

## Proposed Saturated Fat Target and Indicator for the Global Monitoring Framework on Prevention and Control of Non-Communicable Diseases (NCDs)

We strongly support the inclusion of the core indicator on age-standardized prevalence of raised total cholesterol among adults aged 18+ years (defined as total cholesterol  $\geq 5\text{mmol/l}$ ) and an indicator on the adoption of policies to eliminate partially hydrogenated vegetable oils (trans fats) in the second discussion WHO discussion paper on a comprehensive global monitoring framework for NCDs.<sup>1</sup> However, in order to ensure the cholesterol and trans fat targets and indicators are effective, in addition, we urge WHO and member states to include additional targets and indicators on saturated fat intakes and sugar. The rationale for a saturated fat target and indicator is outlined below.

### Summary rationale for a saturated fat core target and indicator

1. Saturated fat intake is a significant predictor of raised LDL cholesterol and total cholesterol.
2. A saturated fat target and indicator will help countries to meet the proposed WHO indicator on raised total cholesterol.
3. The evidence for the elimination of trans fats demonstrates this is most effective when trans fats are replaced with unsaturated fats, but not when they are substituted with saturated fats or refined sugar.
4. Saturated fat and sugar targets and indicators will help ensure that policies on the proposed WHO core NCD indicator to eliminate trans fats are not undermined by replacement or substitution of trans fats with equally harmful saturated fats or added sugars.
5. A saturated fat target and indicator will help to monitor and ensure appropriate measures are put in place to mitigate the negative impacts of globalisation and the homogenisation of diets.
6. A saturated fat target and indicator will assist low and middle income countries to prevent the double burden of communicable and non-communicable diseases they face from worsening.

### Population targets

- Mean population saturated fat intake of less than 10% of total dietary energy intake
- Mean population added sugar intake of less than 10% of total dietary intake (needed as a supporting goal to ensure only healthy substitutions of saturated and trans fat).

### Proposed indicators

- Age-standardised mean population intake of saturated fat per day as a % of total energy.
- Age-standardised mean population intake of added sugar per day as a % of total energy (supporting indicator needed to ensure only healthy substitutions of saturated and trans fat).

### How saturated fat intakes can be reduced

A saturated fat target and indicator can be achieved by implementation of saturated fat reduction interventions including:

1. Limiting consumption of red meat and processed meat products to moderate amounts. Less than 500g a week<sup>2</sup> or no more than 70g per person per day<sup>3</sup> is recommended
2. Limiting consumption of dairy products to low fat varieties
3. Reduced saturated fat content in processed foods through target-driven product reformulation and replacement with poly-unsaturated fats
4. Saturated fat food taxes are being explored by a number of countries. To be most effective, experts propose them alongside sugar and salt taxes and subsidies on healthy foods<sup>4,5</sup>
5. Agriculture support and subsidies to focus on pulses, grains, vegetable and fruit produce and where appropriate, non-intensive, grass-fed animal production methods
6. Mass media campaigns and implementation of clear food labels to inform and empower consumers to make informed choices.

## Public health relevance

### Saturated fat sources, intakes and rationale for action

Saturated fat is a significant risk factor for cardiovascular diseases (CVD) including heart disease and stroke through raising blood total cholesterol and LDL cholesterol levels<sup>5,6</sup>. The primary sources of dietary saturated fat are meat, dairy products, processed foods and palm oil. In the absence of comparable data on individual dietary fat intakes around the world, the availability of food for human consumption derived from national food balance sheets has been used<sup>7</sup>. While availability of saturated fat in low and middle income countries is currently below 10% of energy, across all world regions, availability of dietary energy from total fat has been rising<sup>7</sup>. It is imperative that global targets and indicators for saturated fat are put in place to prevent high saturated fat intakes and high cholesterol becoming a widespread problem, particularly in low income countries.

### Prevalence of raised cholesterol

Prevalence of raised total cholesterol – defined as a blood level of 5mmol/L or above – currently ranges from 23% in the WHO Afro region to 30% in the WHO SE Asia Region and 54% in the WHO Euro region. High cholesterol features in the top 10 risks for total mortality and morbidity in high income and middle income countries, ranking 5th in the mortality risks for high income countries and 7<sup>th</sup> for middle income countries<sup>6</sup>.

### Recommended saturated fat intakes

A population saturated fat target of less than 10% total energy intake is recommended by WHO experts for the prevention of chronic diseases<sup>8</sup> to support key objectives on blood cholesterol and mortality<sup>9,10</sup>. The 10% energy saturated fat target has been adopted by several high income countries for the prevention of CVD, such as the UK, Australia and New Zealand<sup>11,3</sup>. Recent expert recommendations in Europe and the US have proposed more stringent saturated fat intake goals of less than 7% energy<sup>5,12</sup>. The US dietary guidelines recommend that saturated fat intakes should be as low as possible. The US expert panel decided against setting an upper limit “because any incremental increase in intake increases the risk of coronary heart disease”<sup>13</sup>.

### Examples of successful population-wide interventions

Examples of successful interventions to reduce and replace saturated fat intakes with polyunsaturated fat and CVD mortality have emerged from a number of countries including Finland<sup>14</sup>, Poland<sup>15,16</sup> and Mauritius<sup>17</sup>. In Mauritius, estimated intakes of saturated fats decreased by 3.5% of energy intake while intakes of polyunsaturated fats increased by 5.5%, and were mirrored in changes in serum phospholipid levels between 1987 and 1992. This followed an intervention by the government in 1987, to change the composition of the commonly used cooking oil from mostly palm oil (high in saturated fatty acids) to wholly soya bean oil<sup>17</sup>.

### In some countries the problem is worsening

By contrast with the some of the success stories, rapid rises in CVD mortality seen in China and elsewhere are principally due to the adoption of Western diets rich in saturated fats<sup>18,19</sup>.

### Correlation of saturated fat with other dietary fats and sugar

Evidence suggests that a reduction in saturated fat intake is most beneficial when replaced with unsaturated fat, but not with trans fats or simple carbohydrates which have large amounts of added sugars<sup>20,21,5</sup>. Therefore saturated fat targets need to be accompanied by efforts and targets to eliminate trans fat and limit population sugar intakes in line with existing sugar recommendations of a maximum of 10% of energy<sup>8</sup>, to prevent harmful substitution.

### Target setting

- A target intake of less than 10% of total dietary energy from saturated fat is recommended by WHO for the prevention of CVD<sup>8</sup>.
- A corresponding increase in consumption of polyunsaturated fats up to 10% of total energy would be acceptable<sup>22</sup>.

## **Baseline data availability, measurement issues and requirements**

Work is needed by WHO and others to support the development of monitoring mechanisms in low and middle income countries to assess dietary saturated fat intake levels at the individual level<sup>7</sup>. In the absence of comparable data on individual dietary intakes around the world, the availability of food for human consumption derived from the Food and Agriculture Association (FAO) national food balance sheets should continue to be used<sup>7</sup>.

Given the close relationship, data on blood lipids from nationally representative surveys such as the WHO STEPwise approach to surveillance (STEPS) can also provide a useful indication of dietary saturated fat intakes. However, further work is needed to support the development of monitoring mechanisms in low income and some middle income countries to assess blood cholesterol levels utilising the STEPS or similar health examination survey protocols<sup>23</sup>.

## **Supporting organisations**

1. World Heart Federation [www.world-heart-federation.org](http://www.world-heart-federation.org)
2. European Heart Network [www.ehnheart.org](http://www.ehnheart.org)
3. National Heart Forum [www.heartforum.org.uk](http://www.heartforum.org.uk)
4. Heart of Mersey [www.heartofmersey.org.uk](http://www.heartofmersey.org.uk)

## **Contact details**

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## **References**

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<sup>3</sup> Department of Health (1991) Dietary Reference Values for food, energy and nutrients for the United Kingdom. London: HMSO.

<sup>4</sup> WHO (2012) Research and Development to Meet Health Needs in Developing Countries: Strengthening Global Financing and Cooperation. Report of the Consultative Expert Working Group on Research and Development: Financing and Coordination. [http://www.who.int/phi/CEWG\\_Report\\_5\\_April\\_2012.pdf](http://www.who.int/phi/CEWG_Report_5_April_2012.pdf)

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<sup>7</sup> WHO (2011) Global status report on noncommunicable diseases 2010.

<sup>8</sup> WHO (2003) Diet, Nutrition and the Prevention of Chronic Diseases. WHO Technical Report Series 916. Geneva: WHO.

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- <sup>12</sup> US Department of Agriculture and US Department of Health and Human Services. Dietary Guidelines for Americans, 2010. 7th Ed. Washington, DC: US Government Printing Office 2010.
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