LIPIDS AND CARDIOVASCULAR HEALTH IN THE NIGERIAN POPULATION

CONSENSUS STATEMENT OF NIGERIAN HEART FOUNDATION NATIONAL HEART HEALTH AND NUTRITION SUMMIT APRIL 2016

AT

NIGERIAN INSTITUTE OF MEDICAL RESEARCH, LAGOS, NIGERIA.

THURSDAY APRIL 21, 2016

www.nigerianheart.org
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FOREWORD
In Nigeria, globalization and urbanization has brought about rapid changes in lifestyle, with consequent heavy impact on the health of the population. The negative results of these changes are unhealthy dietary patterns, increased tobacco use, decreased physical activity, increased sedentary behaviour and increased alcohol consumption; which is leading to a rise in the incidence of Non-communicable diseases (NCDs). Non-communicable diseases (cardiovascular disease, diabetes mellitus, cancer, chronic lung disease, road traffic accidents and sickle cell disease) are becoming increasingly significant causes of disability and premature death in developing countries like Nigeria. However, cardiovascular disease is the leading Non-communicable disease in Nigeria.

The Nigerian Heart Foundation, in recognition of the rising prevalence of cardiovascular disease in Nigeria and the importance of prevention through promotion of Heart-healthy diets facilitated the organization of the National Summit. The Summit was organised in furtherance to the 2013 World Health Assembly which endorsed the NCD Action Plan 2013 - 2020 and recommended promotion of healthy diets by Member States, International Partners and Civil Society Organisations. It is intended that the Summit will support the WHO target of reducing heart attack and stroke by 25% through provision of practical tools to prevent Cardiovascular Disease (CVD).

The objective of the Summit was for the Nigerian Heart Foundation to take its pride of place in Africa and issue a consensus statement on the controversial issue of the relationship between lipids and cardiovascular health in the Nigerian Population. Coronary heart disease (CHD) is a major public health problem globally, being an important cause of morbidity and mortality. Elevated levels of triglyceride, cholesterol, and low density lipoprotein-cholesterol, are documented as risk factors for heart disease. The blood level of high density lipoprotein- cholesterol in contrast bears an inverse relationship to the risk of coronary heart disease: the higher the level, the lesser the risk.

The situation of palm oil as regards its effect on cardiovascular diseases has generated global controversy. In Nigeria, palm oil is the most commonly used oil at home for cooking, in the urban area 60.5% of adults use palm oil for cooking, in the rural area 90% of the
population use palm oil for cooking. The mean total population cholesterol is 122.4 – or ± 42 mg/dl which is lower than in most developed countries. However, the cholesterolemic ability of palm-oil may be considered minimal, though it needs to be scientifically documented. The prevalence of ischemic heart disease in the Nigerian population is less than 10%. In addition, the significance of high level of saturated fatty acids present in palm oil and its relationship with ischemic heart disease in the Nigerian population needs to be evaluated through scientific evidence.

To achieve this objective, the Summit brought partners from the Federal Ministry of Health, Federal Ministry of Agriculture, National Institute of Medical Research and Nigeria Center for Disease and Control, National Agency for Food, Drug Administration and Control, Standard Organisation of Nigeria, other Research institutes, Universities, Civil Society Organizations, Consumers, Food manufacturers and other relevant Stakeholders to deliberate on this important issue.

The outcome of the Summit will encourage more needed research in this area, translating these research into effective individual – population interventions which will go a long way in exchange of relevant information in cardiovascular health, empowering us with tools for effective strategic planning and finding solutions to the burden of NCDs in Nigeria.

The Summit recommends that the Federal Government of Nigeria convene other stakeholders and leading partners on addressing NCDs (international institutions, philanthropic foundations, nongovernmental organisations, research institutions and private companies) to develop a strategic and sustainable plan for collective actions on NCDs in Nigeria.

I would like to offer our profound appreciation to the Federal Ministry of Health, and in particular, the Hon. Federal Minister of Health, Prof. Isaac Folorunso Adewole, for his professional contribution to the success of the land-mark Summit. I would like to thank the Technical committee chairs, Professor Tola Atinmo and Professor Sola Omueti for their dedication to the Summit. I am thankful to all the Technical Committee members and Working Group Team, whose expertise contributed to the outcome of the report.
Also, I would like to express my thanks to the Executive Director, Nigerian Heart Foundation, Dr. Kingsley K. Akinroye, for his guidance, commitment and tireless support for the summit from inception.

Our appreciation also to the Director General, Nigerian Institute of Medical Research, Prof. I Ujah; Acting Director General, National Agency for Food, Drug Administration and Control, Mrs. Yetunde Oni; the Director General, Nigeria Centre for Disease Control, Prof. A. Nasidi; the Director General, Federal Institute of Industrial Research, Dr. Gloria Elemo; Managing Director, Choices International, Belgium, Mr. Rutger Schilpzand, all partners, Gentle men of the Media, and all participants for their valuable contributions, work and support.

Emeritus Professor O.O. Akinkugbe, CFR
President,
Nigerian Heart Foundation
ACKNOWLEDGEMENT

The Nigerian Heart Foundation wishes to offer profound appreciation to the Federal Ministry of Health, and in particular, the Hon. Federal Minister of Health, Prof. Isaac Folorunso Adewole, and thanks to the valuable contributions made to the Summit by: Prof. Innocent Ujah, Director General, Nigerian Institute of Medical Research (NIMR); Mrs. Yetunde Oni, Acting Director General, National Agency for Food, Drug Administration and Control; Prof. Abdulsalam Nasidi, Director General, Nigeria Centre for Disease Control; Dr. Gloria Elemo, Director General, Federal Institute of Industrial Research; Rutger Schilpzand, Managing Director, Choices International Foundation, Belgium; SUN Business Network, World Food Programme; Members of the Consensus Working Group, Managements of PZ Wilmar, Warm Spring Waters Nigeria Limited, Mona Products, and Dufil Prima Foods, Gentlemen of the Media, Members of staff of NIMR and all participants for their contributions, work and support.
# ACRONYMS

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<tr>
<th>Acronym</th>
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<tr>
<td>AHN</td>
<td>African Heart Network</td>
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<tr>
<td>β-carotene</td>
<td>Beta Carotene</td>
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<tr>
<td>CAD</td>
<td>Coronary artery disease</td>
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<tr>
<td>CDC</td>
<td>Centre for Disease Control</td>
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<tr>
<td>CHD</td>
<td>Coronary heart Disease</td>
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<tr>
<td>COPD</td>
<td>Chronic obstructive pulmonary disease</td>
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<td>CSOs</td>
<td>Civil Society Organisations</td>
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<td>CVD</td>
<td>Cardiovascular disease</td>
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<td>FAO</td>
<td>Food and Agriculture Organisation</td>
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<td>FDA</td>
<td>Food and Drug Administration</td>
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<td>FIIRO</td>
<td>Federal Institute of Industrial Research Oshodi</td>
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<td>FMOH</td>
<td>Federal Ministry of Health</td>
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<td>HDL</td>
<td>High-density lipoprotein</td>
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<tr>
<td>IHD</td>
<td>Ischaemic heart disease</td>
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<tr>
<td>LDL</td>
<td>Low-density lipoprotein</td>
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<tr>
<td>LIMC</td>
<td>Low and Middle Income Countries</td>
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<td>NAFDAC</td>
<td>National Agency for Food and Drug Administration and Control</td>
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<td>NCDC</td>
<td>Nigeria Centre for Disease Control</td>
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<td>NCDs</td>
<td>Non-Communicable Diseases</td>
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<td>NDHS</td>
<td>Nigeria Demographic and Health Survey</td>
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<td>NGO</td>
<td>Non-governmental Organisation</td>
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<td>NHF</td>
<td>Nigerian Heart Foundation</td>
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<td>NIMR</td>
<td>Nigerian Institute of Medical Research</td>
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<td>Acronym</td>
<td>Description</td>
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<tr>
<td>R &amp; D</td>
<td>Research and Development</td>
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<td>RDA</td>
<td>Recommended Daily Allowance</td>
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<td>RHD</td>
<td>Rheumatic heart disease</td>
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<tr>
<td>SUN</td>
<td>Scaling Up Nutrition</td>
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<td>TG</td>
<td>Triglyceride</td>
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<td>UN</td>
<td>United Nations</td>
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<td>VLDL</td>
<td>Very-low Density Lipoprotein</td>
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<td>WFP</td>
<td>World Food Programme</td>
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<td>WHF</td>
<td>World Heart Federation</td>
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<td>WHO</td>
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KEY NOTE ADDRESS

Distinguished colleagues, participants and stakeholders from the Academia, Research institutions, private sectors, and line Ministries, Departments, and Agencies, it is with great delight and honour to be invited by one of our revered medical legend- Professor O.O. Akinkugbe on behalf of the Nigerian Heart Foundation to this summit. I am humbled to be invited as the Chairman for this important occasion. Let me congratulate the Nigerian Heart Foundation for organizing the National Summit on “Lipids and Cardiovascular Health in the Nigerian Population”.

2. Globally, Non-Communicable Diseases (NCDs), primarily cardiovascular diseases, cancers, chronic respiratory diseases and diabetes, are responsible for 63% of all deaths worldwide (36 million out 57 million global deaths). In Nigeria, NCDs accounted for 27% of the total deaths in 2008 (WHO NCD Country profile, 2012). It is well documented that unhealthy diet, tobacco use, harmful alcohol intake, and physical inactivity are major clustering risk factors for the development of cardiovascular and other non-communicable diseases (NCDs). These risk factors are aggravated by poor awareness, harmful cultural practices, beliefs and misconceptions by the public. The population now consumes excess red meat, saturated fat, salts, refined sugars and drinks. There is also observed inadequate intake of fibre-rich food, vegetables and fruits in the population.

3. Distinguished ladies and gentlemen, the current burden of NCDs will increase unless we sharpen our strategies. We need robust collaboration to deliver quality, affordable, accessible and acceptable health services to Nigerians. We need to strengthen our NCD surveillances system. Government through the Federal Ministry of Health has made some progress since the establishment of Non-Communicable Diseases Control Programme in 1989. Recent successes worthy of mention include:


II. National Nutritional Guideline on NCDs Prevention, Control and Management 2014. The document contains nutritional management of NCDs including
cardiovascular diseases. It also has some of our local food items with their glycaemic index for informed choices.

III. National guideline for the control and management of sickle cell disease, 2014

IV. National Tobacco Control Act 2015 to legally enforce implementation of stringent tobacco control measures since tobacco is a major preventable risk factor for NCDs;

V. Training health workers at states Government levels in order to implement the integration of WHO package of Essential Non-communicable diseases (WHO-PEN) into Primary Health Care. It is hopeful that WHO-PEN integration would provide more accessibility to PHCs for NCDs management and prevention.

VI. With the aim of bolstering WHO-PEN, the Ministry developed Desk Guide on NCDs in June 2015 to be used at Primary Health Care levels for early detection and referral of NCDs.

VII. The government of Nigeria in 2013, flagged off the National Stroke screening to encourage Nigerians to routinely carry out medical check-ups which include blood pressure, blood cholesterol level, MBI, blood sugar check.

4. In view of the enormous tasks of fighting NCDs through risk factors modification, I want to seize this opportunity to again call on the Federal Ministry of Agriculture; Federal Ministry of Industry, Trade and Investment; Federal Ministry of Youth and Sports; National Agency for Food and Drugs Administration and Control; Standards Organization of Nigeria; Consumers Protection Council; Nigeria Customs Service; Manufacturers of Vegetable oils and other Stakeholders to be part of this important campaign for healthy lifestyles.

5. There is a need to regulate cross border marketing of foods high in saturated fats, trans-fatty acids, free sugars, salt etc. We also need to increase the availability and access to local foods by enhancing support to farmers, fishermen for home production, through technical assistance, tax breaks, subsidies and other support measures. Improving the quality of processed and other foods by developing collaborations between the food industry and governments to encourage product reformulation towards a healthier nutrient profile of processed foods is crucial. Mandatory product labelling with ingredient
lists and nutrition information labels to facilitate healthier choices is a very important component of this campaign.

6. Finally, I want to assure you that the Federal Ministry of Health and other Policy Makers will be interested in your recommendations at the end of the summit. It is my hope that your research findings and recommendations will add value to our National policies, strategic frameworks and guidelines on the control and prevention of Non-Communicable Diseases (NCDs) in Nigeria. I wish you a fruitful presentation and discussion.

7. Thank you for your attention.

Professor Isaac F. Adewole FAS, FSPSP, DSC (HONS)
The Honourable Minister of Health,
Federal Republic of Nigeria
CONSENSUS STATEMENT OF NIGERIAN HEART FOUNDATION NATIONAL HEART HEALTH AND NUTRITION SUMMIT ON LIPIDS AND CARDIOVASCULAR HEALTH IN THE NIGERIAN POPULATION; APRIL 21ST 2016

Preamble: The Nigerian Heart Foundation collaborated with several National and International organizations to convene the National Heart Health and Nutrition summit on Lipids and Cardiovascular Health in Nigerian population. The event had the representatives of Federal Ministries of Health, Agriculture, Science and Technology, State Ministries, International and Development Partners, Universities, Civil Society Organisations (CSOs), National Agency for Food and Drug Administration, Standard Organization of Nigeria, Nigeria Centre for Disease Control, Research Institutes, and other Departments and Agencies of Government, Nutritionists, Public Health Organisations and Civil Society Organisations in Heart, Cancer, Diabetes, Nutrition, Food Manufacturers, other relevant stakeholders and the Media.

The Summit’s lead organizer, the Nigerian Heart Foundation, is an affiliate of the World Heart Federation, Geneva and a founding member of African Heart Network. Its major objectives are Prevention of Heart diseases, Heart Health promotion, Advocacy, Support for Scientific Research in heart diseases and related issues.

The Nigerian Heart Foundation, in recognition of the rising prevalence of cardiovascular diseases in Nigeria and the importance of prevention through promotion of Heart-Healthy diets, facilitated the organization of the Summit. This was also in furtherance of the 2013 World Health Assembly's endorsed NCD Action Plan 2013 - 2020 and the recommended promotion of healthy diets by Member States, International Partners and Civil Society Organizations.

The event witnessed highly interactive discussions and contributions of participants. The following conclusions and recommendations were made.

CONCLUSION

1. NCDs are now recognized as the dominant contributors to the global burden of disease, and CVD is the leading contributor to NCDs. Though CVD death rates are
declining in developed countries, the trends are increasing in most low and middle income countries including Nigeria.

2. The key risk factors to the increase in CVD death rates include Tobacco use, unhealthy dietary changes (related to trans-fats and oils) leading to abnormal blood lipid levels, high intake of salt, low intake of dietary fibre, reduced physical activities and increased sedentary activities.

3. The causes of the rise of CVDs are beyond the confines of the health sector alone and therefore are multi-sectoral. Thus, a collaborative approach is needed so that policies in non-health sectors of government especially in agriculture, industries, education and the private sectors can be developed to promote Cardiovascular health.

4. Improved level of population data on CVD in Nigeria will serve to inform policies and programmes. Also, implementation research and translation research will be particularly needed to develop and upscale intervention measures as related to CVDs.

5. Reduction of abnormal blood lipid levels to decrease the risk for CVDs in the population.

6. Private – sector leaders at the multinational, national, and local level in the food industries, pharmaceutical, biotechnology and the business community, can be partners to reduce the burden of CVDs in this public health challenge. The food industries (including manufacturers, retailers, and food service companies) can also collaborate with the Global public – sector (WHO, WHF, NCD-Alliance and World Food Programme) to reduce dietary intake of trans-fats and cholesterol; and to implement marketing restrictions on these products.

7. It is established that there is cholesterol-free oil in the Nigerian market which must be promoted.

8. Abnormal lipid profile (raised TC, LDL-C, VLDL-C, TGL and low HDL-C) have been associated with Coronary artery disease and Peripheral artery disease. This results in high mortality and morbidity rates especially in developed countries and is rapidly increasing in developing economies.
9. There is documented evidence of deleterious effect of lipids in Nigerians.
10. There is a steady increase in the prevalence of Ischaemic heart disease in Nigeria.
11. There are various dietary lipids available in the Nigerian markets, both of plant and animal origins.
12. NAFDAC has the responsibility by law to regulate dietary lipid products of both plant and animal origins and other food products in Nigeria. The regulatory capacity of this agency however needs to be strengthened.
13. Many brands of vegetable and animal oils are marketed in Nigeria without appropriate labelling of their constituents and origin (plant or animal source).
14. The Summit acknowledges the existence of "Nutritional guidelines for the prevention, control and management of NCDs in Nigeria' and commends the FMOH for putting it in place as part of the Ministry's NCD control programme.
15. The Summit further observes that the "Nutritional guidelines for the prevention, control and management of NCDs in Nigeria" by FMOH is not well publicized for the information and action of stakeholders.
16. The Summit observes that there is abundance of local sources of heart-friendly nutritional lipid products which are yet to be fully tapped in the country.
17. There has been sub-optimal emphasis on Heart Healthy foods which contributes to the low awareness of what constitutes healthy foods especially in relation to Heart Health.
18. In Nigeria there has been a gradual shift from Heart Healthy foods to ‘westernized diets’. This has been encouraged by rural-urban shift and urbanization processes.
20. The Summit identified the availability of daily dietary allowances specific for the Nigerian population and the need to promote public awareness on this information.
21. The Summit recognized the absence of current Food Composition table for Nigeria.
22. There are insufficient data on the biochemical quality of Palm-Oil and the implication of its continuous consumption on Heart Health in Nigerians.
23. The average Nigerian is increasingly disposed to NCDs attributable to changes in diet and lifestyles over time. Also evident is the worsening nutritional indices in various reports over the years, including the NDHS (2013).

24. The Summit recognized efforts of the Nigerian Government in the year 2000 to ameliorate the worsening nutritional status, especially of women and children with regard to Vitamin A deficiency evident in the introduction of the National Fortification Programme. Under this programme, it became imperative for all flours, sugar and vegetable oils sold in the country to be fortified with vitamin A and other micronutrients as enforced by NAFDAC.

25. The Summit noted that Nigeria was the world’s largest producer of Palm oil until the early seventies, but lost a golden opportunity to promote the health benefits of palm oil as the single richest natural source of β-carotene which is the precursor of Vitamin A. Although there are many vegetable oils consumed locally including groundnut oil, palm kernel oil, coconut oil, soybean oil, sunflower seed oil, cotton seed oil, maize oil; palm oil still offer a great nutritional advantage in Nigeria because of its high level of β-carotene.

26. Today, there are many local manufacturers of regulated edible oils in Nigeria but only four are endorsed through the NHF Heart Check Food Labelling Programme, namely, Grand Cereals Ltd, PZ Wilmar, Raffles LFTZ, and Sunola Foods Ltd. However, there are other bulk importers who repackage locally, in various brands. The smuggling of various edible oils into Nigeria is also very rampant, especially soya and sunflower oils which are repackaged for sale without any fortification.

27. The Summit therefore agreed that it is time to revisit the issue and take concerted actions to promote the health benefits of raw palm oil and encourage an informed return to its consumption by the public. In this regard, Government, the Legislature and CSO’s role in policy, nutrition education and consumer awareness will be vital.

28. The initiative of the Nigerian Heart Foundation is welcome at this time. The Nigerian Heart Foundation Heart Check Food Labelling Programme is a commendable initiative which should be supported and promoted.
**RECOMMENDATIONS**

1. *To improve National and States data on NCDs*

   Efforts should be made by the Federal and State Governments to initiate and maintain health surveillance systems to monitor and control NCDs through creation and support for NCD departments in State Ministries of Health. The Federal and State governments should allocate funds and build capacity for sustainability of NCDs Surveillance with emphasis on prevention, detection and response as a target for reducing incidence of CVDs and mitigating the impact of NCDs.

2. *Collaboration to improve diets*

   The Federal government of Nigeria should collaborate with WHO, WHF, Global NCD Alliance, World Food Programme and other initiatives in conjunction with leading National CSOs to coordinate national efforts to develop collaborative strategies towards reduction of dietary consumption of trans-fats and cholesterol by the population. This initiative should include stakeholders from the public health community, multinational and national food corporations including the food services industries and retailers.

3. *Advocate for NCDs to be given Funding priority*

   Leading National CSOs and Professional societies related to CVDs and other NCDs should work together to advocate for private foundations, charities, governmental agencies and private donors to prioritize funding for specific initiatives and research to prevent and control the emerging epidemic of CVD and related NCDs. For successful advocacy, these organizations should consider (a) improving awareness of Cardiovascular health, (b) Advocating for health promotion and NCD prevention policies at Federal and State levels of government, (c) Engaging the media about priorities related to NCD control and (d) Emphasizing the importance of translating research into effective individual – population interventions. The funding should address surveillance and prevention activities and ability to diagnose CVDs using latest technologies.
4. **Advocacy For Correct Product Labelling**

Companies producing and marketing vegetable oils should label their products correctly according to the Codex Guidelines on Labelling of Pre-packaged foods and NAFDAC’s Fats and Oils Regulations (2005), with emphasis on cholesterol free content.

5. The Federal Government should promote and support compulsory labelling of food products based on International acceptable standards (i.e. Codex Standards; Choices International standards etc.). Information on the labelling should be clear, consistent, understandable, scientifically correct, simply presented and expressed both graphically and numerically.

6. Nutritional Labelling of dietary lipids to be made mandatory with NAFDAC enforcement by appropriating sanctions to defaulting companies.

7. The Nigerian Heart Foundation should continue the Endorsement of Heart friendly oils.

8. There should be periodic update of the information contained in the "Nutritional guidelines for the prevention, control and management of NCDs in Nigeria” in a way that is easy to understand, for the purpose of consumer education.

9. That Government actively encourages research into improving the quality of local sources of Heart-friendly nutritional lipid products.

10. Cohort studies to determine the Recommended Daily Allowance (RDA) of lipids for Cardiovascular health in Nigerians should be encouraged and supported.

11. Cohort studies to document cardiovascular diseases incidence, lipid profile status of indigenes in areas (locations) of high production and consumption of palm oil should be conducted.

12. Effects of variously processed and cooked palm oil on the blood lipid profile of human subjects, their effects on the level of oxidation, antioxidation as well as the free radical scavenging properties of palm oil should be investigated.

13. Urgent collaborative research studies to establish the Food Composition tables for Nigeria should be instituted in appropriate Departments in Nigerian Universities and Research institutions.
14. With respect to vegetable oils the Summit urges the Nigerian Heart Foundation to coordinate necessary efforts among Nigerian scientists to carry out more comprehensive analysis locally of all Nigerian vegetable oils for their fatty acid profiles for the benefit of all stakeholders.

15. The Government should be reminded of the responsibility of promoting healthy lifestyles including adoption of Heart-healthy dietary habits in partnership with the private sector, research institutions, CSO’s and other stakeholders.

16. There is the need for Federal government policy to promulgate legislation with emphasis on agriculture and food, and incentives to encourage the production of local sources of heart friendly nutritional lipid products.

17. Government, the private sector, research institutions, CSO’s and other stakeholders are invited to join the Nigerian Heart Foundation in the campaign for Heart - healthy food habits in Nigeria.
APPENDIX I

PROGRAMME

1. WELCOME GUESTS /REGISTRATION 8.00 AM – 8.45 AM

2. WELCOME ADDRESS 9.00 AM – 9.10AM
   Prof. O. O. Akinkugbe, President Nigerian Heart Foundation

3. OPENING ADDRESS 9.10 AM – 9.25 AM
   Prof. Isaac Adewole, Hon. Minister of Health

4. Overview: Nigerian Heart Foundation Heart Check Food Labelling Programme 9.25 AM – 9.35 AM
   Dr. K. K. Akinroye, Executive Director Nigerian Heart Foundation

5. PRESENTATION OF PAPERS 9.35 AM – 10.30 AM
   i. Dietary Lipids and Cardiovascular Disease in Nigeria - Situational Analysis.
      Prof. Tola Atinmo, Department of Nutrition, University of Ibadan
      Prof. B.J.C. Onwubere, Department of Medicine, University Teaching Hospital,
      Enugu
   ii. Current status of Cardiovascular Disease and Operational Nutritional
        Policies in Nigeria - A case for Dietary Lipids.
        Dr. Chris Isokpunwu, Department of Nutrition, Federal Ministry of Health
   iii. Palm Oil and Heart Health in Nigeria
        Prof O.J. Odia, Department of Medicine, University of Port-Harcourt
   iv. Nutrition and NCD Prevention: Role of Food Labelling
        Mr. Rutger Schilpzand, Choices International Foundation, Belgium

6. QUESTIONS/COMMENTS 10.30 AM - 11.00 AM

7. TEA BREAK 11.00 AM – 11.30 AM
8. GROUP WORK

11.30 AM – 12.30 PM

i. Sub-group on Regulation

**Topic:** Dietary Lipids-Policies and Legislation

**Resource Persons:** Prof. Nnodimele Atulomah, Babcock University, Ilishan Remo; Prof O.J. Odia, Department of Medicine, University of Port- Harcourt; Dr. Abimbola Ajayi, Nutrition Society of Nigeria, Dr. (Mrs.) A. Olaniba, Olaniba Adeshina Heart Foundation.

ii. Sub-group on Food Manufacturing Industries

**Topic:** Industry and Promotion of healthy foods for Cardiovascular Health

**Resource Persons:** Mrs. Dolapo Coker, Nutrition Consultant, Mr. Rutger Schilpzand, Choices International Foundation, Belgium; Prof. Olugbenga A. B. Ogunmoyela, Post Graduate School, Bells University of Technology; Mrs. Foluso Babasola, Nutritionist, XpertSolutions, Lagos.

iii. Sub-group on Government

**Topic:** Dietary Lipids and global Action/Plan on NCDs

**Resource Persons:** Prof. Akin Osibogun, Department of Community Health, College of Medicine, University of Lagos; Dr. Anthony Usoro, NCD Department, Federal Ministry of Health; Dr. Femi Mobolaji-Lawal, Paediatrician, Emel Hospital Lagos/ Nigerian Heart Foundation, Dr. Tony Philips, Guild of Medical Directors.

iv. Sub-group on Research

**Topic:** The role of research, Laboratory, Academia in the promotion of Healthy Nutrition

**Resource Persons:** Prof. Oni Idigbe, National Institute of Medical Research; Prof. Olusola Omueti, Director of Nutrition, Nigerian Heart Foundation; Dr. Adeola Olukosi, Department of Nutrition, National Institute of Medical Research; Dr. Sonny Kuku, NCD Alliance, Nigeria; Prof. Obehi Okojie, Community Health Medicine, University of Benin; Ralf Siwit, World Food Programme; Prof. Ambrose Isah, Department of Medicine, Clinical Pharmacology & Therapeutics, University of Benin.
9. PRESENTATION OF GROUP WORK 12.30 PM – 1.00 PM

10. DISCUSSION OF GROUP WORK 1.00 PM – 2.00 PM
    Prof. Tola Atinmo, Department of Nutrition, University of Ibadan
    Dr. Kingsley K. Akinroye, Nigerian Heart Foundation

11. CONSENSUS STATEMENT SESSION 2.00 PM – 2.30 PM

12. CLOSING REMARKS 2.30 PM

13. LUNCH
APPENDIX II

CONSENSUS WORKING GROUP

TECHNICAL COMMITTEE

Prof. Tola Atinmo, Chairman of the Technical Committee, is a Professor of Human Nutrition at the College of Medicine, University of Ibadan. He graduated with a PhD from Cornell University, New York. He served as President of the Nutrition Society of Nigeria and the Federation of African Nutrition Societies (FANUS). He is a Fellow of the Nigeria Academy of Science.

Prof. Olusola Omueti, Co-Chairman, is a Professor of Nutritional Biochemistry at the Department of Biochemistry, Adekunle Ajasin University, Akungba-Akoko, Ondo State. She obtained a Ph.D in Applied Biochemistry and Nutrition from the University of Nottingham. She is the Director of Nutrition, Nigerian Heart Foundation.

Mrs Charlotte Foluso Babasola is a graduate of African Nutrition Leadership Programme. She holds a Bachelor of Science degree in Business Administration from University of Lagos, a Certificate in Nutrition from Wageningen University, Netherlands, Certificate in Nutrition from GIMPA/GREENWITCH University,
London, a Fellow Nutrition Society of Nigeria and Member European Nutrition Society. Lead Nutrition Consultant, Xpersolutions

Prof. Oni Idigbe is a Medical Microbiologist by training and obtained his Ph.D from the University of Glasgow. He was the immediate past Director-General of the Nigerian Institute of Medical Research, Lagos. He currently works in the Institute as the Coordinator of Research Planning and Management and an Adjunct Professor of Microbiology at the Feinberg School of Medicine, Northwestern University Chicago, USA. He is Director, Research and Planning, Nigerian Institute of Medical Research.

Prof. Ambrose Isah is a Consultant Physician/Clinical Pharmacologist, Department of Medicine, Clinical Pharmacology & Therapeutics University of Benin/University of Benin Teaching Hospital, Benin City, Nigeria. He graduated from the College of Medicine, University of Benin. He is a Member of the Noncommunicable Disease Committee at the Nigerian Federal Ministry of Health, Member of the WHO Expert Panel on Medicinal Products and the Global Advisory Committee on Vaccine Safety, and former member of the WHO Advisory Committee on Safety of Medicinal Products. He is a member of the Executive Board Nigerian Heart Foundation.

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