# Combating the epidemic of Non-Communicable Diseases in Oman by changing the nutritional quality of the food chain.

**Urgent needs**:

1. **Markedly reduce salt intake in the national diet by focusing initially on highly-salted common foods, e.g. bread, cheese, canned foods, processed meats, and pickles/spices**.

   a) Bread is a major salt source in every EMRO country: reduce salt content in all breads in stages, e.g. 10% each time with no sudden major reduction. Current 10% reduction each 6-12 months in Kuwait, Qatar and Bahrain showed a success experience starting in early 2014. ,

   b) Consider other salt sources for similar routine and universal 10% salt reductions for implementation in 2015.

   **Need**: i) Coordinated approach to, and involvement of, cheese manufacturers, processed meat producers; import businesses.

   ii) Government guidelines to procure only food items complying with new salt standards as well as new fat criteria as in Trans and saturated fat changes

   c) Identify national groups for monitoring

      i) 24 hr urine sodium/salt excretion

      ii) national laboratory for checking salt content of regulated items

      iii) conducting national food surveys on a common agreed basis

   d) Make iodination of salt mandatory for all industrially used salt. This will limit iodine deficiency with iodine analyses for sufficiency included in the urine monitoring of salt intakes.

2. **Regulatory measures for eliminating trans fat:**

   a) forbid the production of trans fat by the food oil refining industries in the country.

   b) require food importers to have all imported foods certified as industrial trans fat free.

   This approach, involving Ministry of Commerce is in keeping with legal action by several European countries where dramatic falls in trans fat occurred within 6 months of the measures being taken. Small amounts, i.e. <1% dietary trans fat found in naturally produced products, e.g. meat and milk products or <2% trans fat, in any fat source, are acceptable.

3. **Focus on reducing saturated fat of two major sources in Oman:**

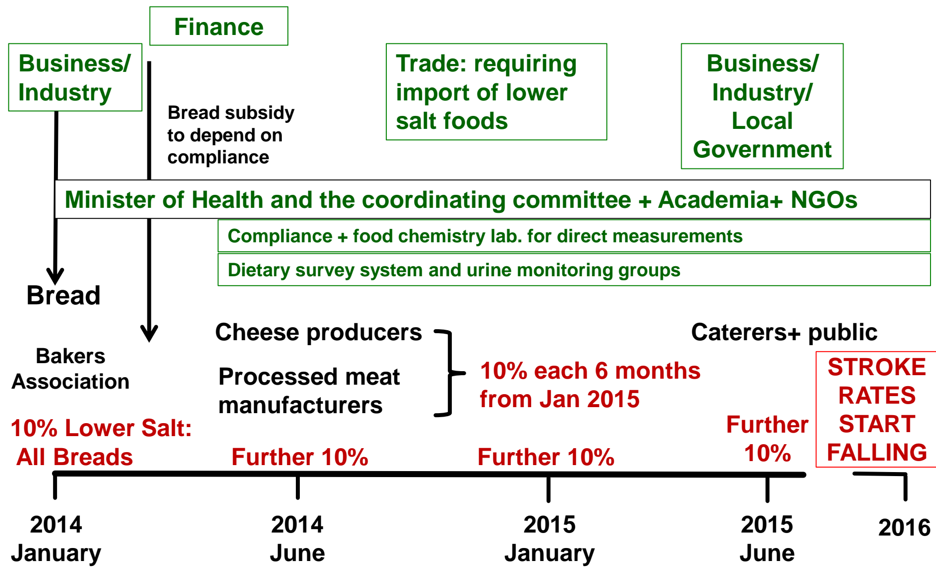
   a) Milk and milk products.

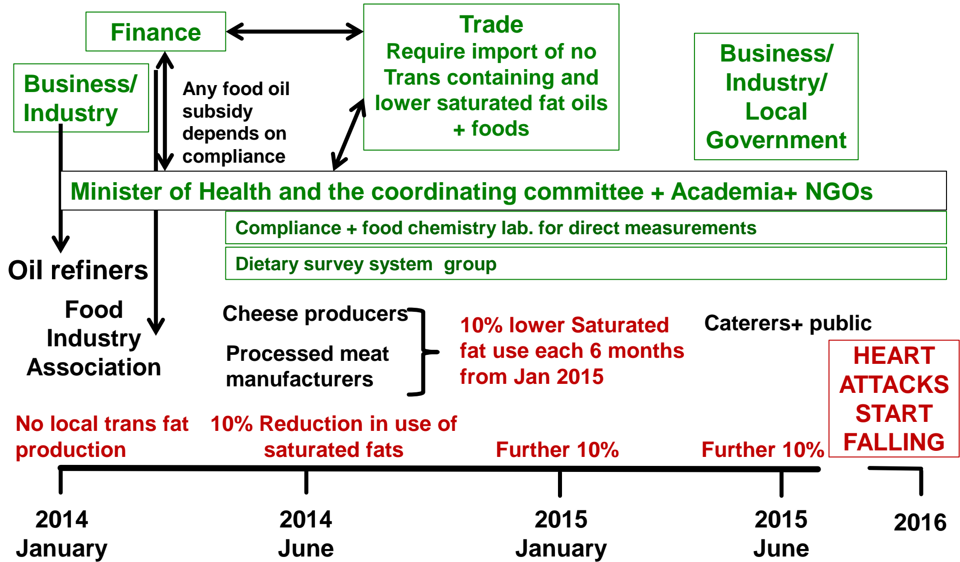
   Require government supported establishments to only provide semi- skimmed (1.0-1.8% fat) and make this milk available for sale to consumers with a lower price than full cream milk. The Agriculture and Fisheries Wealth Ministry may help local dairy businesses to develop milk skimming facilities. Suggest a 2-year plan for successful implementation.

   b) Palm and coconut oils with a high saturated fat content need progressively replacing with better oils, e.g. corn, soya, olive or sunflower oils by:

   i) Replacing palm/coconut oils with more suitable oils in all government supported subsidy schemes and catering.
   ***Note***: current international trade prices are lower for palm oil, so financial adjustments are needed.

   ii) Markedly limiting imports of palm oil by changing import policies/duties on health grounds, given long standing WHO agreement that saturated fat is a major cause of cardiovascular disease, and UN General Assembly agreement that many sector changes are needed to improve health. Need national financial/trade analyses of best options.


A coordinated reduction in salt intakes and the burden of strokes
Most Ministries probably involved : Cabinet initiative often helps: all government departments procure only food in accordance with new criteria
Finance
Business/ Industry
Bread subsidy to depend on compliance
Trade: requiring import of lower salt foods
Business/ Industry/ Local Government
Minister of Health and the coordinating committee + Academia+ NGOs
Compliance + food chemistry lab. for direct measurements
Dietary survey system and urine monitoring groups
Bread
Bakers Association
Cheese producers
Processed meat manufacturers
10% each 6 months from Jan 2015
Caterers+ public
STROKE RATES START FALLING
10% Lower Salt: All Breads
Further 10%
Further 10%
Further 10%
2014 January
2014 June
2015 January
2015 June
2016


A coordinated elimination of trans fats from food & a low saturated fat intake to reduce the burden of heart disease
Most Ministries probably involved: Cabinet initiative often helps; all government departments procure only food in accordance with new criteria
Finance
Trade
Require import of no Trans containing and lower saturated fat oils + foods
Business/ Industry
Any food oil subsidy depends on compliance
Business/ Industry/ Local Government
Minister of Health and the coordinating committee + Academia+ NGOs
Compliance + food chemistry lab. for direct measurements
Dietary survey system group
Oil refiners
Food Industry Association
Cheese producers
Processed meat manufacturers
10% lower Saturated fat use each 6 months from Jan 2015
Caterers+ public
HEART ATTACKS START FALLING
No local trans fat production
10% Reduction in use of saturated fats
Further 10%
Further 10%
2014 January
2014 June
2015 January
2015 June
2016

**More detailed proposals on policy needs and actions to lower national salt intakes and lower death rates from high blood pressure and strokes.**

**Suggested Policy Goal**: a progressive and sustainable reduction in the next 3-4 years by 25% to reduce stroke and heart disease rates within 5 years. Current salt intakes are very high at >12g/head/day in most EMRO countries. There is no need for extra salt in hot climates and the taste for salt adapts rapidly to progressive but modest rather than rapid drastic reductions in salt intake. Even a small 1 gram per day reduction in salt intake will reduce death from strokes and heart attacks by more than 7%.

**Rationale**: Salt is the major cause of high blood pressure which is itself a major cause of strokes and heart disease with excess deaths and severe disability in the survivors. Salt reduction is a very cost-effective public health policy: in the UK for a £5 million/yr cost of having industry reduce their salt in foods, £1.5 billion was saved in health care, i.e. a benefit which is 300 times greater than cost of implementing the industrial salt reduction programme. In this region bread with 1-2% salt accounts for 30-40% of all salt intake, so this is the first focus with several industrial groups already taking action, e.g. in Kuwait, Qatar and Bahrain.

**Actions**

**Phase 1**: Ocober 2014 - Major Initiatives focused on Bread Production.

1. Establish a national taskforce on salt reduction representing key stakeholders and partners[1].
2. Achieve a 10% reduction of salt/sodium in staple bread within 3-4 months. This will reduce salt intakes by about 0.5 gram per day in the whole population.
3. Establish salt standards for compliance by all bakers. Several major bakers in EMRO are now reducing salt but all bakers need to comply to avoid trade conflicts.
5. Mandate use of iodized salt in local and imported food to ensure adequate maintenance of the population's iodine status and the avoidance of goitre and cretinism.
6. Identify the top five other food contributors to salt/sodium in national diet e.g. cheese, processed meat and others.
7. Review and revise national food standards for bread to reflect the recommended minimum levels of salt/sodium content in bread; i.e. 30% reduction of salt/sodium from current levels over an18 month period.
8. Establish national groups to obtain simple suitable population based food intake data, a laboratory group for measuring the salt content of specified foods and a national group for monitoring salt intake using 24hr urine measurements.

**Phase 2: March 2015.**

A. Confirm progressive salt changes in national bread production.
   - A1. Further 10% reduction i.e. total 20% reduction of salt/sodium in all bread sources.
   - A2. Monitor bread industry/bakeries compliance to salt standards.
   - A3. Monitor use of iodized salt in locally and imported food industry.
   - A4. Measure salt/sodium content of top 5 contributors to national dietary salt/sodium intake.
   - A5. Adopt 24 hour urinary sodium excretion testing to measure national sodium intake as recommended by WHO regional protocol[2].

B. Government establishments to start reducing salt content in all food served on their premises by 10% every 6 months.
   - B1. Establish a requirement that all government serving food, e.g. army, police, hospitals, schools, universities, local and national governments record for inspection their salt purchases each month.

---

[1] Ministry of health, academia involved in public health, trade, the food industry, retailer and catering organisations, nongovernmental organizations.

[2] Governments could consider measuring urinary iodine excretion to monitor iodine deficiency program. Moderate salt reduction within the recommended levels for EMRO has minimal effect on iodine population status.

B2. Require all these services to reduce their salt use by 10% each 6 months for 2 years.

B3. Establish a monitoring group including civil society groups; link to food safety/trade inspections and analytical laboratory for monitoring locally made items in menus.

B4. Establish a catering educational group linked to national body responsible for educating caterers.

**Phase 3: September 2015**

A. Confirm government based initiatives and compliance with further 10% reduction in salt levels.

B. Engage major national businesses and all caterers to help lower salt intakes.

C. Public educational campaign focused primarily on caterers and those providing food rather than the public in general.

D Engagement with general Businesses.

Major businesses employing substantial numbers of workers have a major opportunity to contribute to the health of their workers by reducing salt in the food provided in their canteens. Chinese steel factory studies[3] show a fall of 75% in deaths from strokes within 5 – 7 years of factory meal changes in canteen salt and fat content. So there is a great opportunity for businesses to contribute to their workers' health by changing the menus in their own canteens and reducing salt and fat intake. Business leaders could ensure their catering staff comply by ensuring the purchases of salt are monitored and declared and made available for scrutiny by staff and concerned civil society organisations.

. E. Educating Caterers and those responsible for home cooking

Caterers in general are a more specific focus for educational initiatives than general educational messages for the public as they are crucially involved in the detailed organisation of menu planning and cooking. Then include national programme relating to home cooking. There will, however, be a need to overcome common beliefs such as the need for high salt intakes in hot climates.

## More detailed description of policies and actions for reducing fat intakes and lowering heart attack rates in the Eastern Mediterranean Region

**Policy Goals**

1. to eliminate all industrially produced trans fat from the food supply

2. to reduce markedly the saturated fat content of the food supply

**Rationale:** Trans fat (TFA) from industrial refining is toxic to the heart and may increase the risk of diabetes: it needs to be eliminated. Saturated fat (SFA), together with smoking is the major risk factor for heart disease and stroke. WHO recommends that populations should not exceed the consumption of 10% of energy from SFA, and less than 1% from naturally occurring TFA. In addition, WHO notes that intakes from total fat range between 10 and 35% of total energy intake, but we now need to consider the evidence of an association between fat intake and the increased likelihood of weight gain and obesity and therefore of diabetes. Traditional Middle East diets were very low in fat content and as this has risen so has the obesity/diabetes epidemic which is more serious than any other region in the world.

An overview of national policies has concluded that the most effective way of ensuring a drastic fall in TFA intakes is by legally prohibiting the sales of food products containing industrially produced TFA. In practice, highly effective legislation (e.g. in Denmark, Switzerland, Austria, and Iceland) indicate a limit of 2g/100 g of oils or fats[4]. The voluntary reduction approach taken by some countries requires solid and sustainable monitoring system and has not been proven to be as effective. It is evident that in countries of the Region there are local oil refining companies which could rapidly be required to eliminate the production of TFA, e.g. when producing local ghee or

---

[3] Chen J, Wu X, Gu D. Hypertension and cardiovascular diseases intervention in the capital steel and iron company and Beijing Fangshan community. Obesity Reviews. 2008 ;9 Suppl 1:142-5.

[4] Downs SM, Thow AM, Leeder SR. The effectiveness of policies for reducing dietary trans fat: a systematic review of the evidence. Bulletin of the World Health Organization, 2013, 91: 262–9H.

margarine . If a sales ban is implemented import of products that do not comply with it may also be prohibited without infringing international trade agreements. This is important in the region where food imports often comprise a substantial proportion of the national food supply.

The reduction of the dietary intake of SFA has been remarkably successful in bringing down deaths from coronary heart disease and stroke by as much as 85% in Finland. Reducing SFA requires a good understanding of the food chain within a country. In Finland 19 government initiatives involved all sectors of the food chain from local production to government purchases of food and import policies; there was no reliance on health education alone. In EMRO countries, there is a substantial opportunity to reduce saturated fat intake by introducing policies that discourage the use of palm oil and coconut oil containing products and encourage the sales and consumption of products containing other vegetable oils with less SFA and more unsaturated fats. If cow's milk and its products is widely used in a country, policies to establish the routine use of semi-skimmed or low fat milk (with fat content of 1-1.8%) have been highly effective measures for reducing national saturated fat intakes. Animal producers should be encouraged to use feeds containing more unsaturated fat (e.g. canola oil), which is then reflected in the fat content of meats such as chicken. Policies to encourage such changes include pricing policies , the establishment of food quality standards to guide purchases in public institutions, labelling policies (including front-of-the-pack labels, easily understandable traffic light systems, healthy option symbols).Government procurement policies should move progressively to the purchase of only a variety of exclusively healthy, low fat, low saturated fat, low salt and low sugar products together with new training of all caterers and food producers.

**Suggested actions to reduce trans fats**

**Phase 1: January 2016**

1. Introduce legislation to ban the sales and therefore local production and importation of products containing artificially produced trans fats (in oils and fats alone or part of processed food products) in shops and catering outlets. Legislation would need to establish the maximum content of all trans fat in products (max 2 g/100 g of oils).
2. Identify processed foods rich in artificial trans fats and determine the average population intake of these foods.
3. Recommend that replacement fats used do not increase the saturated and total fat content of the foods; mechanisms need to be established to monitor compliance with the recommendations

**Phase 2: June 2016**

1. Require food importers to have all imported foods certified as free of artificially produced trans fat.
2. Monitor compliance to national food standards with measures established for non-compliance; i.e. consider sanctions for non-compliers. Certification of compliance to the trans fat legislation for procurement of foods in public institutions will have a major beneficial impact on those providing food.

**Phase 3: January 2017**

1. Adequately inform consumers of the importance of trans fat elimination and engage civil society organizations in supporting the measures taken.
2. Provide incentives in the form of public support to product reformulation and information to the public about compliers and non-compliers.

**Actions to reduce saturated fats :**

**Phase One by January 2016**

1. Develop national standards to limit the use of palm and coconut oil in the food industry.
2. Develop new, lower national standards for saturated fat content of dairy products.

3. Require government supported establishments to provide only semi- skimmed (1.0-1.8% fat) and make this milk for sale to consumers with a lower price than full cream milk. The Agriculture/Food Ministry may help local dairy businesses to develop milk skimming facilities.
4. Negotiate and review standards of livestock to reduce saturated fat content of meats through changes in feed and husbandry systems[5].
5. Negotiate and review standards of vegetable oils and ghee such that total saturated fat content is less than 10%.

**Phase Two by June 2016**

1. Ensure that all foods purchased by public institutions comply with new standards with a saturated fat content <10% .
2. Study measures to favour import of fats, oils and processed foods containing less saturated fat
3. Reconsider policies to assist the production of fats and oils so that varieties with lower SFA content are made more economically viable
4. Reconsider social support policies (e.g. subsidies to food purchases) to favour low SFA oils and fats
5. Implement and monitor government supported establishments to provide only semi- skimmed (1.0-1.8% fat) and make this milk for sale to consumers with a lower price than full cream milk.

**Phase three by January 2017**

1. Consider establishing a differential taxation system to make the consumers' price of products with a reduced SFA content lower than the same products with a higher SFA content.
2. Establish mandatory labelling schemes for SFA content that are easily understandable for most consumers (e.g. traffic light systems) and/or consider the establishment of a "low SFA" label
3. Adequately inform consumers of the importance of saturated fat reduction and trans fat elimination and of the measures taken.
4. Implement and monitor government supported establishments to provide only semi- skimmed (1.0-1.8% fat) and make this milk for sale to consumers at a lower price than full cream milk.
5. Palm and coconut oils with a high saturated fat content need replacing with better oils, e.g. corn, soya, olive or sunflower oils by:
    - i) replacing palm/coconut oils with more suitable oils in all government supported subsidy schemes. Note: current international trade prices are lower for palm oil so financial adjustments are needed. Subsidies are better focused on bread than current subsidies of oil/ sugar in many EMRO countries.
    - ii) markedly limiting imports of palm oil by changing import policies/ duties on health grounds given long standing WHO agreement that saturated fat is a major cause of cardiovascular disease. Needs national financial analyses of best options.

[5] Negotiations need to be with livestock industry, private sector, ministry of trade and ministry of agriculture.