CHANGING THE COURSE OF CHRONIC DISEASE
One Community at a Time

Arogya in Sanskrit means good health. More literally to live a life without disease. Chronic non-communicable diseases called NCDs, include heart diseases, cancer, diabetes and chronic lung diseases.
THE PROBLEM

NCDs* are among the top health and development challenges of the century.

2 out of 3 deaths in the world are caused by NCDs.

80% in developing countries.

ALARMING DISEASE BURDEN IN INDIA

>20% of population in India has one chronic disease; 10% has more than one.

50% of the population dies from chronic diseases.

70 million people live with diabetes. Diabetes kills 1 million Indians every year (IDF).

75% of people living in metro cities are diabetic or pre-diabetic.

DEVASTATING ECONOMIC IMPACT

Indians get diabetes 10 years earlier than in the West - at the peak of their productive years.

2/3 India's 1 billion plus people are under age 35. Alarming public health crisis as large numbers get diabetes in next decade.

The cumulative economic output loss from NCDs (including mental health) in 20 yrs = $47 trillion.

25% of a poor Indian family’s income is spent on care for one person with diabetes.

*NCDs = heart disease, diabetes, cancer, chronic lung diseases
According to WHO, a healthy diet, exercise and avoiding tobacco can prevent:

- **80%** of Premature Heart Disease
- **80%** of Type II Diabetes
- **40%** of Cancers

Landmark Clinical Trial - Diabetes Prevention Program (DPP):

- 30 mins Physical Activity/day + low-fat diet reduced chances of getting diabetes by **58%**
  (Metformin:31%)
  (NEJM, Feb 7 2002)
- 3,234 high-risk adults in the U.S.A.
- Diabetes prevention with lifestyle changes sustained for **10 years**
  (The Lancet – 2009)

Also confirmed in Indian Studies
Arogya World India Trust is a global health non-profit organization committed to helping people lead healthier lives by preventing non-communicable diseases (NCDs) through health education and lifestyle change.

Our DOORSTEP DELIVERY MODEL takes prevention to where people live, work and learn.

**mDiabetes**
Reach 1.3 million
20% impact

**Healthy Schools**
Reach 200,000 kids
15% impact

**MyThali**
45 workplaces

**Healthy Workplace**
116 companies,
2.5 million employees

**myArogya**
An mHealth initiative

WE HAVE REACHED 4 MILLION, IMPACTED 400,000!
ABOUT HEALTHY SCHOOLS

Teaching Children about Healthy Lifestyles at a young age and in their own language.

Transformation to healthy diets by 2050 will require substantial dietary shifts, including a greater than 50% reduction in global consumption of unhealthy foods, such as red meat and sugar, and a greater than 100% increase in consumption of healthy foods, such as nuts, fruits, vegetables, and legumes. – EAT Lancet Commission 2019

Poor diets are the number 1 cause of death – Global Burden of Disease Report April 2019
>1.5 LAKH STUDENTS

9 INDIAN LANGUAGES

ACROSS MORE THAN
12 STATES
Create a strong base for healthy lifestyle practices with a specific focus on behaviour change and developing leadership skills among the students, before their lifestyle habits are set.

The Healthy Schools initiative is a 2 year program conducted for middle school children. I.e., students of classes (6-8) age 11-13 years

Today, Arogya Schools program is wide-spread and is conducted in various states like Uttar Pradesh, Madya Pradesh, Bihar, Assam, Rajasthan, North Maharashtra, Karnataka, Andra Pradesh, Telengana, South Kerala, both in private and government schools,

The trainings are done and materials are available in the local language.
**THE MODEL**

**Innovative and Engaging Activity Based Behavior Change Model**

- 2 year program for middle school children.
- 5 Compelling age-appropriate activities each year
- Participatory Learning Model
- Pre & Post Survey to measure effectiveness
- Implementation Partners across India.
- **Works in** Govt + Private Schools, Rural + Urban India
- Creates Student Peer leaders and engages with staff and community
TEACHING THROUGH INNOVATIVE ACTIVITIES AND ENGAGING DISCUSSIONS

Active life is a healthy life

Identifying “Healthy Behaviours”

Let’s write a healthy recipe!

Volunteer Training

Fun Snake and Ladder to reinforce healthy behaviours

Enabling Peer Leadership
EXAMPLE YEAR 1 ACTIVITIES: BE FIT, EAT RIGHT!

WORKSHEET No.2: Climb the Health Ladder

WORKSHEET No.5: Doctor says “Be Fit, Eat Right”

Name: ___________________________ Date: ____________

Class and Section: ___________________________

Sachin is a 11 year old boy weighing 51 kilograms. He goes to bed at 10 P.M in the night and wakes up at 5.30 A.M in the morning. Sachin is often tired and hates to exercise. He eats his breakfast everyday. Sachin likes to go to school in his father’s car. At break time he prefers to eat the home made tiffin. He dislikes playing sports and always makes excuses so that he doesn’t have to go out of the class in the games period as he often feels tired. Sachin often feels hungry that is why he always has a burger and cold drink while going back home from school. After coming back home he spends long hours playing video games. In the evening he goes for a walk with his mother and has an ice-cream everyday while walking. He watches TV for half an hour in the night.

Imagine yourself as a doctor and suggest lifestyle modifications for Sachin

A. Segregate Sachin’s lifestyle practices in zones:

<table>
<thead>
<tr>
<th>Red zone (Avoid completely)</th>
<th>Yellow zone (Cut down)</th>
<th>Green zone (Be regular)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
YEAR 1 ACTIVITIES: CROSSWORDS AND RECIPE WRITING

WORKSHEET No 3: Make Your Own Recipe

Name: __________________________ Date: ____________
Class and Section: ________________________

WRITE YOUR RECIPE HERE

<table>
<thead>
<tr>
<th>Name of your Recipe:</th>
<th>Ingredients:</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Method of Cooking:</th>
<th>RATE YOUR RECIPE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Score:</td>
<td>To Be Avoided</td>
</tr>
<tr>
<td>Poor</td>
<td>Average</td>
</tr>
</tbody>
</table>

Use a pencil or sketch pen to connect the letters. Start in the square that says "Start", then follow the arrows till the "End". You may use the space below to help you spell out the secret message. Good luck!
YEAR 2 ACTIVITIES: INVOLVING THE COMMUNITY FOR FURTHER IMPACT
YEAR 2 ACTIVITIES: PERFORM A SKIT, SHOW YOU ARE FIT!
MORE THAN 1.5 LAKH KIDS EDUCATED IN DIABETES/ NCDs AWARENESS & PREVENTION!

WE MADE AND FULFILLED A UN EVERY WOMAN EVERY CHILD COMMITMENT (2015-2017)
I study in KGVB, Kadambu, RES, Bagalkot. Today people from Arogya World and Agastya Foundation came to our school to teach us about diabetes awareness. This workshop was very informative and we could later spread this useful information in our family members. For this, I would like to thank Arogya World and Agastya Foundation on behalf of my school and me.

Student

Because of Arogya, we have discussed in the teacher - student meeting and made lot of changes in our cafeteria in terms of offering healthy options vegetable sandwiches, fruit chat, nimbu pani, etc instead of cool drinks and less of oil and no junk packed foods at all.

School Leader

Before when I used to check the lunch boxes of all my friends in class, they used to get lot of junk and unhealthy food. After the awareness program by Hriday & Arogya World, they have started getting healthy foods for lunch.

Peer Leader of Arogya Healthy Schools Program, Delhi
DOES OUR SCHOOLS PROGRAM WORK?

EXAMPLE 1 - RESULTS FROM SCHOOL PILOT IN DELHI (2011-2013)

2263 students from 6 schools (3 government, 3 private)

Partner: Hriday
Awareness Increased

23.7% more students understood that unhealthy eating habits can put you at risk for diabetes, and 12.2% more students learned that being overweight can increase the future risk of diabetes.
Daily intake of vegetables increased from 61.2% to 76.9% over the two-year program.

More kids moved - 52.6 % vs 34.9 % reported going outside and playing with friends.

Children consistently reported choosing healthier foods: more students (75.4% vs 65.7%) chose fruit chaat over alu tikki.
Part C – Diabetes

Unhealthy eating habits can put one at risk for Diabetes

<table>
<thead>
<tr>
<th>Year 1</th>
<th>Year 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total = 400</td>
<td></td>
</tr>
<tr>
<td>Students who said NO</td>
<td>Pre</td>
</tr>
<tr>
<td>186</td>
<td>292</td>
</tr>
<tr>
<td>% per year</td>
<td>46.5%</td>
</tr>
<tr>
<td>Δ change</td>
<td>26.5</td>
</tr>
</tbody>
</table>

Physical inactivity can put one at risk for Diabetes

<table>
<thead>
<tr>
<th>Year 1</th>
<th>Year 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total = 400</td>
<td></td>
</tr>
<tr>
<td>Students who said NO</td>
<td>Pre</td>
</tr>
<tr>
<td>174</td>
<td>254</td>
</tr>
<tr>
<td>% per year</td>
<td>43.5%</td>
</tr>
<tr>
<td>Δ change</td>
<td>20</td>
</tr>
</tbody>
</table>

Agastya schools Group: Please add the school details
EVIDENCE OF IMPROVED HEALTH BEHAVIOURS: AGASTYA 2015-2017

Increase in exercise / going out to play

33. During your leisure (free) time, you mostly -

<table>
<thead>
<tr>
<th>Activity</th>
<th>Year 1</th>
<th>Year 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total=400</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Students who said PLAY</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pre</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Post</td>
<td></td>
<td></td>
</tr>
<tr>
<td>% per year</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Δ Change</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Consumption of Fried Foods Reduced

27. How often do you have Fried Snacks (samosa, pakora, kachri, etc.)?

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Year 1</th>
<th>Year 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total=400</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Students who said DAILY</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pre</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Post</td>
<td></td>
<td></td>
</tr>
<tr>
<td>% per year</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Δ Change</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
THANK YOU!!!