

Diabetes

Our lifestyle disease
The how, when and the why

The current facts regarding diabetes

- Australian population 25 years or older (ABS 2010)
 - 7.5 % have diabetes
 - 16% have pre diabetes.
 - Therefore 1:4 have some issue with diabetes
- In 2014-15 there were about 1.7 million Australians with diabetes.
- The risk of diabetes increases with age, from 2.5 per cent in people aged between 35-45 years to 23.6 per cent in those over 75.
- Indigenous peoples have one of the highest rates of Type 2 diabetes in the world.

<http://www.betterhealth.vic.gov.au/bhcv2/bhcarticles.nsf/pages/Diabetes>

In your table groups

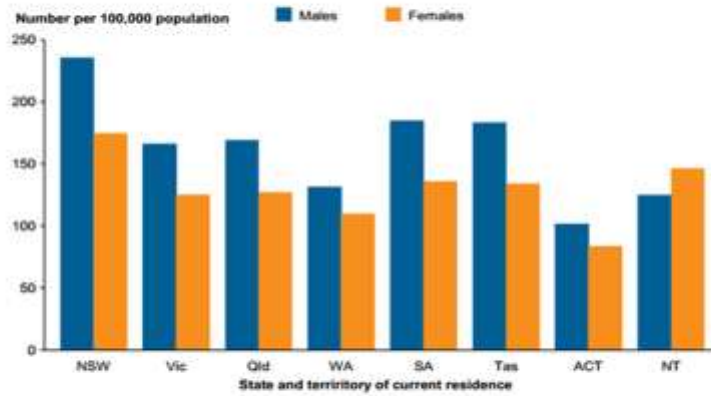
Discuss the following questions

- List some of the changes in farm life, that prevent physical activity in our daily lives.
- List some of the major risk factors for the development of diabetes in our lives today.

Document your answers Chapter 3 on page 3.2 in your
resource kit



Diabetes Incidence Australia



Source: AIHW analysis of the NDR 2011 (Table A11).

Figure 3.2: Incidence of insulin-treated type 2 diabetes by state or territory of usual residence and sex, Australia, 2011

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Diabetes incidence Victoria 2001 - 2008

Diabetes 2001



0-2% people with diabetes

Diabetes 2006



2-4% people with diabetes

Diabetes 2008



4-10% people with diabetes

Source <http://www.dav.org.au/epidemic/index.htm>

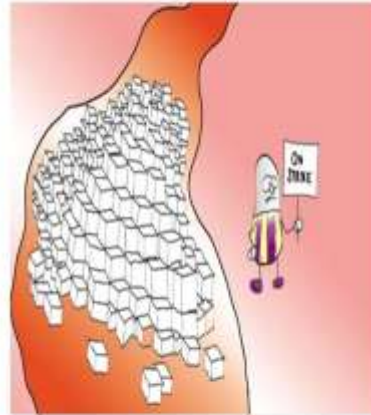


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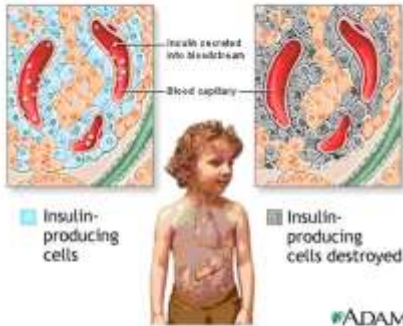
What is diabetes

- The body requires glucose as one source of energy
- The body requires this glucose levels to be regulated within certain limits
- Diabetes is a condition where blood glucose levels are not effectively regulated by the hormone insulin
- There are two types of diabetes conditions





Type 1, juvenile or IDDM



■ Insulin-producing cells

■ Insulin-producing cells destroyed

ADAM

- Occurs in approx 1 in 700 children
- Is an autoimmune disorder
- Insulin cells are destroyed by the body's own defense system
- No insulin is able to be produced
- Supplementary insulin is required



Management of Type 1

- Regular blood glucose samples
- Regular supplementary insulin
- Balanced diet and physical activity is a must
- Can live a normal and active life



Type 2, mature age onset, or NIDDM

- Often a lifestyle related condition
- Effects 85-90% of all diabetics
- The person still produces insulin but it has become less effective
- Develops in stages
- Many risk factors
- Most of these are lifestyle related



Syndrome X/ Metabolic Syndrome

Syndrome X disorders include: -

- Abdominal obesity - Waist circumference
 - > 88 cm for women
 - > 102 cm for men

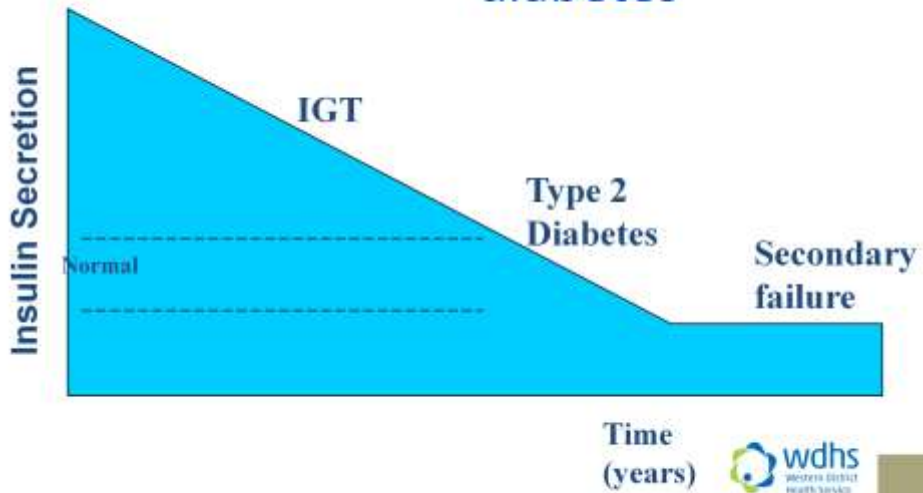
Plus two of the following factors:-

- Raised blood pressure
- High blood triglycerides > 1.7mmol
- Low level of High Density Lipids (good cholesterol),
 - < than 1.3 in females
 - < than 1.0 in males
- Fasting blood glucose greater than 5.6 mmols



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Natural history of Type 2 diabetes



Time
(years)



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Risk factors for Type 2 diabetes

- **Age - our risk increases up to 2.5 times for those over 55**
- **Family history of diabetes**
- **Waist measurement**
4 times the risk if your waist is > 102 (men)
> 88 (women)
- The need for blood pressure medication
- **Body mass index**
> 25 = 1.2 times risk
> 30 = 3 times the risk
- Increased risk with previous elevated fasting blood glucose results
- Low physical activity participation i.e. less than 4 hours per week



Management of diabetes

Type 1

- Insulin
- Healthy diet
- Exercise
- Regular monitoring

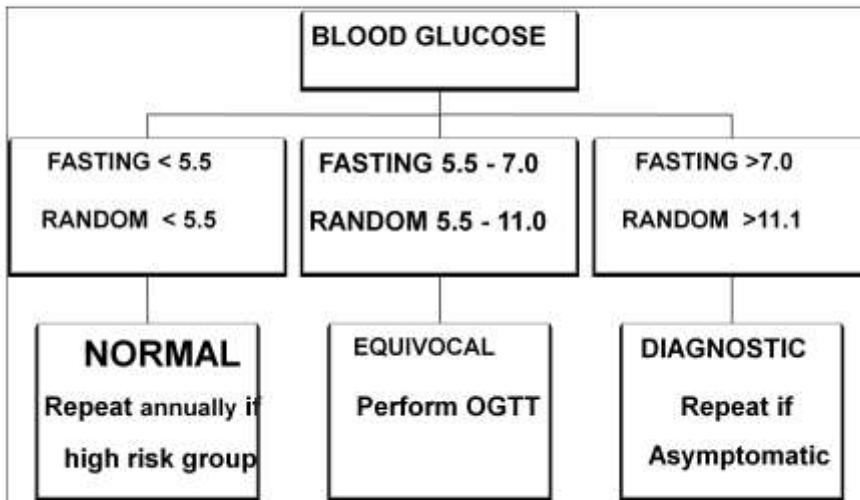
Type 2

- Activity
- Healthy diet
- +/- Tablets
- +/- Insulin



Assessing glucose levels

From Cohen M. (2000) Diabetes Management for health professionals



Signs & symptoms

Signs

- Tiredness
- Thirst
- Infections
- Blurred Vision
- Weight Loss

Symptoms

- Hyperglycaemia
- Polyuria (lots of wee)
- Nocturia (weeing overnight)



Treatment options Type 2

- Regular screening
- Diet and lifestyle changes
- Reduce intake of high GI foods
- Exercise regularly
- Oral glucose tolerance test
- +/- oral hypoglycemic medications
- Eventual insulin supplementation





Insulin therapy for Type 2 diabetes

- The UK Prospective Study suggests that the majority of people with Type 2 Diabetes will ultimately require insulin permanently



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Insulin delivery devices



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Insulin pumps



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Vascular ulcer



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Neuropathic ulcer



In your table groups

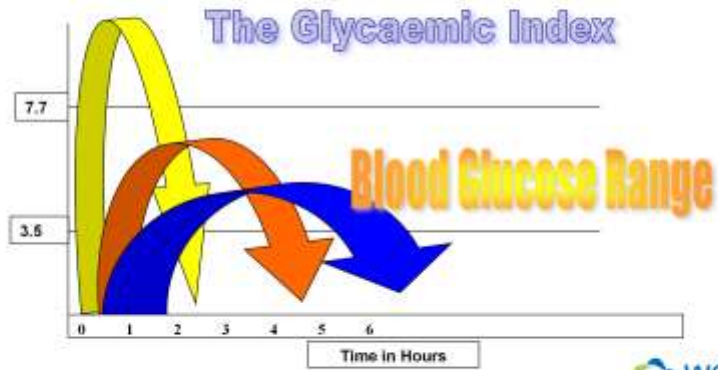
Discuss and complete the following:

- The AUSDrisk assessment tool
- If comfortable discuss your findings with your table group

Document your answers in Chapter 3 on page 3.11 in your resource kit



Understanding the glycaemic index (GI)





The glycaemic index of foods

(GLUCOSE = 100)

BREAKFAST CEREALS

Porridge - oats	42
All Bran	42
Weet-bix	69

BREAD

Pumpnickel	41
White	70
Wholemeal	69

LEGUMES

Lentils	29
Baked Beans	48

PASTA

Calrose rice	41
Basmati rice	87
	58

FRUIT

Apple	38
Watermelon	72

VEGETABLES

Sweet potato	54
Baked potato	93

MISCELLANEOUS

Peanuts	14
Chocolate	49



Low GI carbohydrates

Bread	Wholegrain varieties, pumpnickel, sourdough, fruit bread
Cereal	Porridge, muesli, Guardian, All bran
Rice	Doongara, Basmati
Pasta	All varieties
Legumes	Especially baked beans, kidney beans, chickpeas, lentils, haricot beans
Fruit	Especially apples, pears, oranges, grapes, cherries, grapefruit, peaches, plums, kiwi fruit and firm bananas. <i>To note:</i> although watermelon is high GI the carbohydrate content is very low therefore glycemic effect is small.
Vegetables	Especially sweet potato and corn



What can we do to take control?

- Participating in lifestyle behavioral course
- Monitor and assess your dietary habits
- Activity- “Move it” or increase the risk for diabetes
- Become proactive not reactive
- Monitor your risk factors and minimise them
- Losing even as little as 5–10% of your body weight and keeping it off, can help reduce the risk.



The final thought on Type 2 diabetes

- This is a manageable disease that is increasing in the population because of genetic and lifestyle factors.
- Preventing diabetes is a lifelong process and starts today for many of us.
- Understanding the risks relating to diabetes will prevent many of us suffering in the long term.
- Participating in lifestyle behaviour change programs such as Life! can prevent or delay the onset.
- Life! - www.diabeteslife.org.au

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