

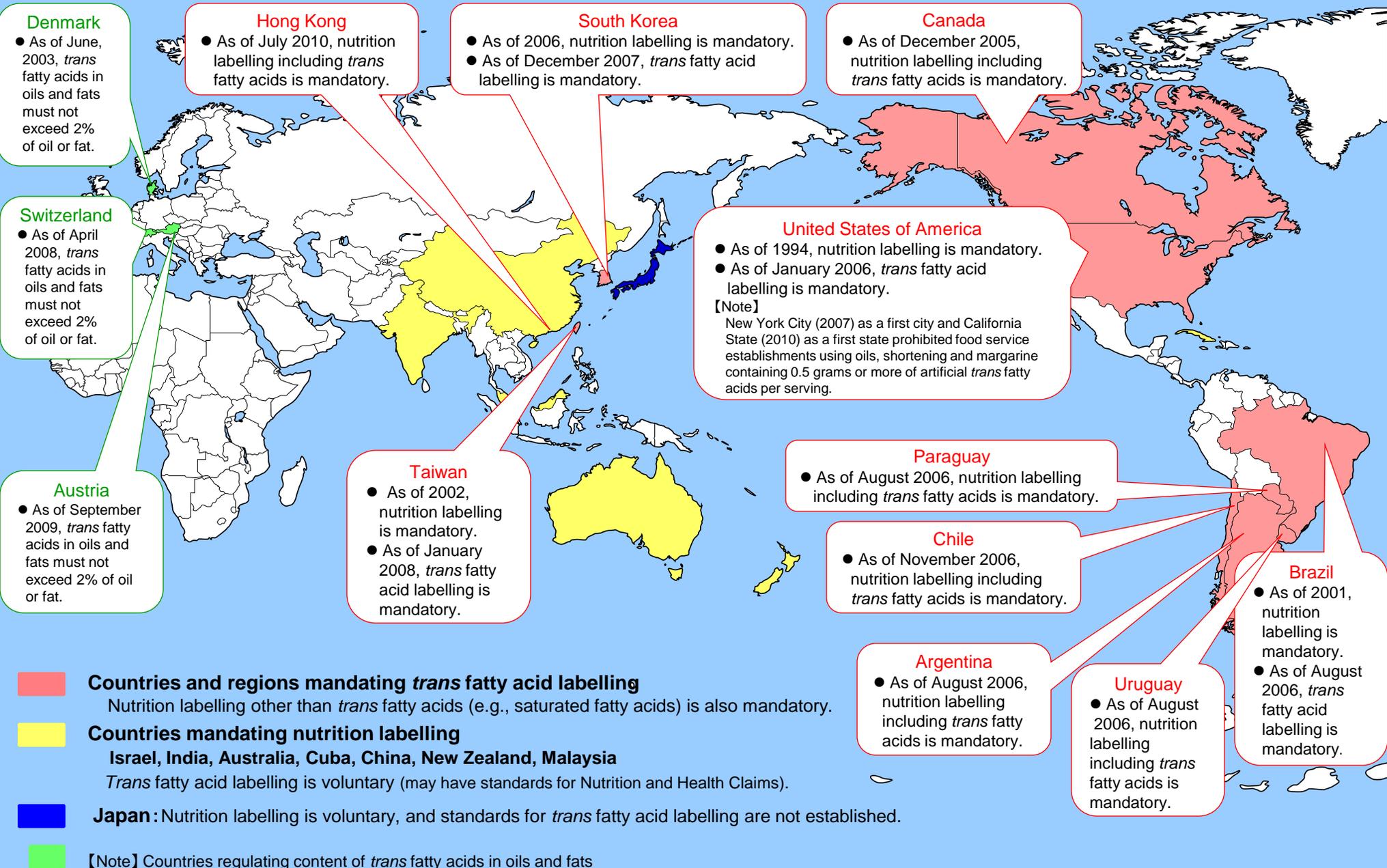
Regulatory trends of Nutrition labelling and *trans* fatty acid labelling

October, 2010

Consumer Affairs Agency

Food Labelling Division

Global regulatory trends on Nutrition labelling and *trans* fatty acid labelling



Fatty acids and Health

Important roles of fatty acids

- Structural component of cell membranes.
 - Source of energy (provides more than twice amount of energy compared with carbohydrates and proteins).
 - Supports absorption of fat soluble vitamins (vitamins A·D·E·K) and carotenoids.
 - Cholesterol constitutes cell membranes and serves as precursors for hormones and vitamin D.
 - N-6 fatty acids and n-3 fatty acids, fatty acids not synthesized in the body (essential fatty acids), must be obtained from diets.
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Dietary reference intakes for Japanese (2010) have established adequate intake and dietary goals for fatty acids by age group and sex.

Reference: Ministry of Health and Welfare:
<http://www.mhlw.go.jp/shingi/2009/05/s0529-4.html>

Saturated fatty acids

- High saturated fatty acid intake increases LDL cholesterol level, the major risk factor coronary heart disease.
- Individual saturated fatty acids [lauric acids (12:0), myristic acids (14:0), palmitic acids (16:0) or stearic acids (18:0)] have different effects on lipoprotein cholesterol levels.

Trans fatty acids

- *Trans* fatty acids not only increase LDL cholesterol level, but also lower HDL cholesterol level.
- *Trans* fatty acids increase risk of coronary heart disease.
- In 2003, World Health Organization (WHO) recommended very low intake of artificial *trans* fatty acids (less than 1% of daily energy intake). In 2008, Joint FAO/WHO expert consultation on Fats and Fatty acids in Human Nutrition, however, reported that possible need of revising the current recommendation in order to protect substantial subgroups from having dangerously high intakes.

Cholesterol

- Elevated LDL cholesterol level is a major risk factor for coronary heart disease, and cholesterol intake may raise total and LDL cholesterol levels. However, association between cholesterol intake and cardiovascular diseases is inconsistently observed. Further studies are warranted to make conclusion on the effects of cholesterol on health.

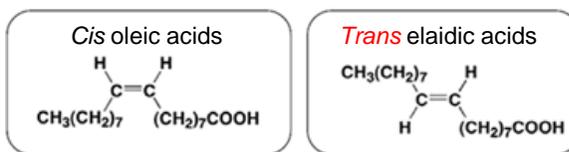
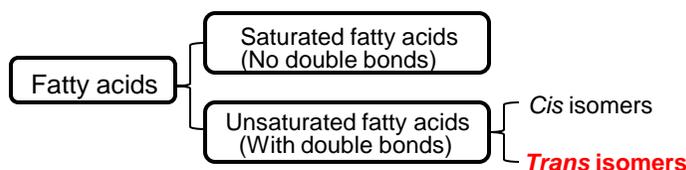
Trans fatty acid labelling in Japan

- *Trans* fatty acids increase risk of coronary heart disease. Several countries and regions in North America, South America, and Asia have mandated *trans* fatty acid labelling as one of the nutrients in the nutrition labelling regulations.
- Estimated mean *trans* fatty acid intake among Japanese is 0.6% of total energy intake. However, intake of individuals with unbalanced diets (e.g., high amount of sweets, which are high in fats), may exceed this level.
- Consumer Affairs Agency will release “Guidelines on *trans* fatty acid labelling” (tentative) for food industry to promote voluntary disclosure of information on *trans* fatty acid content. Considering to develop labelling systems of *trans* fatty acids, we will continue working on this issue.

Trans fatty acids

Trans fatty acids are type of fatty acids found in processed fats and oils, such as margarine and shortening, as well as food products made with these fats. Also, *trans* fatty acids are found in meat and milk of cows and other ruminant animals.

Example of *trans* fatty acids: Elaidic acids Reference: Ministry of Agriculture, Forestry and Fisheries



Example of nutrition labelling in the United States of America

Nutrition Facts	
Serving Size about 1 piece (20g)	
Servings Per Container about 6	
Amount Per Serving	
Calories 90	Calories from Fat 0
% Daily Value*	
Total Fat 0g	0%
Saturated Fat 0g	0%
<i>Trans</i> Fat 0g	
Cholesterol 0mg	0%
Sodium 10mg	0%
Total Carbohydrate 19g	6%
Dietary Fiber less than 1g	3%
Sugars 18g	
Protein 2g	
Vitamin A 0%	Vitamin C 0%
Calcium 0%	Iron 4%
*Percent Daily Values are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your calorie needs.	
Calories 2,000 2,500	
Total Fat	Less than 65g 80g
Sat Fat	Less than 20g 25g
Cholesterol	Less than 300mg 300mg
Sodium	Less than 2,400mg 2,400mg
Total Carbohydrate	300g 375g
Dietary Fiber	25g 30g

Estimated intake Reference: Food Safety Commission

- Japanese population
 1. Estimated from consumption of food group data in the National Health and Nutrition Survey →0.7g/day (0.3% of total energy intake)
 2. Estimated from Production data →1.3g/day (0.6% of total energy intake)
- US population: 5.8g/day (2.6% of total energy intake)
- EU population: men: 1.2-6.7g/day (0.5%-2.1% of total energy intake)
women: 1.7-4.1g/day (0.8%-1.9% of total energy intake)

2003: Diet, Nutrition and the Prevention of Chronic Diseases, Report of a Joint WHO/FAO Expert Consultation

Recommended *trans* fatty acid intake to less than 1% of daily energy intake.

2008: Joint FAO/WHO expert consultation on Fats and Fatty acids in Human Nutrition

Reported that possible need of revising the current recommendation in order to protect substantial subgroups from having dangerously high intakes.

Current and future work regarding *trans* fatty acid labelling (As of 2010, March 9)

(1) Provide helpful information to Consumers

- ① Educate consumers about nutrition, especially on fatty acids including *trans* fatty acids.
 - Released fact sheet on *trans* fatty acids (2010, September 10)
- ② Promote industry efforts to reduce *trans* fatty acids in food products and to disclose information of *trans* fatty acid content.
 - Consider definitions, analytic methods, and acceptance criterion for *trans* fatty acid labelling, and develop “Guidelines on *trans* fatty acid labelling” for food industry by the summer, 2010.
 - Request food industry to work on voluntary disclosure of information on *trans* fatty acid content.

(2) Continue considering to develop labelling systems for *trans* fatty acids.