

Essential Diabetes for Primary Care

Welcome to Master Class One!

Ranked top department in England for nursing
in the 2014 Guardian league table



Aims

Two primary care master classes:

- To enable development of knowledge, confidence and skills in relation to diabetes care in the primary care setting
- Supporting safer, more effective care for people receiving insulin and non-insulin therapies
- Sharing the latest dietary recommendations

Master Class 1

The focus is on insulin therapy and type 2 diabetes

- Insulin types and regimens
- Diabetes reviews including:
 - when to start insulin
 - avoiding hypos
 - assessment for further referral
 - sick day advice
 - safe care delivery
- Consultation skills & how to record
- 4.30pm finish



THE UNIVERSITY *of York*

The Department of Health Sciences

An introduction to insulin therapy



Tara Kadis/Clare MacArthur/Anne Phillips

Diabetes

❖ Diabetes is the fourth most common long-term condition in England

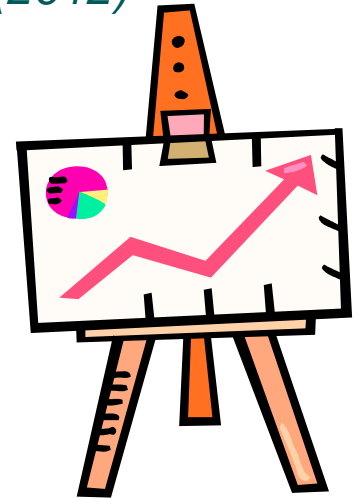
- after hypertension, depression and asthma

Information Centre for Health & Social Care (2012)

❖ 2.7 million people in England have *diagnosed* diabetes

- an increase of 38% compared to 2001
- most will have type 2 diabetes (around 90%)

Diabetes UK (2013)



What do we know?

- ❖ Good blood glucose control prevents both micro and macrovascular complications for people with diabetes (although BP more important for CV risk!)
- ❖ **HbA1c now mmol/mol** – previously %
 - We've gone decimal!
 - $58 \text{ mmol/mol} = 7.5\%$
- ❖ **Good blood glucose control should also aim to prevent hyperglycaemia and hypoglycaemia**



Type 2 diabetes

- ❖ Characterised by both insufficient insulin and insulin resistance → high blood glucose
- ❖ Blood glucose management is essential
- ❖ Cardiovascular risk factor management also essential – and effective!



Cardiovascular events

In 1000 people with type 2 diabetes

Reduction in:

Reduces
cardiovascular
events by:

- | | |
|------------------------------|-----------------------------|
| ❖ Blood pressure of 10/5mmHg | ❖ 29 over five years |
| ❖ Cholesterol of 1mmol/L | ❖ 23 over five years |
| ❖ HbA1c of 0.9% | ❖ 8 over five years |

National Institute for Health and Clinical Excellence (NICE), (2011)

Type 2 diabetes & glucose

- ❖ No matter how diabetes treated – progressive increase in HbA1c as beta cells fail (UKPDS, 1998)
- ❖ Not a failure of self-management – this is the natural course of the condition
- ❖ Insulin – the only therapy where there is no maximum dose for efficacy

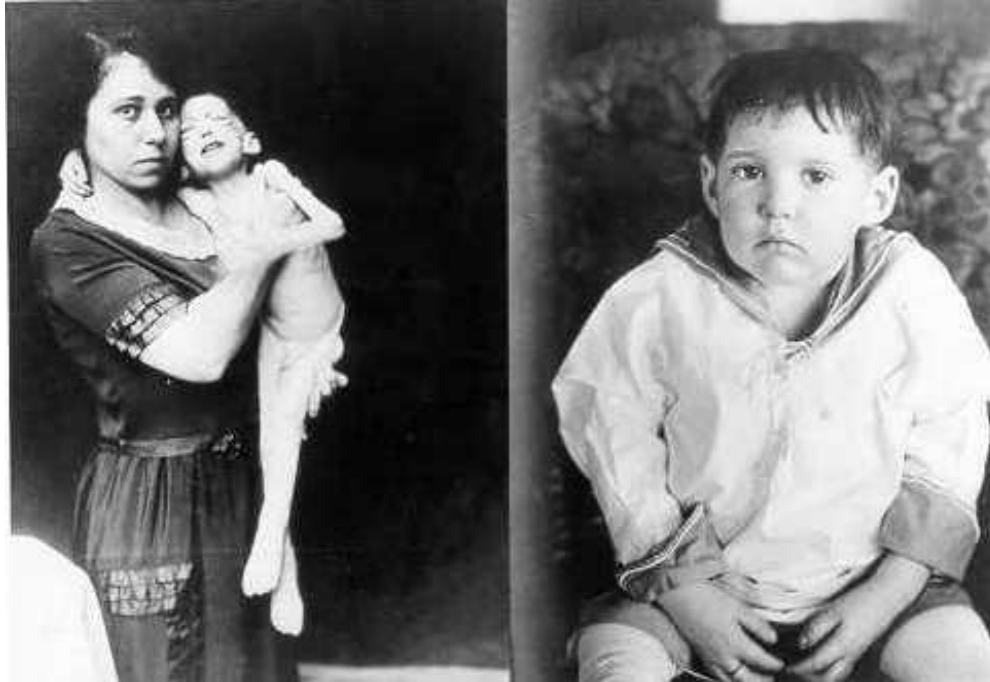


Insulin?

- ❖ 40-50% of people with type 2 diabetes will need to use insulin eventually (*Gale, 2012*)
- ❖ Everyone with type 1 diabetes needs insulin



Type 1 diabetes



**Characterised by weight loss and
ketoacidosis (DKA)**

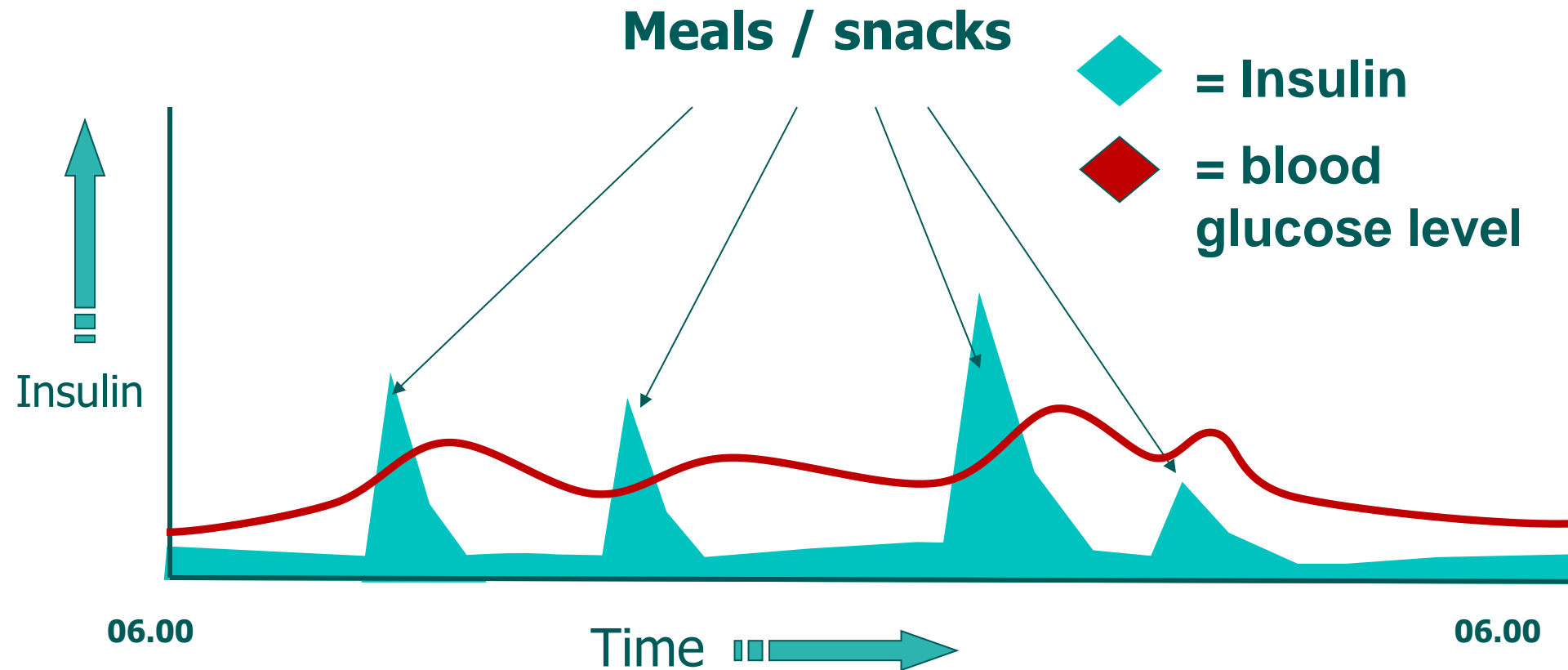
What do we know?

Insulin was discovered
by Banting & Best in
1922



Non-diabetic insulin secretion

Instant release of insulin pulse followed by 'maintenance dose'



How do we give insulin?

- ❖ **Intravenous insulin** used short-term for trauma, serious illness and 'nil by mouth'
- ❖ Syringes, pumps and pens **subcutaneously**
 - No automatic regulation
 - Variable diffusion
 - Can't be switched on or off
 - Systemic not portal circulation
- ❖ Hard to match requirements



Problems

People who bought:



Also bought:



Hospital admissions

- ❖ In 2010/11 there were **12,400** admissions due to hypoglycaemia – this does not include self-managed hypos, emergency A & E attendance, calls to GPs & paramedics or the burden for relatives/carers
- ❖ In 2010/11 there were **10,700** emergency admissions for ‘diabetes with hyperglycaemic emergency’ in England

Source: Hospital Episode Statistics online
www.hesonline.org.uk/Ease/servlet/ContentServer?siteID=1937&categoryID=206
(Diabetes is from the K11 group onwards)

Reality check

- ❖ Peyrot et al. (2012) – one third of people treated with insulin reported missing injections / non-adherence on at least one day in the last month
- ❖ The average was 3.3 days!
- ❖ Reasons: too busy, travelling, skipped meals, stress, public embarrassment, challenging timing, too many injections...



Further learning

- ❖ Click the *Safety* button at www.diabetes.nhs.uk
- go to the archive for this
- ❖ Safe Management of Hypoglycaemia e-learning course
- ❖ Safe Use of Insulin



Safe Management of
Hypoglycaemia (SMH)



Safe Use of Insulin (SUI)



Management of Diabetes

- ❖ *Management of Diabetes Mellitus*
- ❖ Module level 5/6 – for nurses/midwives and allied health professionals
- ❖ 7 days over 12 weeks + 3 clinical visits to observe & learn from practice
- ❖ Next course starts April 2014



Know your insulins?

Advanced level: Why choose these?

Did you know... French Lilac or Goat's Rue



Is made
into
Metformin!

Thank You