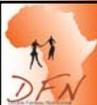




ADDRESSING THE NUTRITION TRANSITION AND THE DOUBLE BURDEN OF MALNUTRITION IN WEST AFRICA

April 18-20, 2012

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Nutrition, lifestyle transition
 ↓
 ↗ Nutrition-related chronic diseases ('overnutrition')
 +
 Persistence of undernutrition and micronutrient malnutrition
 =
Double burden of malnutrition

A double burden household - Amalia

Demographics	Age 35y; husband 40y 5 children; Claude 24 months; Irene 40 months	
Socio-economic profile	Moved from the village to the capital city 15 years ago Occupation: She: vendor; He: Motorcycle taxi-driver Complain that they cannot cope with rising food prices	Nutrition transition <ul style="list-style-type: none"> • Migration to city • Sedentariness Food insecurity
Health and nutrition status	Amalia is obese (BMI 31), short (1m45) and anaemic Her husband is thin (BMI 18) and hypertensive Irene is stunted	Double burden: <ol style="list-style-type: none"> 1) Obesity, hypertension 2) Anaemia, underweight, chronic malnutrition



Diet transition

<p>Traditional rural diet</p> <ul style="list-style-type: none"> • ↓ fat • ↓ sugar • ↑ complex carbohydrate • ↑ fibre • Monotonous • Based on few staples 		<p>Urban, westernized diet</p> <ul style="list-style-type: none"> • ↑ fat • ↑ sugar • ↑ meat • ↓ fibre • + Varied • ↑ industrial processed • ↑ fast food • ↑ Sweet carbonated drinks
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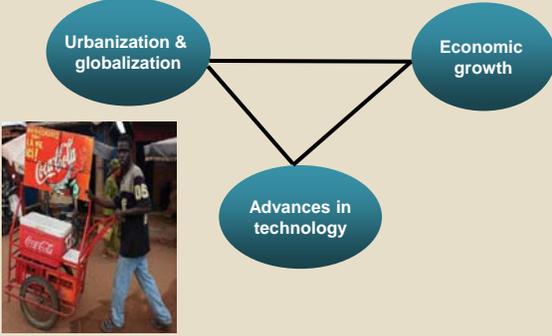
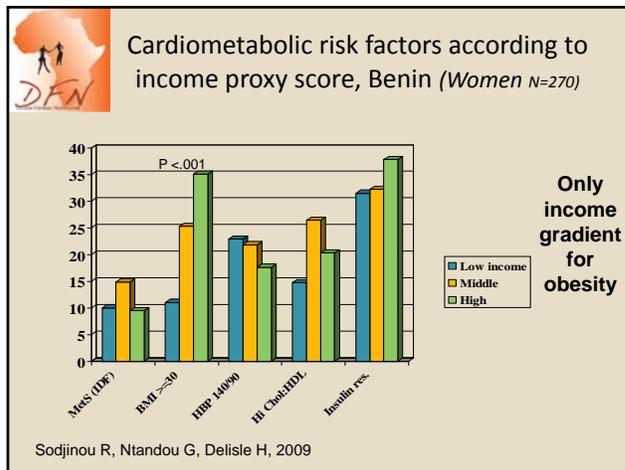
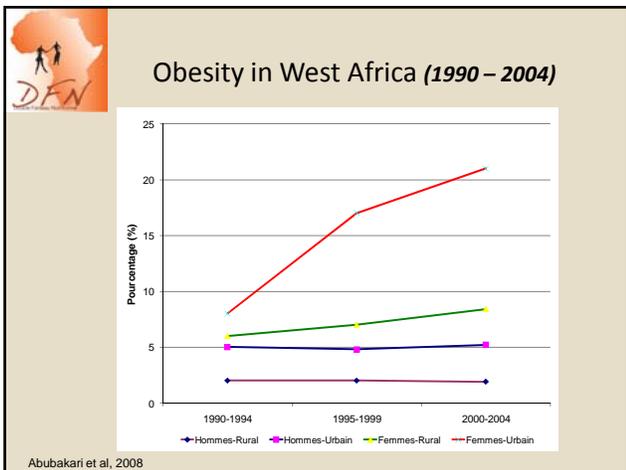
(Adapted from Vorster 1999; Popkin 2004)

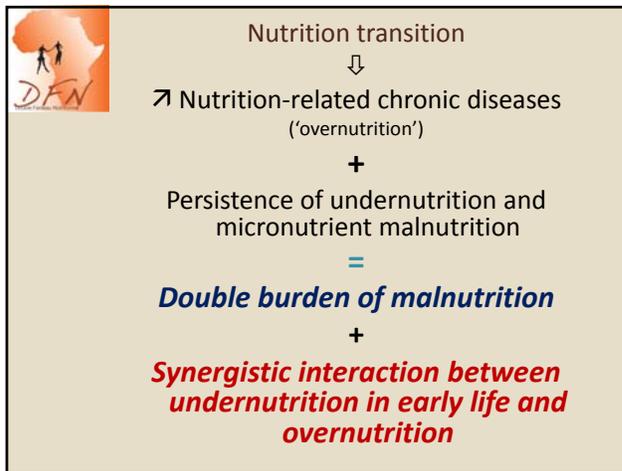
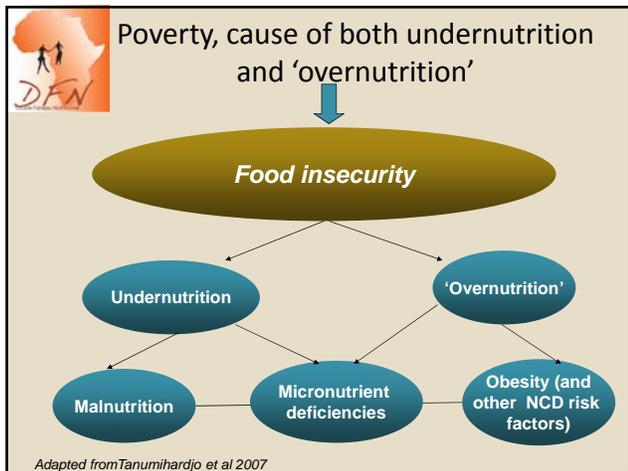
Lifestyle transition

- sedentary lifestyle with urbanization:
 - Motor vehicles
 - Mechanization of work
 - Sedentary leisure: screen activities
- Tobacco, alcohol, stress
- Globalization of marketing and publicity ➔ **Transfer of western types of food patterns and lifestyles to developing countries**




Nutrition & lifestyle transition drivers



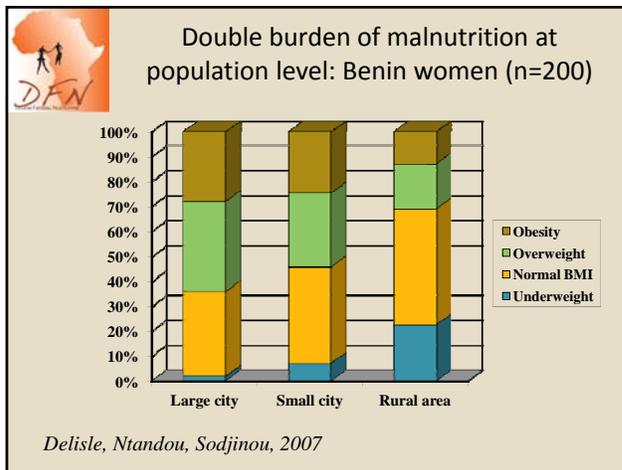
How the synergy between undernutrition in early life and exposure to atherogenic environment?

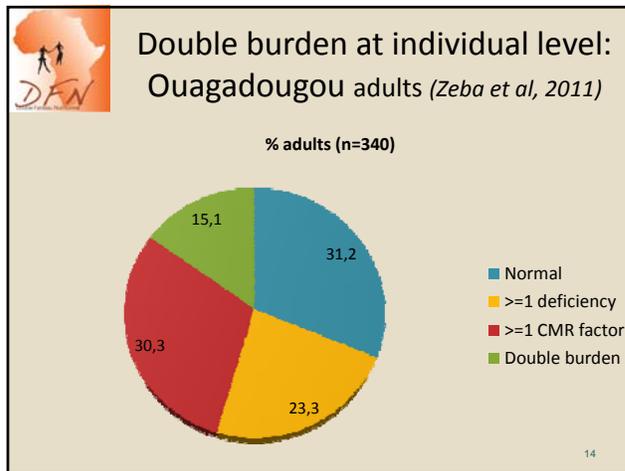
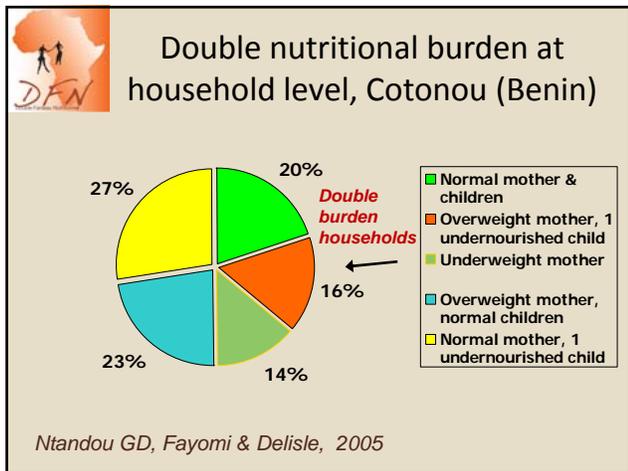
Barker's theory of 'Developmental origins of chronic diseases':

The fetus or infant exposed to undernutrition adapts for survival in an environment of paucity through metabolic programming and epigenetic processes

↓

- ↗ Risk of abdominal obesity, hypertension, diabetes and CVD
- When exposed to western-type diet and sedentary lifestyle





Addressing the double burden of malnutrition in Africa: *challenges*

- Myth: undernutrition affects the poor whereas obesity and other nutrition-related NCDs, the better-off
- Positive image of overweight
- Lack of awareness of the urgency to act
- Lack of personnel, of data

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IRSP
 INSTITUT REGIONAL DE SANTE PUBLIQUE
 Université d'Abomey-Calavi, BENIN
 et de la sous-région ouest-africaine francophone

- Mandate of TRANSNUT (2003-...)
 Technical support to WHO and its partners for training, research and communication on nutrition transition and **the double burden of malnutrition** (2007-....)
- Key project: 2008-2014:
- ‘Double burden’: concurrent undernutrition and nutrition-related NCDs (or risk factors)

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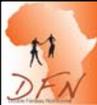


A hub on the double burden of malnutrition in French-speaking Africa
CIDA-funded UPCD project 2008-2014




Dr Victoire Agueh, project co-director
 Head of Nutrition program, IRSP

Institut régional de santé publique, Ouidah (IRSP) Bénin



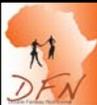
Strategies of the DFN Project

- Institutional strengthening through training of human resources **Component 1**
- Research, primarily action research in schools and communities, to reduce de double burden of malnutrition **Component 2**
- Sensitization and advocacy to promote policies and programs to prevent nutrition-related NCDs **Component 3**



1) Institutional strengthening and training of human resources

- New degree-granting university programs in Benin for the region :
 - M.Sc. in public nutrition 2009
 - Professional B.Sc. in Dietetics and Nutrition 2011
- Training of trainers at University of Montreal;
- Continuous education /e-courses
 - Nutrition transition and the double burden of malnutrition
 - Management of severe malnutrition



Professional B.Sc. In Nutrition and Dietetics (2011-...)

School of Nutrition and Dietetics, Faculty of Health Sciences, University Abomey-Calavi (Benin)



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2) Action research in schools and communities; other studies

- In schools: pilot-testing of Nutrition-Friendly School Initiative (WHO)
- In communities: Self-help groups for the prevention of nutrition-related NCDs
- Other studies
 - Nutrition issues in management of diabetes
 - Diabetes and exposure to pesticides

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Nutrition-Friendly School Initiative (WHO): Health promotion approach

- **School nutrition policy and plan**
- **Awareness and capacity strengthening**
- **Nutrition and physical education in curriculum**
- **Supportive school environment**
 - Food
 - Water and hygiene
- **School health and nutrition services**
 - Nutritional status monitoring
 - Feedback with parents and referral .




3) Communication and advocacy

- R&D:
 - Food-based dietary guidelines (Benin)
 - Development of advocacy strategies and tools focusing on management and prevention of type-2 diabetes



Toward Benin Food Guide



www.poleDFN.org



To tackle the double burden of malnutrition

- Poverty reduction for food security
- More sustainable local food systems
- Lifecycle approach, with emphasis on mothers and children
- Promotion of healthy weight and physical activity so these become social norms
- Rehabilitation of traditional foods

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Thank you for your kind attention