Universal Screening of Gestational Diabetes Mellitus

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Gestational Diabetes Mellitus (GDM)

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Diabetes Type II PANDEMIC

- In 1997 the WHO estimated that the prevalence of Diabetes Type II in adults will grow by >120% representing an absolute change from 135 million patients in 1997 to 375 million in 2025.

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*Source: HAPO. The Hyperglycemia and Adverse Pregnancy Outcome (HAPO) Study. Int J Ginecol Obstetr 78;(2002):69-77*
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IDF Diabetes Atlas
5th edition | 2012 update

SOUTH-EAST ASIA
South and Central America/Africa

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1 in 10 adults in this region has diabetes

North America and Caribbean

Over the next 20 years, the number of people with diabetes in the region will almost double
This region has the highest mortality rate due to diabetes

1 in 5 of all undiagnosed cases of diabetes is in this region
1 in 4 deaths due to diabetes occurred in this region

WORLD
371M
people living with diabetes

*All estimates are presented as comparative rates
How to prevent Diabetes type II

- Findings suggest that reaching out to women who have had gestational diabetes on the importance of a healthy diet and physical activity might significantly reduce the overall rate of type 2 diabetes.

- Therefore, the interventions focussing on the peri-conceptional period and during the pregnancy are an excellent cost-effective strategy that could help to battle the epidemic of diabetes.
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Hossain et al. NEJM: GDM estimations 2030

HSPH-Department of Epidemiology

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Inactivity women >20 in the USA, 2009

Age-Adjusted County-Level Estimates of Leisure-Time Physical Inactivity Among Women Aged ≥ 20 Years – United States 2009

Obesity women >20 in the USA, 2009

Age-Adjusted County-Level Estimates of Obesity Among Women Aged ≥ 20 Years – United States 2009
HAPO study, 2002-2006

The Study and Results

- Prospective, observational, multicenter, blinded study of 23,316 pregnant women.
- The results demonstrate that associations between maternal glycemia and adverse outcomes are continuous across the range of glucose concentrations below levels diagnostic of diabetes.

Results implications

The results of HAPO study provide the evidence for developing outcome-based standards to diagnose and classify GDM, that are valid and applicable worldwide.
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*Universal Screening* at 24-28 week’s gestation in pregnant women not previously known to have diabetes using a 75-g 2-h OGTT.

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Objective

To evaluate the prevalence of GDM among Peruvian women attending perinatal care and provide objective evidence that will help to improve the local guidelines for standardized GDM screening, diagnosis and treatment.

Specific objectives

1. To screen women at 24-28 weeks of gestation using 75-g OGTT and interpret abnormal fasting, 1-h, and 2-h plasma glucose concentrations as individually sufficient for the diagnosis of GDM.

2. To evaluate the extent to which established traditional GDM risk factors such as obesity and hypertension predict positive 75-g OGTT.
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OGTT

OGTT cutoffs

<table>
<thead>
<tr>
<th></th>
<th>mmol</th>
<th>mg/dl</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fasting</td>
<td>5.1</td>
<td>92</td>
</tr>
<tr>
<td>One hour</td>
<td>10.0</td>
<td>180</td>
</tr>
<tr>
<td>Two hours</td>
<td>8.5</td>
<td>153</td>
</tr>
</tbody>
</table>
Alhambra: Granada, Spain

Thank You

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