Diabetes Tsunami
WHO Report 2016 on Diabetes

- 422 million adults have diabetes (108 in 1980)
- Incidence increased from 4.7 to 8.5%
- Rising incidence from 4.7 to 8.5% (1980–2016)
- 1.5 million deaths caused by diabetes
- 2.2 million additional deaths contributed by poor glycaemic control
- Diabetes and its complications bring about substantial economic loss to people with diabetes and their families, and to health systems and national economies.
DIABETES

DIABETES IS ON THE RISE

422 MILLION adults have diabetes

3.7 MILLION deaths due to diabetes and high blood glucose

1.5 MILLION deaths caused by diabetes

THAT’S 1 PERSON IN 11
WHO recommendations on prevention

- Type 1 diabetes cannot be prevented with current knowledge.

- Effective approaches are available to prevent type 2 diabetes and to prevent the complications and premature death that can result from all types of diabetes.
The 2011 Japanese tsunami has been estimated to cost Japan US$ 309 billion in damages.

Annual health expenditure in the USA as a result of Type 2 diabetes mellitus (T2DM) is about US$ 299 billion (2011) and rising every year.
Verbreitung von Diabetes 2014*

Anteil der Diabeteskranken an der Gesamtbevölkerung

- <5%
- 5-7%
- 7-10%
- 10-15%
- 15-20%
- >20%

Staaten/Gebiete mit mehr als 20 Prozent: Guam, Neukaledonien, Mauritius, Bahrain, Kuwait, Nauru, Vanuatu, Saudi-Arabien, Französisch-Polynesien, Cookinseln, Kiribati, Tokelau, Mikronesien, Marshallinseln

Quelle: International Diabetes Federation | * Altersbereinigt mit der Altersstruktur der Weltbevölkerung
Prevalence estimates of diabetes, 2025

Map showing the prevalence of diabetes across the world with different color gradients indicating the percentage range.
The number of New Zealanders living with diabetes has doubled from 125,000 to 250,000 in the past 10 years (2015).

It estimated a further 1.1 million people have pre-diabetes.

In 2008 the estimated direct cost for type 2 diabetes was $600 million per year. The forecast cost of diabetes was predicted to rise from $600 million in 2006/07 to $920 million in 2011/12, $1,310 million in 2016/17 and $1,770 million in 2021/22 (15% of health budget).
In NZ ~1 in 4 adults obese (BMI >30)

1 in 5 children <14 yrs overweight and 1/12 obese

Rates rising in ‘obesogenic’ environment
1 Person in 11 are Diabetic, but it doesn’t have to be YOU.
T2DM is Preventable

- Maintaining healthy body weight (BMI 20–25)
- Exercising at least 30min/day
- Eating healthy
Reduce risk of Diabetes Complications

- AND
- Good glycaemic control
- Regular medication
- Control BP and lipids
- Regular Screening—Retinal, Renal and Legs
# Diagnostic Criteria

<table>
<thead>
<tr>
<th>Result</th>
<th>Action</th>
<th>Why</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Symptomatic</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HbA1c (\geq 50) mmol/mol or Fasting glucose (\geq 7.0) mmol/L or Random blood glucose (\geq 11.1) mmol/L</td>
<td>No further tests required</td>
<td>Diabetes is confirmed</td>
</tr>
<tr>
<td><strong>Asymptomatic</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HbA1c (\geq 50) mmol/mol or Fasting glucose (\geq 7.0) mmol/L or Random glucose (\geq 11.1) mmol/L</td>
<td>Repeat HbA1c or a fasting plasma glucose</td>
<td>Two results above the diagnostic cutoffs, on separate occasions are required for the diagnosis of diabetes*</td>
</tr>
<tr>
<td>HbA1c 41-49 mmol/mol and, if measured, Fasting glucose 6.1–6.9 mmol/L</td>
<td>Advise on diet and lifestyle modification. Repeat the test after 6–12 months</td>
<td>Results indicate ‘pre-diabetes’ or impaired fasting glucose*</td>
</tr>
<tr>
<td>HbA1c (\leq 40) mmol/mol and, if measured, Fasting glucose (\leq 6) mmol/L</td>
<td>Retest at intervals as suggested in cardiovascular risk factor guidelines</td>
<td>This result is normal</td>
</tr>
</tbody>
</table>
Management Of T2DM

- Diet & exercise
- Oral monotherapy
- Oral combination
- Insulin ± oral agents
At Risk

- Risk increases with age
- Overweight and Obese
- Sedentary lifestyle
- Ethnicity
- Family history
- H/O Gestational Diabetes or had large babies
- Long-term use of some medications
- Non Coffee drinkers ??
What Can We Do

- As an individual
- As a community
- As a Nurse