Changing health habits requires more than informing:
Social marketing for healthier and sustainable communities

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- Co-speaker, A+ Science Communication expert group

- Vice-president, Swiss School of Public Health

- Chair, SSPH+ Summer School in Public Health Policy, Economics, and Management

Growing
Green
Communities

Empowering young people in climate change action through Growing Green Communities

Why this matters

NCDs cause 70% of deaths globally
~37% in low-income countries
~88% in high-income countries

Most are result of 4 behaviours:

- tobacco use

- physical inactivity

- unhealthy diet

- harmful use of alcohol

That lead to 4 key risk factors:

- raised blood pressure

- raised blood glucose

- raised cholesterol

- overweight/obesity

Behavior: Tobacco use

- Kills up to ½ of its users.

- Kills > 8 million people each year.
  - > 7 million of those deaths are the result of direct tobacco use while
  - ~1.2 million are the result of non-smokers being exposed to second-hand smoke.

- Also causes:
  - Lung Cancer, COPD, Heart Disease, Stroke, Asthma, Diabetes, Blindness, Cataracts and Age-Related Macular Degeneration, > 10 other types of Cancer, including Colon, Cervix, Liver, Stomach and Pancreatic

Behavior: Physical Inactivity

More than 110,000 US deaths could be prevented each year if adults > 40 added **10 minutes of daily moderate to vigorous physical activity to their normal routines**
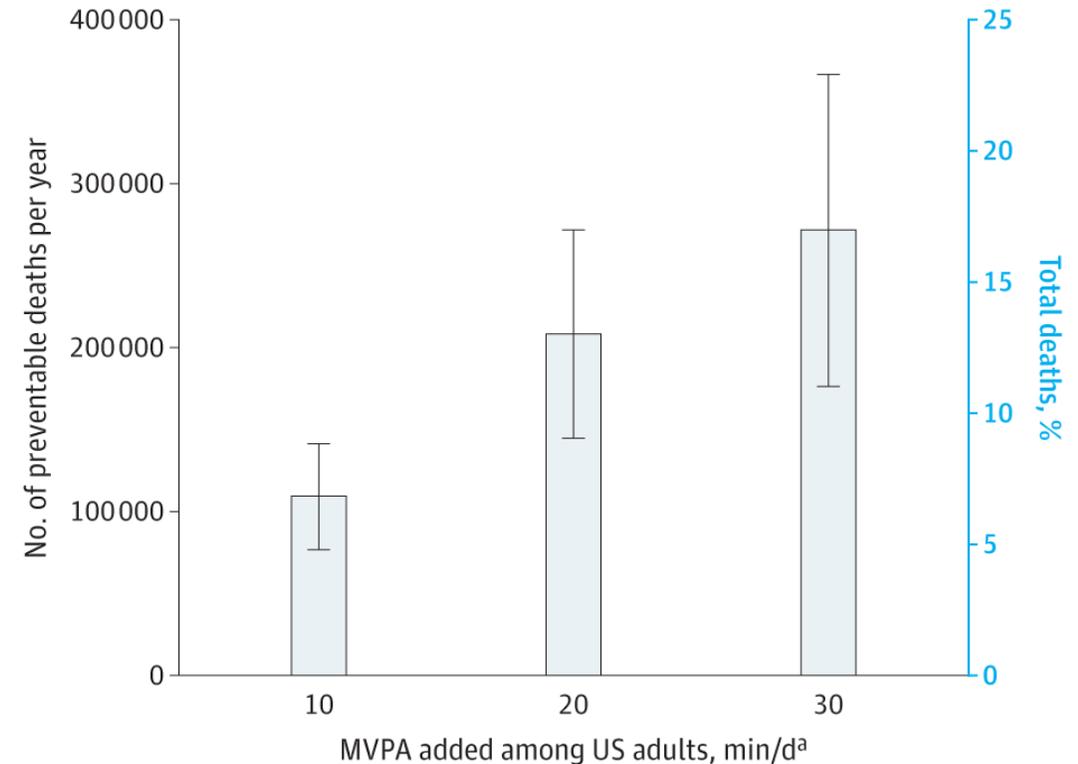
Behavior: Poor diets

Bad diets killing more people globally than tobacco, study finds

Eating and drinking better could prevent one in five early deaths, researchers say

▲ While sugar and trans-fats are harmful, the biggest problem is the lack of healthy foods in our diets, researchers found. Photograph: Philip Toscano/PA

- responsible for more deaths (~11m deaths, or 22% of all deaths among adults) than any other risks

- eating & drinking better could prevent 1 in 5 deaths around the world

- while sugar and trans-fats are harmful, more deaths are caused by the absence of healthy foods in our diet

- The biggest problem is: **"not the junk we eat but the nutritious food we don't eat"**

'The Mediterranean diet is gone': region's children are fattest in Europe

The diet Greece, Spain and Italy are famous for - rich in fruit, vegetables, fish and olive oil – is supposedly the healthiest in the world, but obesity is rocketing


▲ The Mediterranean diet is said to be the healthiest in the world. Photograph: Alamy Stock Photo

The Mediterranean countries which gave their name to the famous diet that is supposed to be the healthiest in the world have children with Europe's biggest weight problem.

Children in **Sweden** are more likely to eat fish, olive oil and tomatoes than those in southern Europe.

Is information enough to encourage sustainable food choices?

Operationalizing sustainable food consumption behaviours
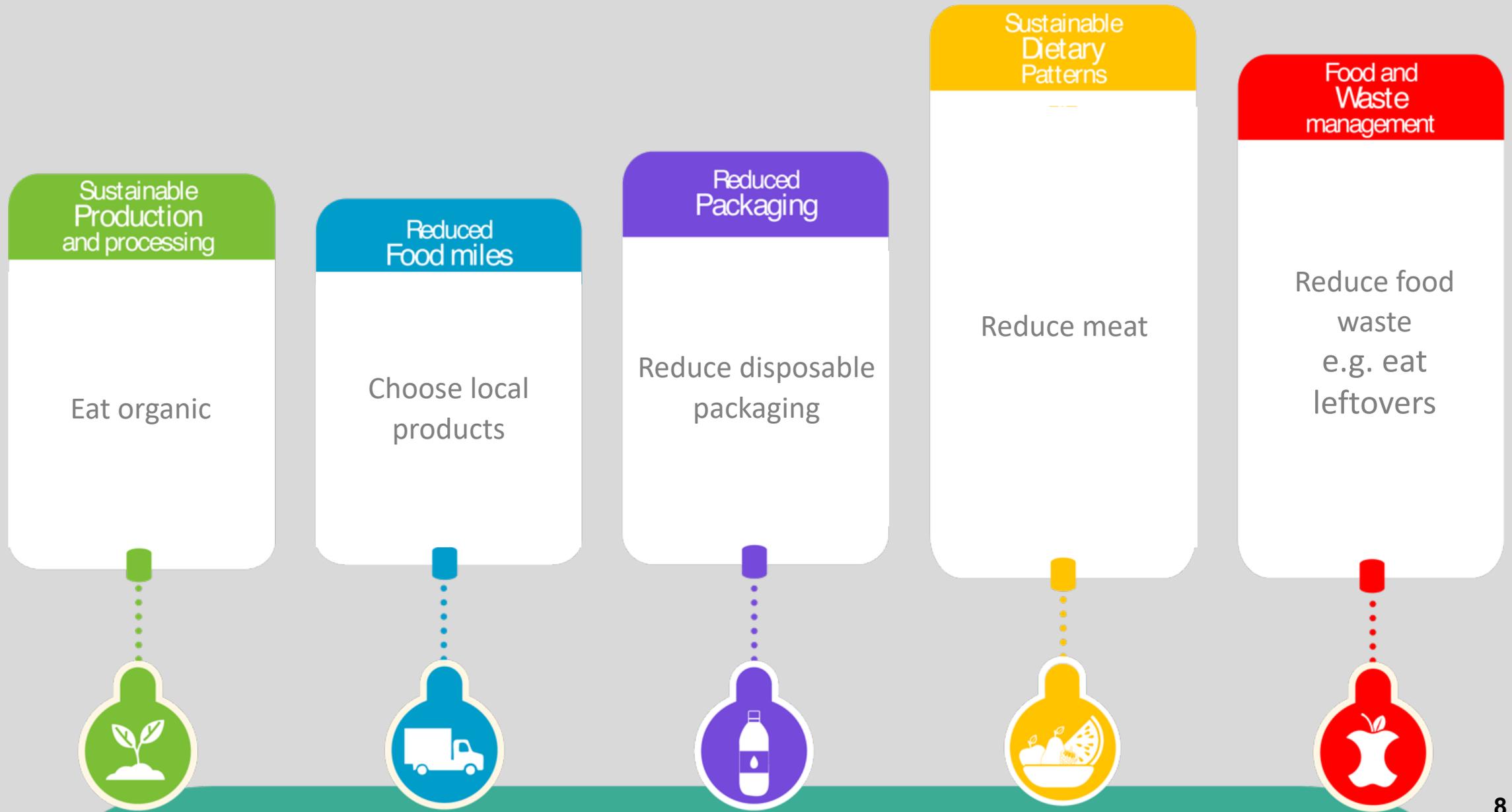
Sustainable Production and processing

Eat organic

Reduced Food miles

Choose local products

Reduced Packaging

Reduce disposable packaging

Sustainable Dietary Patterns

Reduce meat

Food and Waste management

Reduce food waste e.g. eat leftovers

(Aguirre Sánchez et al, 2021)

Food and health

FIGURE 1.2: Six of the top 11 risk factors driving the global burden of disease are related to diet

Legend:
- ■ Disease risk factors linked to diet
- ■ Disease risk factors not linked to diet

Categories (top to bottom):
- Dietary risks
- High systolic blood pressure
- Child and maternal malnutrition
- Tobacco smoke
- Air pollution
- High body mass index
- Alcohol and drug use
- High fasting plasma glucose
- Unsafe water, sanitation and handwashing
- Unsafe sex
- High total cholesterol

X-axis: Global all-age disability-adjusted life years (in thousands, 2013) — 0, 50000, 100000, 150000, 200000, 250000

Source: Global Burden of Disease Study 2013 Collaborators (2015), Figure 5

Note: The graph shows global disability-adjusted life years (DALYs) attributed to level 2 risk factors in 2013 for both sexes combined.

Food systems are responsible for a third of global GHG emissions coming from human activity

(Crippa et al., 2021)

Heath and environmental impact of foods:

Are they all equal?

Food: greenhouse gas emissions across the supply chain

Land Use Change	Farm	Animal Feed	Processing	Transport	Retail	Packaging
Aboveground changes in biomass from deforestation, and belowground changes in soil carbon	Methane emissions from cows, methane from rice, emissions from fertilizers, manure, and farm machinery	On-farm emissions from crop production and its processing into feed for livestock	Emissions from energy use in the process of converting raw agricultural products into final food items	Emissions from energy use in the transport of food items in-country and internationally	Emissions from energy use in refrigeration and other retail processes	Emissions from the production of packaging materials, material transport and end-of-life disposal

Transport emissions are very small for most food products

Food	Value
Beef (beef herd)	60
Lamb & Mutton	24
Cheese	21
Beef (dairy herd)	21
Chocolate	19
Coffee	17
Prawns (farmed)	12
Palm Oil	8
Pig Meat	7
Poultry Meat	6
Olive Oil	6
Fish (farmed)	5
Eggs	4.5
Rice	4
Fish (wild catch)	3
Milk	3
Cane Sugar	3
Groundnuts	2.5
Wheat & Rye	1.4
Tomatoes	1.4
Maize (Corn)	1.0
Cassava	1.0
Soymilk	0.9
Peas	0.9
Bananas	0.7
Root Vegetables	0.4
Apples	0.4
Citrus Fruit	0.3
Nuts	0.3

Methane production from cows, and land conversion for grazing and animal feed means beef from dedicated beef herds has a very high carbon footprint.

Dairy co-products means beef from dairy herds has a lower carbon footprint than dedicated beef herds.

Pigs and poultry are non-ruminant livestock so do not produce methane. They have significantly lower emissions than beef and lamb.

Flooded rice produces methane, which dominates on-farm emissions.

'Farm' emissions for wild fish refers to fuel used by fishing vessels.

Methane production from cows means dairy milk has significantly higher emissions than plant-based milks.

CO_2 emissions from most plant-based products are as much as 10-50 times lower than most animal-based products.

Factors such as transport distance, retail, packaging, or specific farm methods are often small compared to importance of food type.

Greenhouse gas emissions per kilogram of food product
(kg CO_2-equivalents per kg product)

Nuts have a negative land use change figure because nut trees are currently replacing croplands; carbon is stored in the trees.

Note: Greenhouse gas emissions are given as global average values based on data across 38,700 commercially viable farms in 119 countries.
Data source: Poore and Nemecek (2018). Reducing food's environmental impacts through producers and consumers. *Science.* Images sourced from the Noun Project.
OurWorldinData.org – Research and data to make progress against the world's largest problems.

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Health and environmental synergies

Clark, M. A., Springmann, M., Hill, J., & Tilman, D. (2019). Multiple health and environmental impacts of foods. *Proceedings of the National Academy of Sciences, 116*(46), 23357–23362. https://doi.org/10.1073/pnas.1906908116
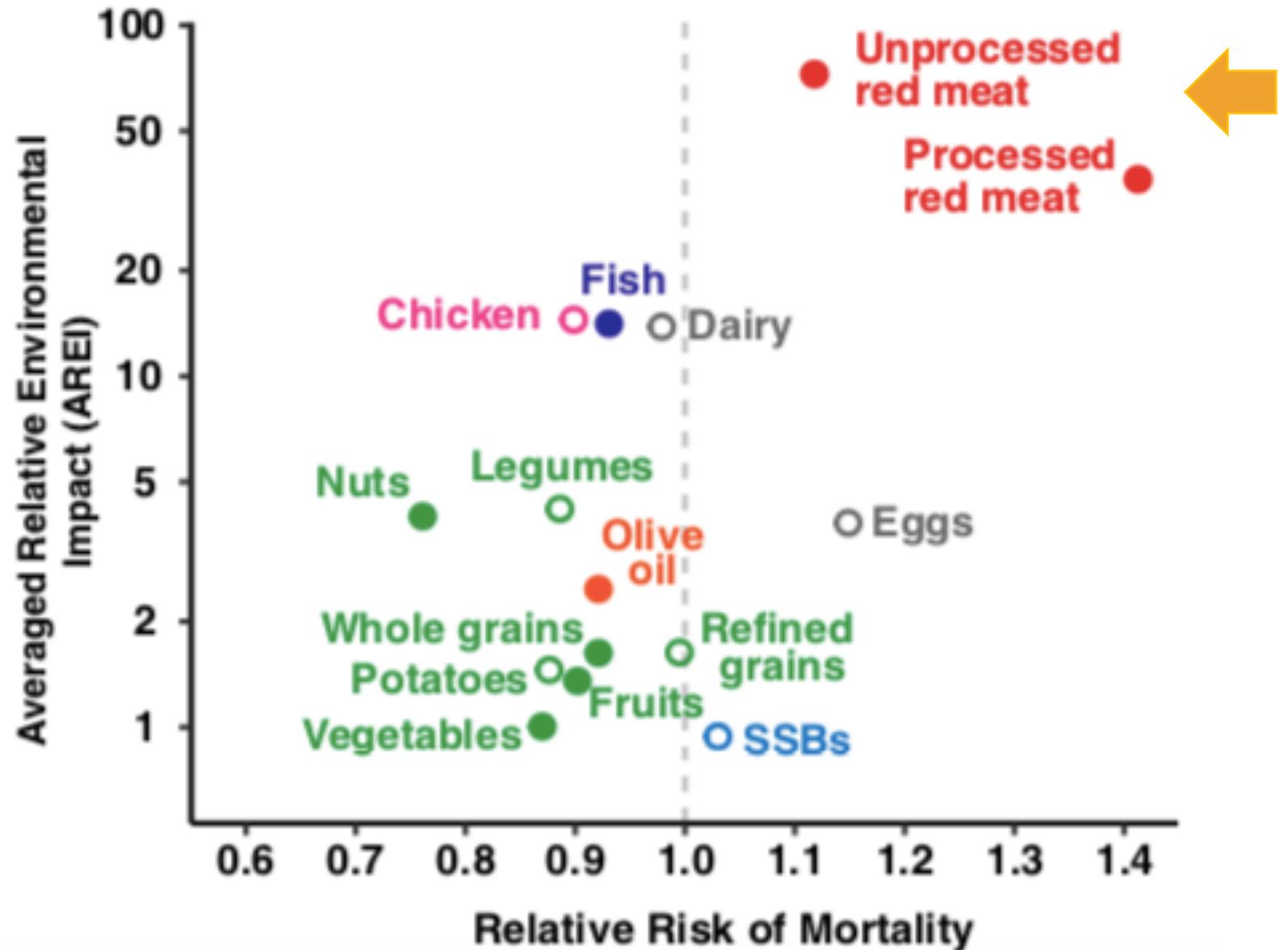
Plan your meal

Order dishes of each day from the highest to the lowest climate footprint

Assumptions:

- Food chain stages from production to cooking are considered

- Mostly conventional agriculture (e.g. no organic)

- Most meats are local

RULES

Do not mix days

No google, or external help

Monday	kg CO2-eq/m ea	Tuesday	kg CO2-eq/m ea	Wednesda	kg CO2-eq/m ea	Thursday	kg CO2-eq/m ea	Friday	kg CO2-eq/m ea
BEEF MEATBALLS	3.22	DÜRÜM KEBAB	3.43	CHILI CON CARNE	2.65	BEEF BURGER	2.49	VEAL BRATWURST	3.18
FISH FILLET SEA BREAM	1.08	THAI CHICKEN	1.13	ROASTED CHICKEN	1.15	PASTA ALL'AMATRICIANA	0.67	FISH FILLET TILAPIA	0.87
RISOTTO	0.54	MUSHROOM BURGER	1.01	VEGGIE CARBONARA	0.47	NASI GORENG	0.65	HUMMUS PLATTER	0.64
DÜRÜM FALAFEL	0.36	BLACK LENTILS	0.23	THAI "BUTTER" BEANS	0.28	VEGGIE SCHNITZEL	0.45	VEGGIE CHILI	0.54

Choosing Imagery in Advertising Healthy Food to Children

Are Cartoons the Most Effective Visual Strategy?

Maria Lagomarsino, L. Suzanne Suggs

We wanted to know:

- Do children know what foods are healthy or unhealthy?

- Do children like healthy foods?

- How to communicate with children in such a way that it motivates them to eat healthy food?

Experimental design – Card sort

N=100 children (first class of elementary school), 8 classes from 5 schools in Ticino
Mean age: 6.4 years old. 56% Girls

Exercise 1
What they like

Tasty-categorization

Exercise 2
What they know

Healthy-categorization

Exercise 3
What motivates them

Visual techniques

Exercise 1:

Percentage of children that liked the foods

Unhealthy items [21 food items cards]

Healthy items [21 food items cards]

72 %
Sweets and salty snacks

50 %
Oils, fats and nuts

73 %
Meat, fish and dairy product

81 %
Grains, potatoes and pulses

60 %
Fruit & vegetables

95 %
Beverages (water)

© Società Svizzera di Nutrizione SSN, Ufficio federale della sanità pubblica UFSP / 2011

Ben informati, ben nutriti. sge-ssn.ch
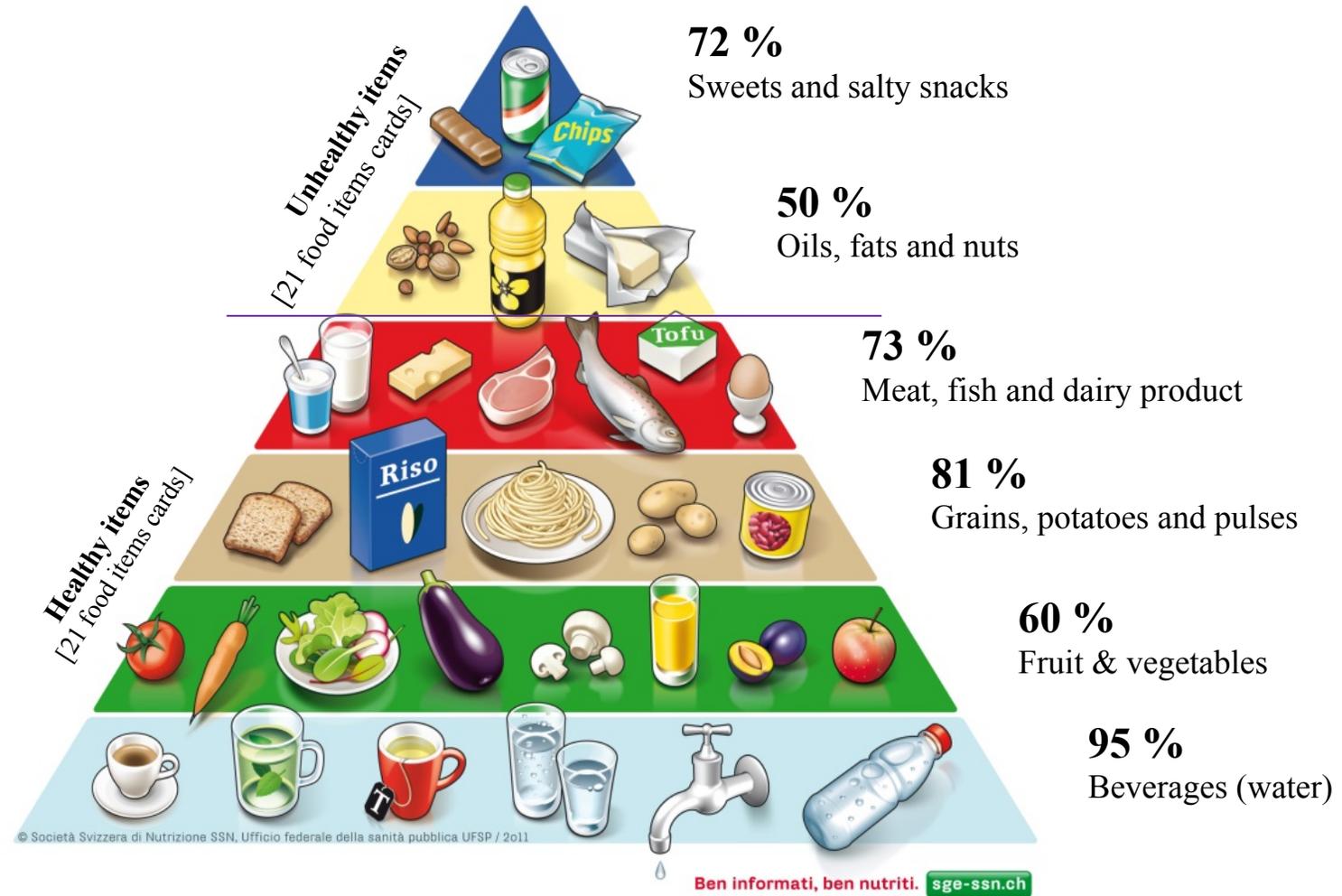
Swiss Food Pyramid (SSN, 2011)

Exercise 2:

**Percentage of children that correctly categorized foods.**

Unhealthy items
[21 food items cards]

75 %
Sweets and salty snacks

75 %
Oils, fats and nuts

65 %
Meat, fish and dairy product

Healthy items
[21 food items cards]

75 %
Grains, potatoes and pulses

90 %
Fruit & vegetables

99 %
Beverages

© Società Svizzera di Nutrizione SSN, Ufficio federale della sanità pubblica UFSP / 2011

Ben informati, ben nutriti. sge-ssn.ch
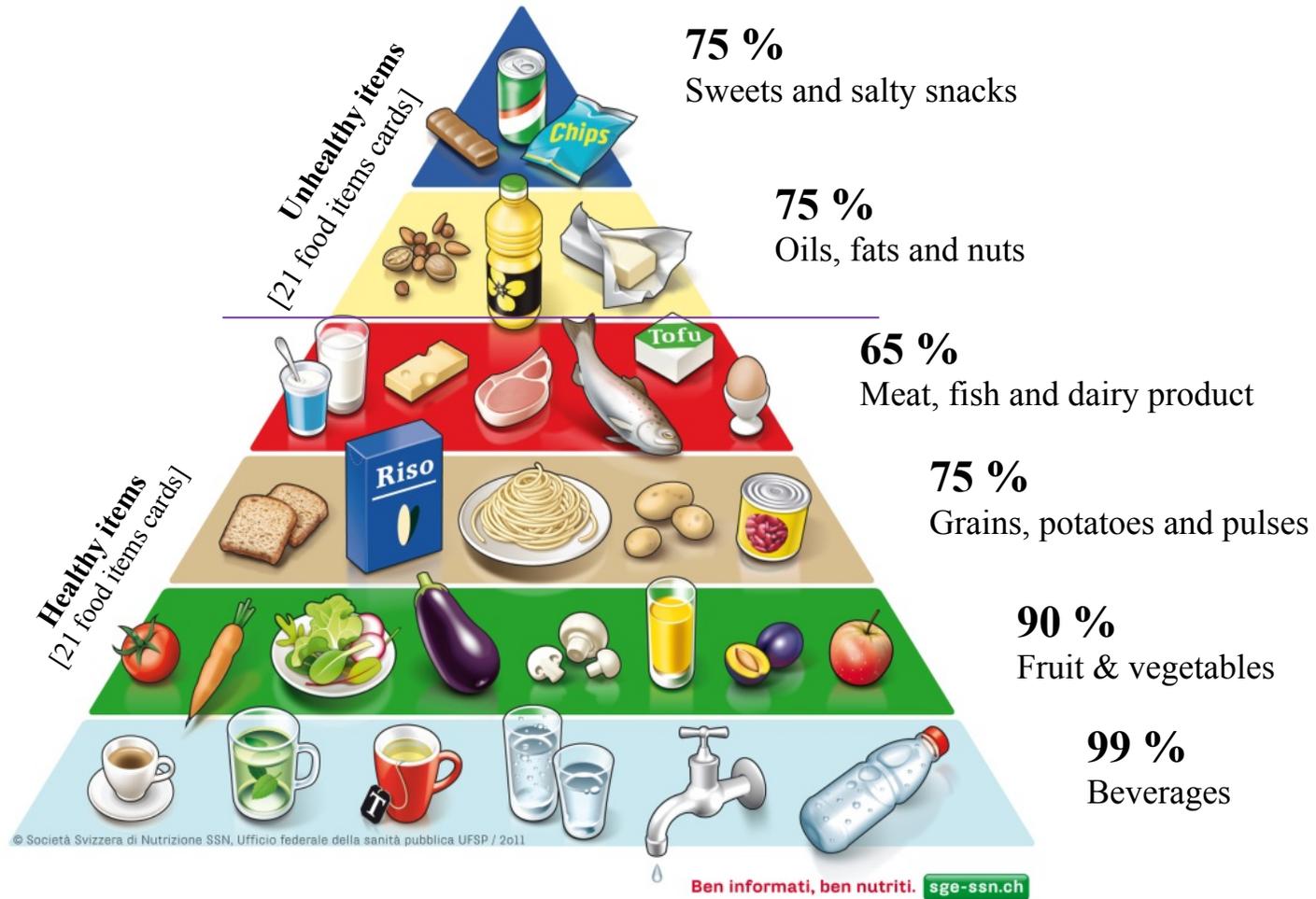
Swiss Food Pyramid (SSN, 2011)

Exercise 3:

Food item cards	Visualizations				
	Style of display: Only the food			Style of display: Food displayed while being consumed	
	Photo	Drawing	Cartoon	Photo of children consuming the food	Drawing of children consuming the food
	Fantasy: No	Fantasy: Low	Fantasy: High	Fantasy: No	Fantasy: Yes
Apple cards					
Broccoli cards					
Carrot cards					
Fruit cards					
Water cards					

Exercise 3: Visual Techniques preferred
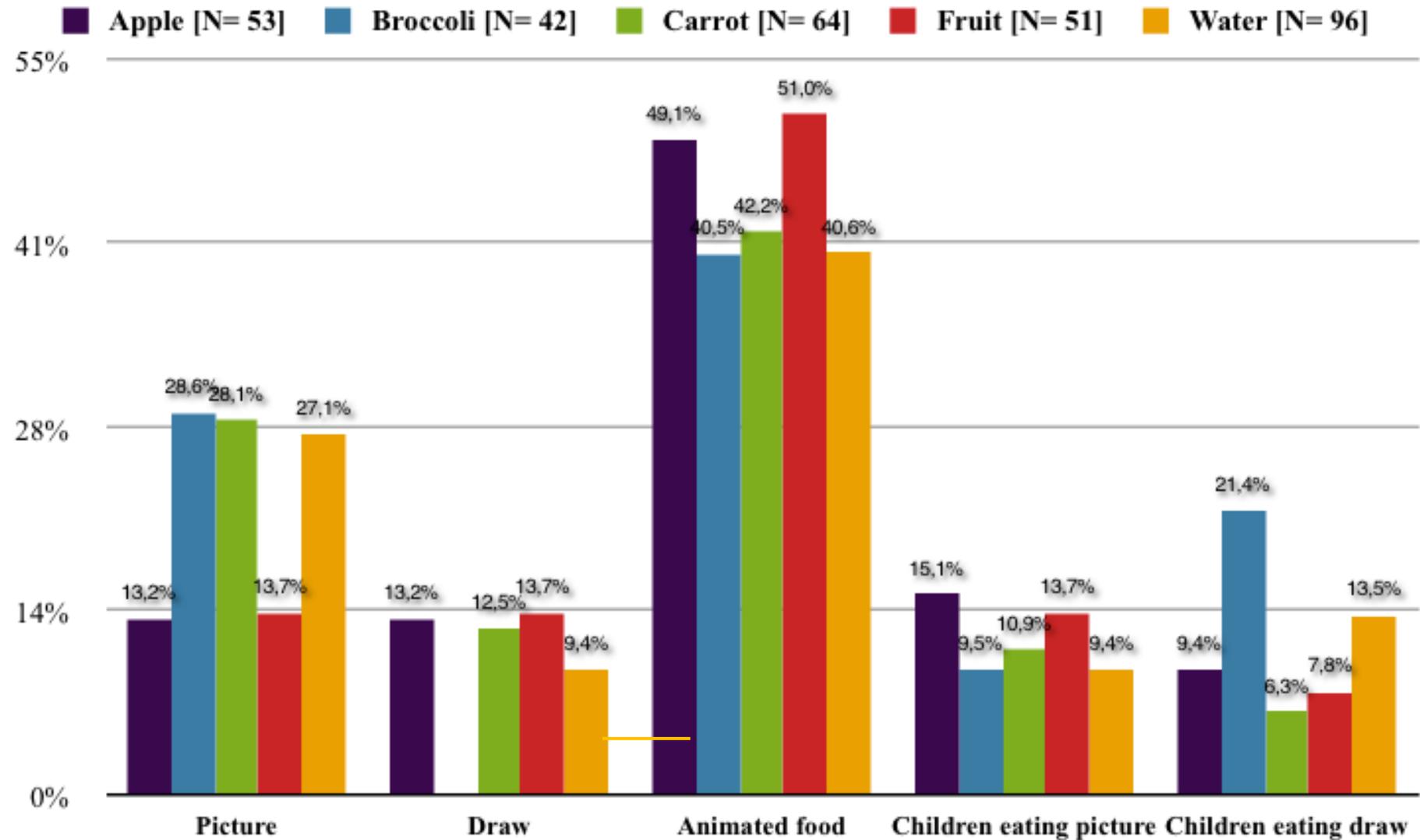
Exercise 3: Visual Techniques of food they thought was tasty
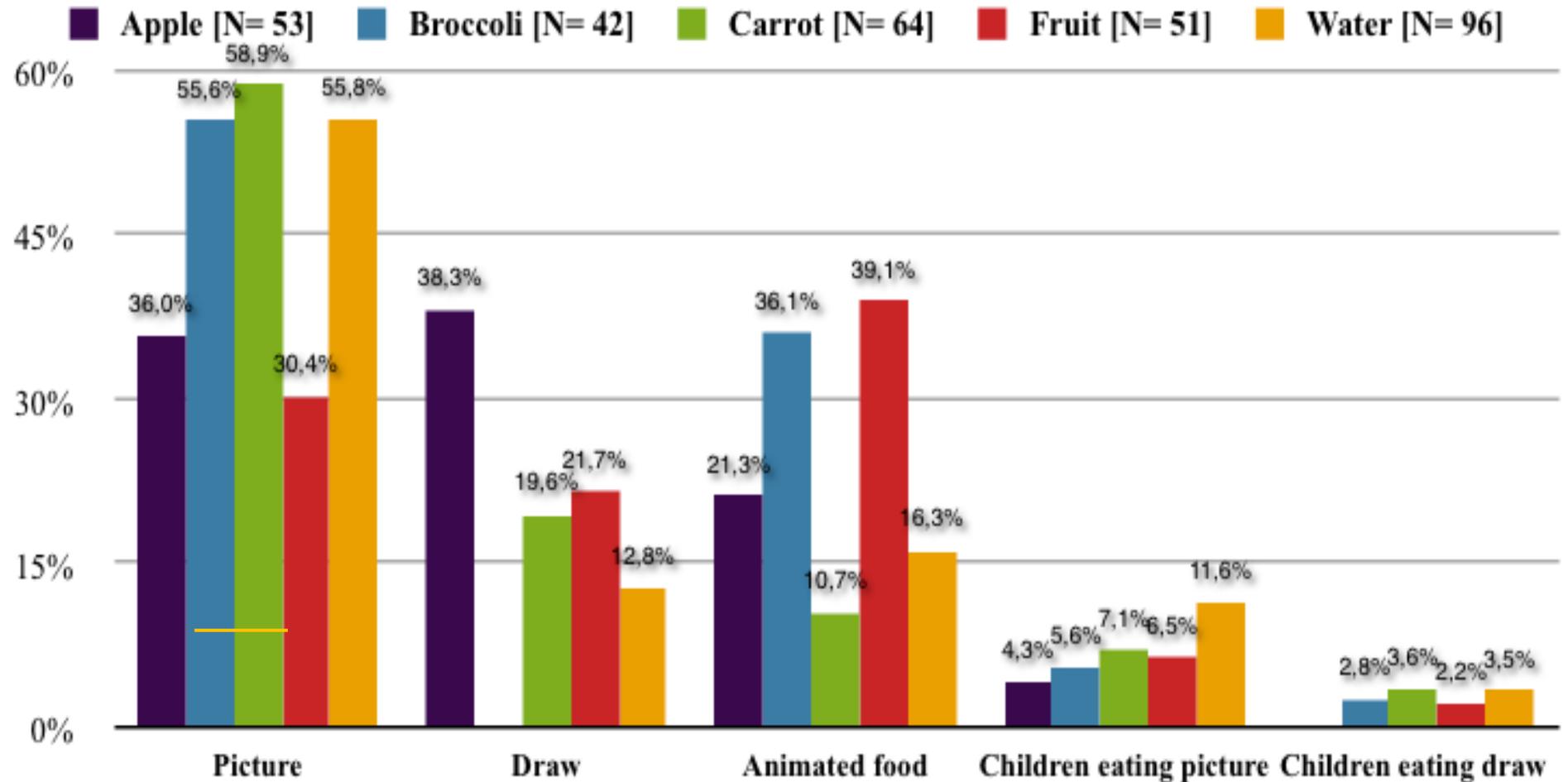
Conclusions

- **Understanding:**
  - Children like healthy food
  - Children know what foods are healthy and unhealthy.

- **Promoting:**
  - If the aim of food promotion is to attract children, then cartoons seem to be effective.
  - If the aim is to increase the likelihood that a child will want to eat it, then the use of photos may be the most effective visualization to employ.

- **Behavior:**
  - Given a choice, they choose unhealthy foods
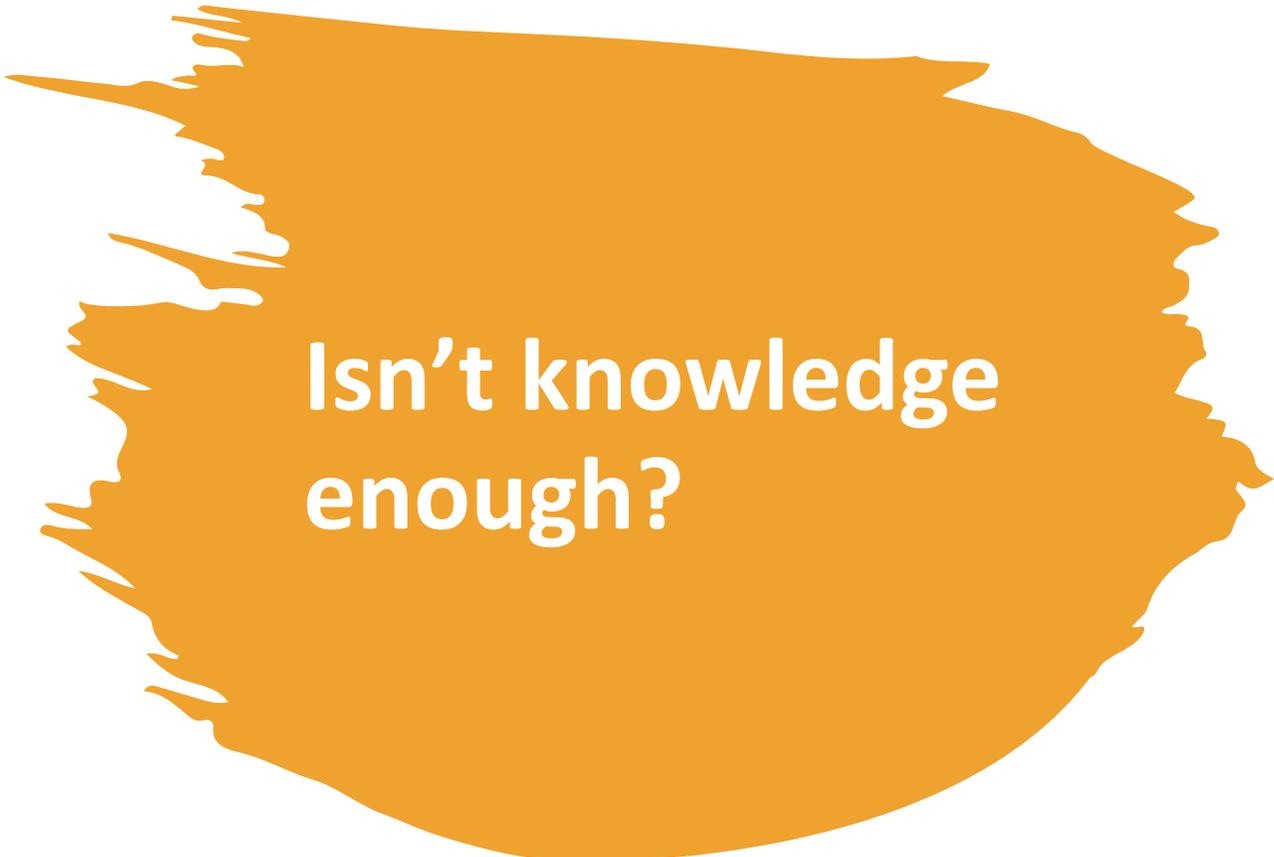
Isn't knowledge enough?

"It would be easy to give the public information and hope they change behavior, but we know that doesn't work very satisfactorily.

[If it did] none of us would be obese, none of us would smoke and none of us would drive like lunatics."

- Ian Potter, Director of the New Zealand Health Sponsorship Council

Why do we do what we do?
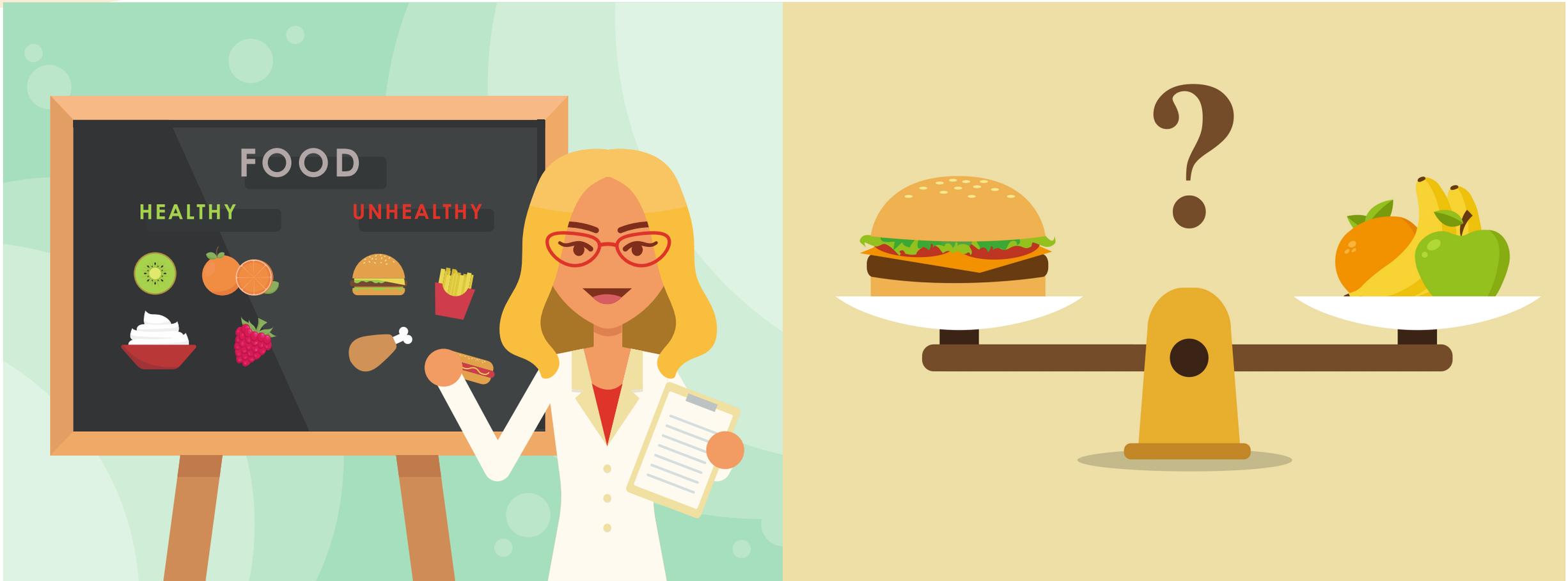
What determines behavior?
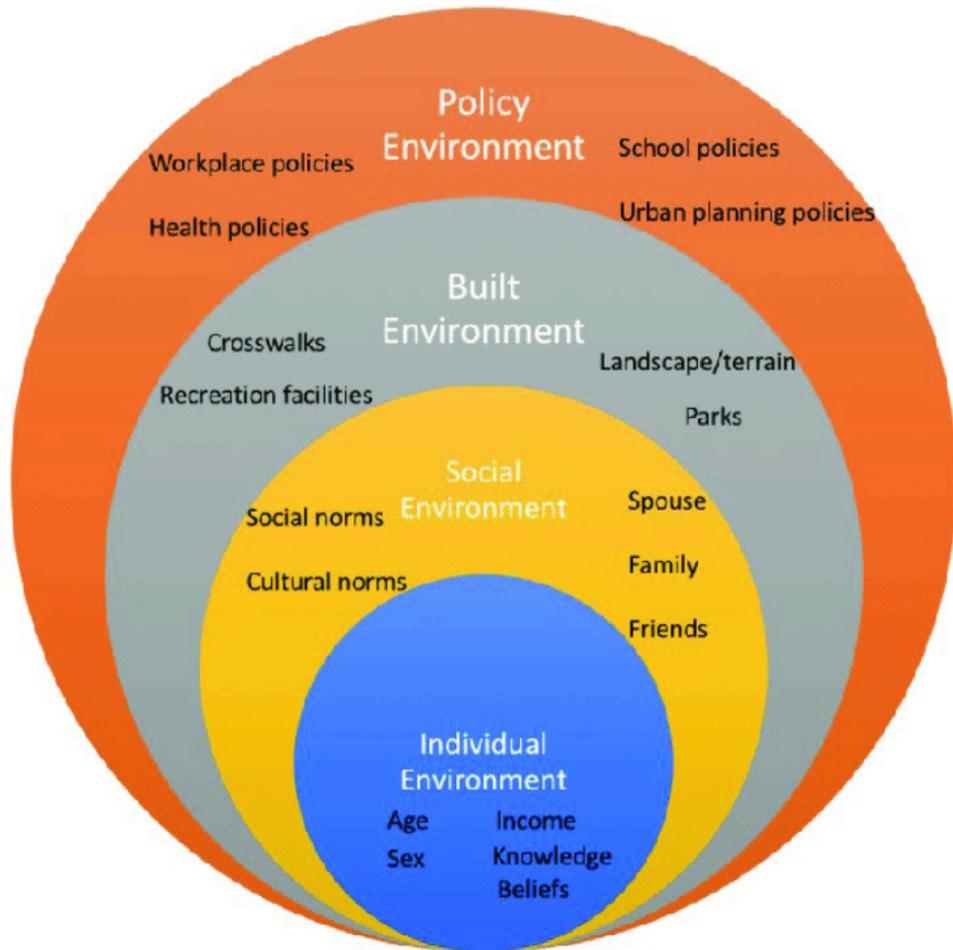
COM-B model of behaviour change
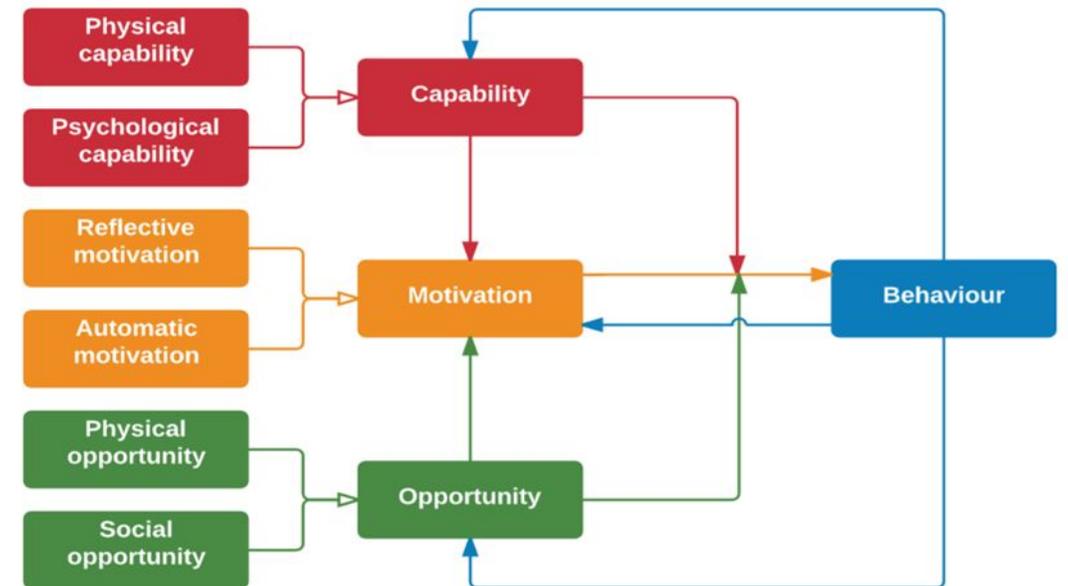
Continuum of behavior change approaches

Social Marketing

Help me

Education
Information

Law

Show me / tell me

Make me

Adapted from Evans School of Public Health and Governance

Tell me: Information

Each serving (150g) contains

Energy 1046kJ 250kcal	Fat 3.0g LOW	Saturates 1.3g LOW	Sugars 34g HIGH	Salt 0.9g MED
13%	4%	7%	38%	15%

of an adult's reference intake

ฺpical values (as sold) per 100g: 697kJ/ 167kc

# Help me: Opportunities / Nudge

Show me: Educate (Capabilities)

Help me: Nudge (Opportunities)
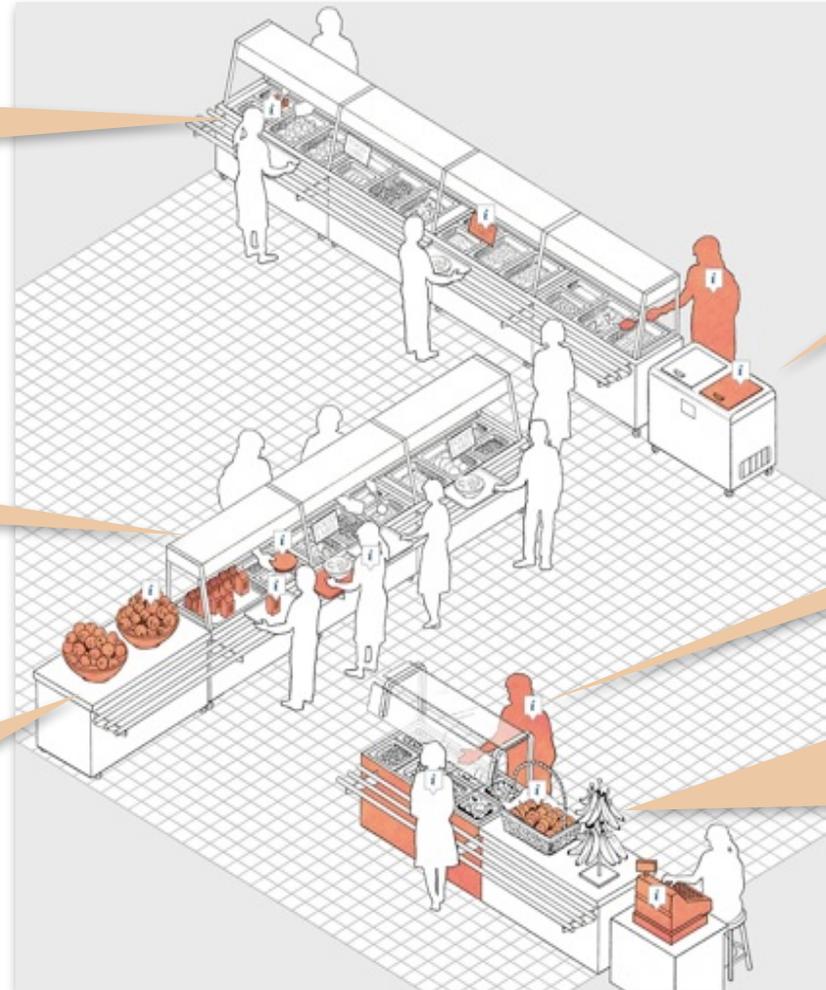
Marketing

- **"The aim of marketing is to know and understand the customer so well the product or service fits them and sells itself."**
  - Peter F. Drucker

- The right product, in the right place, at the right time, at the right price
  - Adcock

Social Marketing

- Develop and integrate marketing concepts with other approaches to *influence behaviour* **that benefit individuals and communities for the greater social good.**

- Social Marketing practice is guided by **ethical principles**. It seeks to integrate research, best practice, theory, audience and partnership insight, to inform the delivery of competition sensitive and segmented social change programmes that are effective, efficient, equitable and sustainable.

A Tapp, R Brophy, M Carausan, J Carruthers, S Peattie, S Revill, M Chamberlain, N Lee, S Sherif, T Beall, W Morgan, C Lellig, L S Suggs, J French
iSMA, ESMA, & AASM. (2013). Social Marketing Definition.

GLOBAL WARMING CLIMATE CHANGE

Tornado

Forest Fires

Landslide

Eruption

Deglaciation

Tsunami

Drought

1. What causes this?
2. Where and how should we intervene?

- Social Marketing understands determinants of behaviors that lead to social problems

- THEN designs strategies to change behavior

Social Marketing = understanding what people value and showing how health fits in to that

"**Listen** to consumers and what they really care about in terms of an issue …

So begin with them, rather than beginning with us."

"Bill" Smith, EdD, PhD, President, Making Change4u, Washington, DC

Social Marketing
Benchmarks
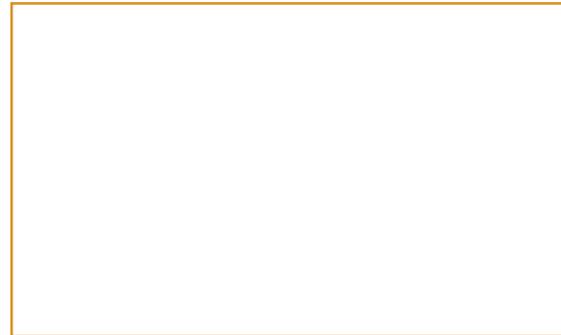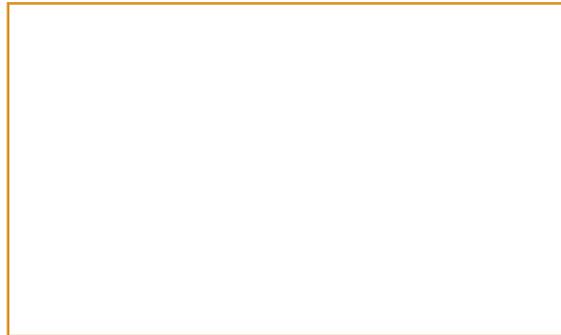
1. Customer Orientation

- Develops a robust understanding of the audience, based on good market and consumer research, combining data from different sources.

2. Behavior

- Has a clear focus on behavior, based on a strong behavioral analysis, with specific behavior goals.

3. Theory

- Behavioral theory-based and informed.

- What determines behavior?
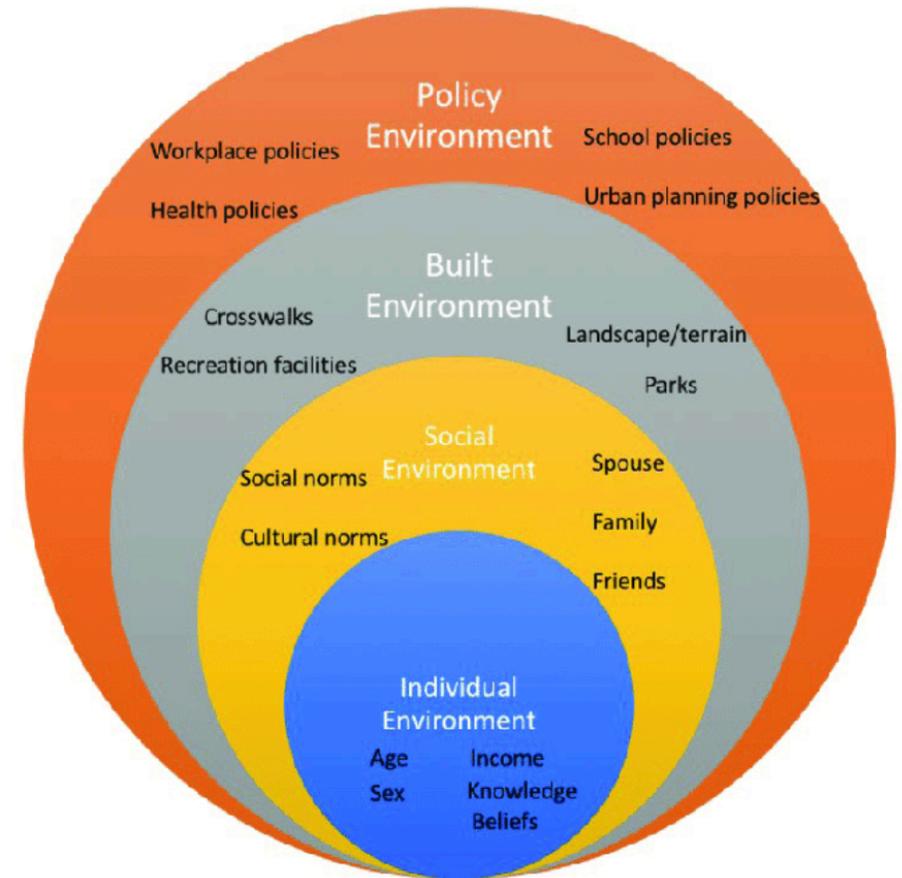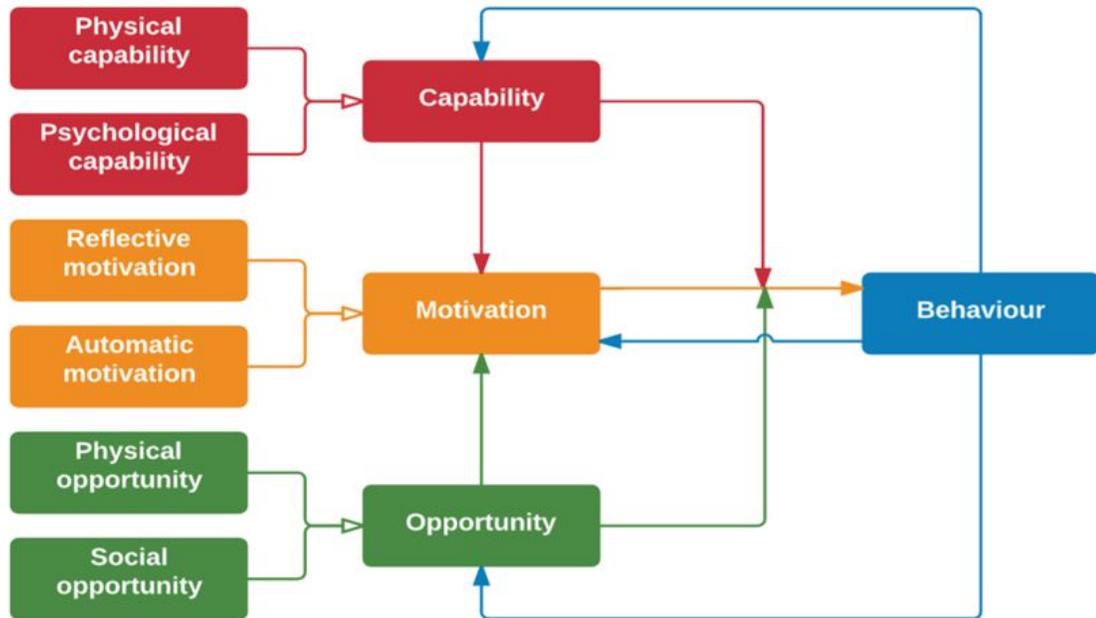
Social ecological model. Adapted from Sallis et al, 2006.

Hafoka, Siosaia. (2017). Assessing the active living environment in three rural towns with a high proportion of Native Hawaiians and other Pacific Islanders. Health Promotion Perspectives. 7. 134-139. 10.15171/hpp.2017.25.

4. Insight

- Based on developing a deeper 'insight' approach – focusing on what 'moves and motivates'.

Help me: understand motivators of eating behavior

We want to feel things, experience things & food can help make those emotional connections

Taste and liking:
What do I feel like eating

Convenience:
What is easy & affordable

Cultural influence:
This is how we have always eaten

Social influences:
Everyone is drinking sugary drinks

Short term gains vs long term gains:
If I drink this fizzy drink now, it will make me feel happy and energized

Loss Aversion:
If I don't get that McDonalds deal today, I might miss out

5. Exchange

- Incorporates an 'exchange' analysis.
- Understanding what the person has to give to get the benefits proposed.

- including emotions, trust, commitment, and collective behavior.

6. Competition

- Incorporates a 'competition' analysis to understand what competes for the time and attention of the audience.

7. Segmentation

- Uses a developed segmentation approach (not just targeting). Avoiding "one size fits all" approaches.

- Identifies groups who share similar views and behaviors and can be influenced in similar ways.

- Who influences who?

One Size Does Not Fit All

CORESIGHT RESEARCH

8. Methods Mix

CONTROL
rules, require, constrain, restrict, police, enforce, regulate, legislate, incentivize

INFORM
inform, remind, reinforce, explain

DESIGN
physical product, environment, organizational system, technology, process

EDUCATE
enable, engage, train, skill development, inspire, encourage, motivate, critical thinking skills

SUPPORT
service provision, practically assist, promote access, social networking, social mobilization.

- 6 P's: product, place, price, promotion, policy, partnerships

- Identifies an appropriate 'mix of methods'

- Avoids reliance on single methods or approaches used in isolation

- Methods and approaches developed, taking full account of any other interventions in order to achieve synergy and enhance the overall impact

Aims of communication

- **Inform and Empower**
  - Science communication
  - Evidence communication

- Inform, not persuade
- Offer balance, not false balance
- Disclose uncertainties
- State evidence quality
- Inoculate against misinformation

- **Inform, Empower, and Motivate**
  - Persuasive communication

- address the audience's needs, values and desires

- interaction between the recipient of the message and the source of the message, who consciously tries to influence the recipient's attitudes or behaviors by means of a specifically designed persuasive message

https://www.nature.com/articles/d41586-020-03189-1

Persuade vs only inform or educate

THE **PERSUASION** WHEEL

SOCIAL PROOF
We do what we think everyone else does.

DEFAULTS
We tend to go with the default option, unless there's strong reason to change.

SCARCITY
We feel loss more than we feel gain. Fear of loss is one of the strongest behavior motivators.

PRIMING
We respond to subconscious cues in our environment, particularly when we are uncertain or lack domain knowledge.

RECIPROCITY
We easily feel indebted to others. Small indebtedness may lead us to respond disproportionately.

COMMITMENTS
We want to be consistent with what we have committed to publically.

MESSENGER
We respond to the messenger sometimes even more than the message itself.

ATTENTION
We give more causal weight to the things we focus on. If something is prominent, we notice it and give it more importance.

BONUS: **SIMPLICITY**– If you want more of something make it easy. If you want less, make it hard.

PERSUASION AT WORK
www.persuasionatwork.com

social influences

- The model for the celebrity shot dates to 1956, when few teenagers were getting the year-old polio vaccine.
  - immunization levels among American teens were at an abysmal 0.6 %

- 2 critical things happened that fall to reverse the trend.
  1. 21-year-old Elvis Presley got the shot in front of cameras before "The Ed Sullivan Show."
  2. the March of Dimes launched a wildly successful peer-to-peer campaign among teen social groups. In short, it leveraged the cool kids, **but** it may not have gotten the cool kids without the "King" (Elvis)

Elvis Presley is vaccinated on The Ed Sullivan Show, 1956. Credit: Getty Images

- after Elvis publicly got vaccinated against Polio,
  - vaccination rates among American youth skyrocketed to **80% after 6 months (up from .6%)**

- Elvis's public act contained 3 crucial ingredients inherent to many of the most effective behavioral change campaigns:
  - social influence,
  - social norms,
  - vivid examples

Scroll for details

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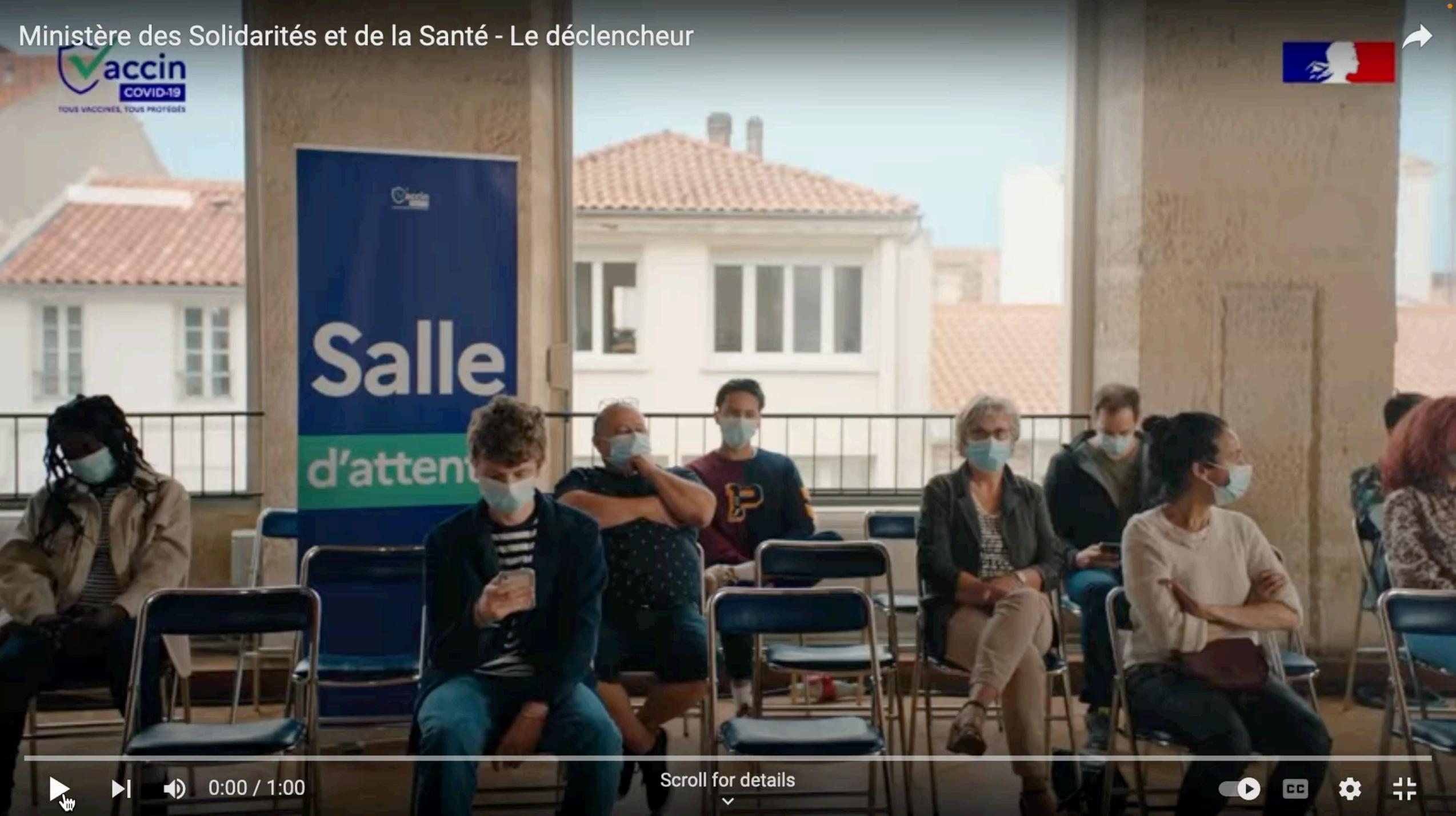
Think like a social marketer to make communities greener and health people and planet

What is the problem? → Why is it important?

What is the cause(s) of it? → How can you change it?

Design 1+ messages and strategies aimed at a TA to convince them to act.