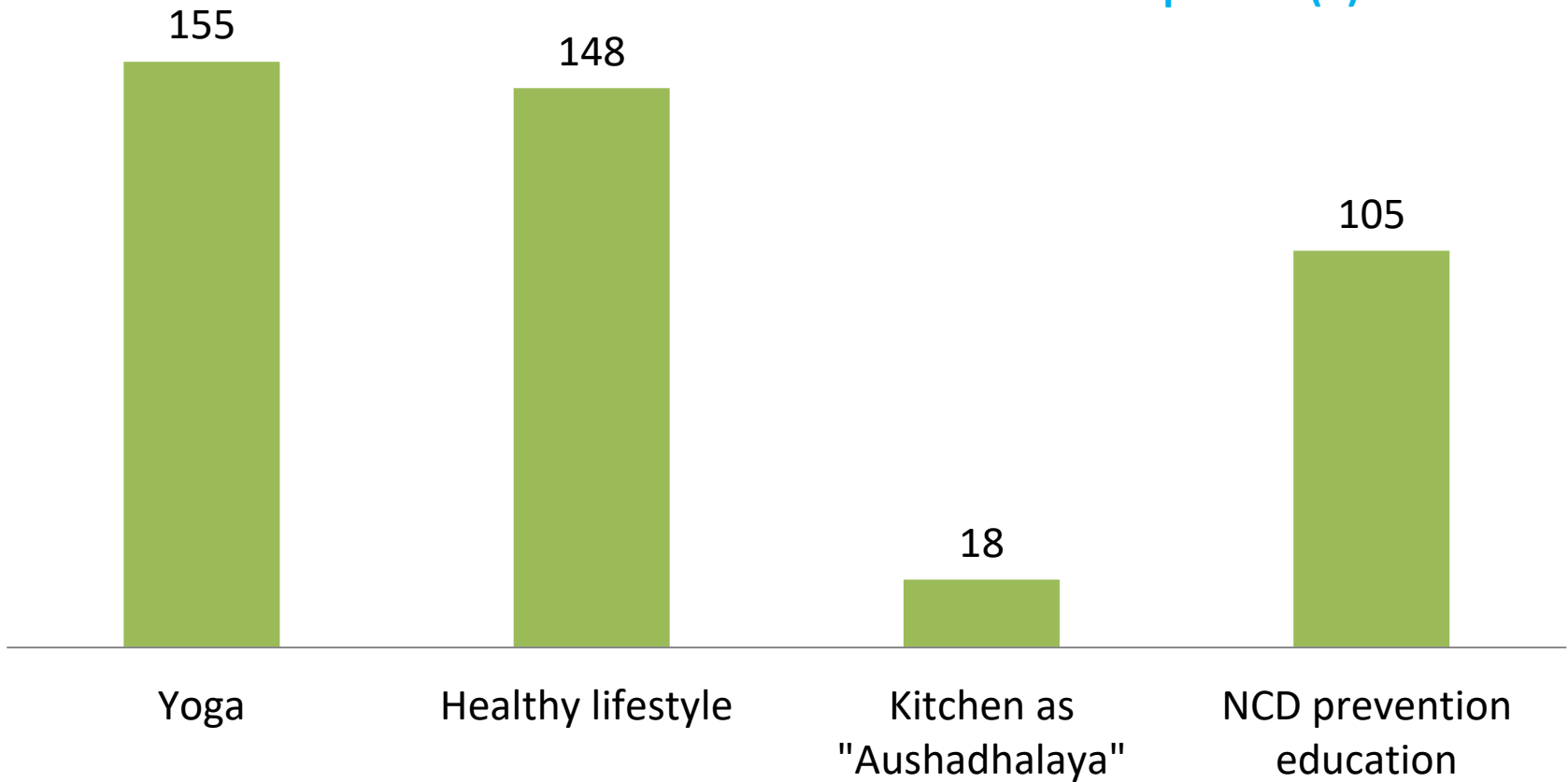


Frequency distribution of participants in 4 major programs



Sampling distribution according to service recipients

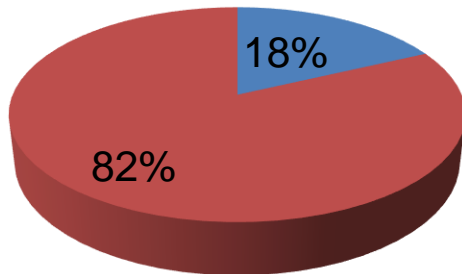
Sample size (n)=426



Age and Sex distributions of respondents

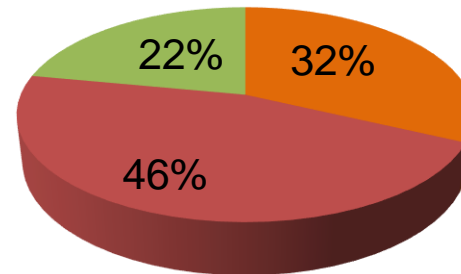
Sex distribution of respondents

■ Male ■ Female

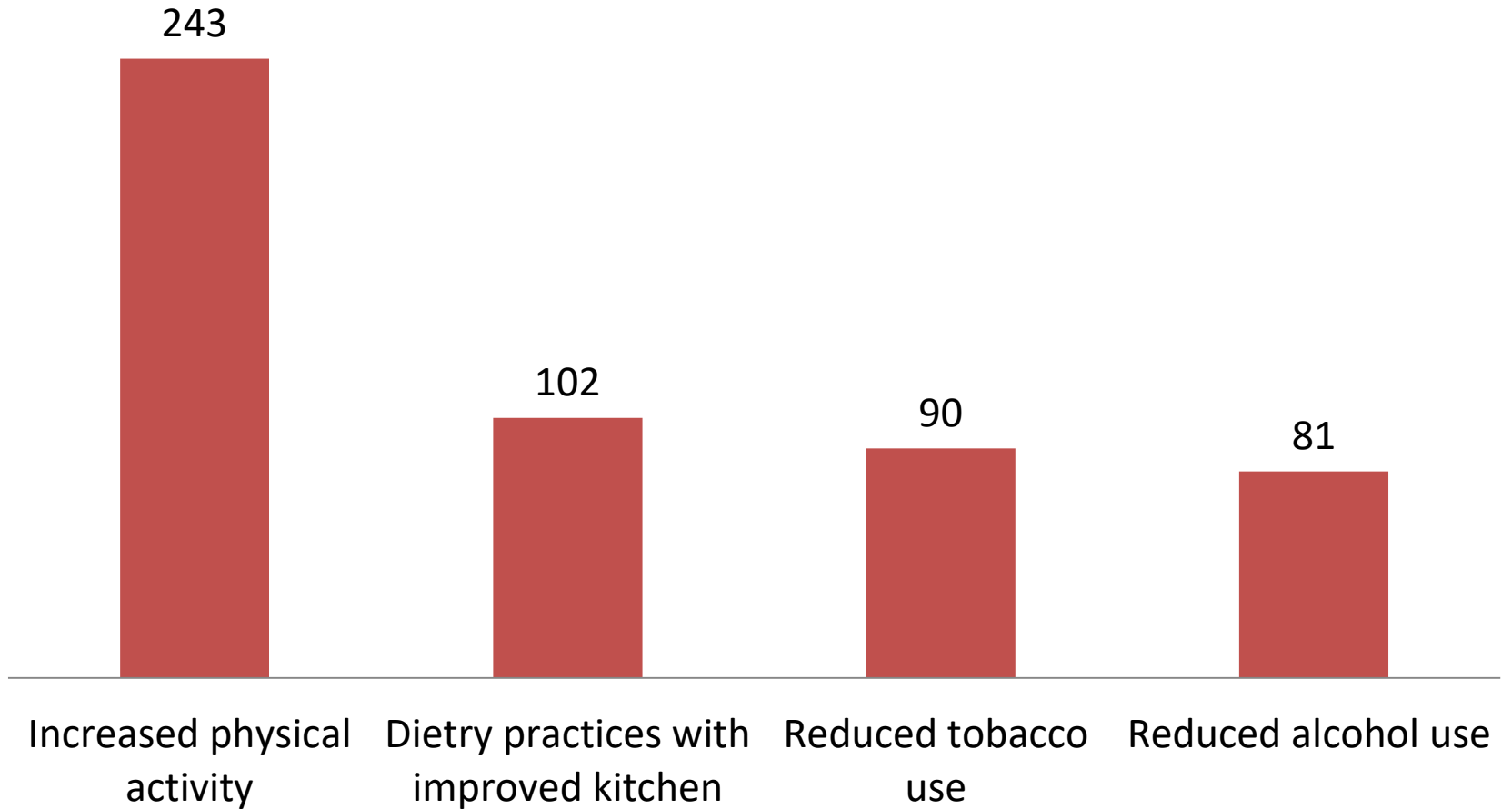


Age distribution of respondents

■ 25-40 ■ 41-60 ■ above 60



Results



Results

Results	Number of respondents	Percentage
Increased physical activity	243	57
Dietary practices with improved kitchen	102	24
Reduced tobacco use	90	21
Reduced alcohol use	81	19

Note: 60 % of respondents from increased physical activity are participants of yoga sessions

Findings

NAP - Role in NCD Prevention

- Promotes physical activity
- Encourages healthy diet and behavior
- Reduces tobacco and alcohol use

Conclusion

- Effective preventive initiative
- Strong potential for NCD control
- Community empowerment is key
- Continued optimization of follow up tracking and expansion of structured behavior change interventions may further strengthen program impact

Acknowledgement

- 5 Nagarik arogya centers and staff
- Respondents
- Dr Puspa raj paudel, MOHP

Thank You !