

Type 2 Diabetes Remission: What is it and how do I discuss it with my patients?

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Disclosures

- **Speaker fees from Novo Nordisk, Lilly, Napp Pharmaceuticals**
- **No conflicts of interest**

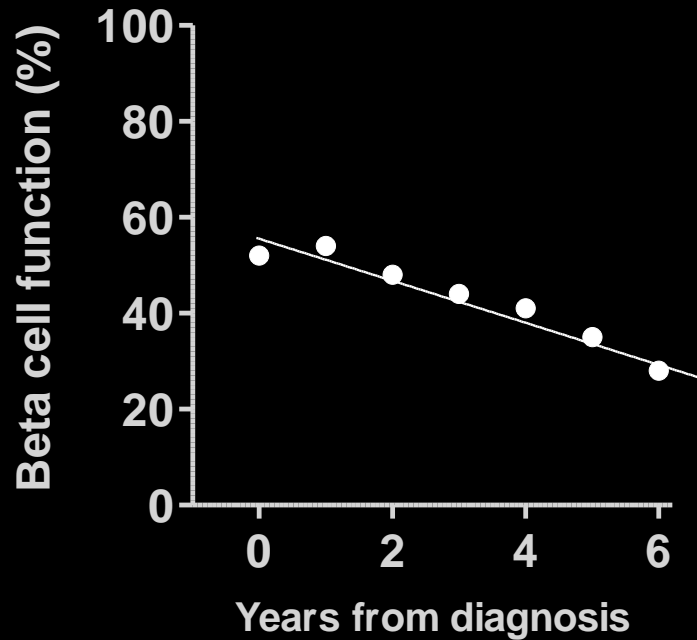
A new understanding of of Type 2 Diabetes



'Inevitable' decline in beta cell function & progression towards
insulin therapy
(50% on insulin after 10 years T2DM)

Type 2 Diabetes: a new understanding

Past



Inevitable decline in Beta cell function

Remission Research: Effective Approaches

1. Bariatric Surgery
2. Low Calorie Diets 800kcal/d (DiRECT)
3. Low carbohydrate lifestyle

n.b. Definitions of remission/study populations vary

Which is 'best'?

Whichever weight loss method suits the individual

Diabetes Remission Clinical Trial (DiRECT)

T2DM up to 6y, not on insulin



Total Diet
Replacement

~ 3 months



Food
Reintroduction

~ 2 months



Weight Loss
Maintenance &
Rescue Plans

to 24 months

Remission: < 48mmol/mol off all diabetes meds (withdrawn at start)

n = 149 (intervention & control groups); 98% caucasian

Why use a liquid diet for weight loss?

Complete
nutrition in
few calories

Lack of
hunger

Safe &
effective

Complete break
from food
decisions



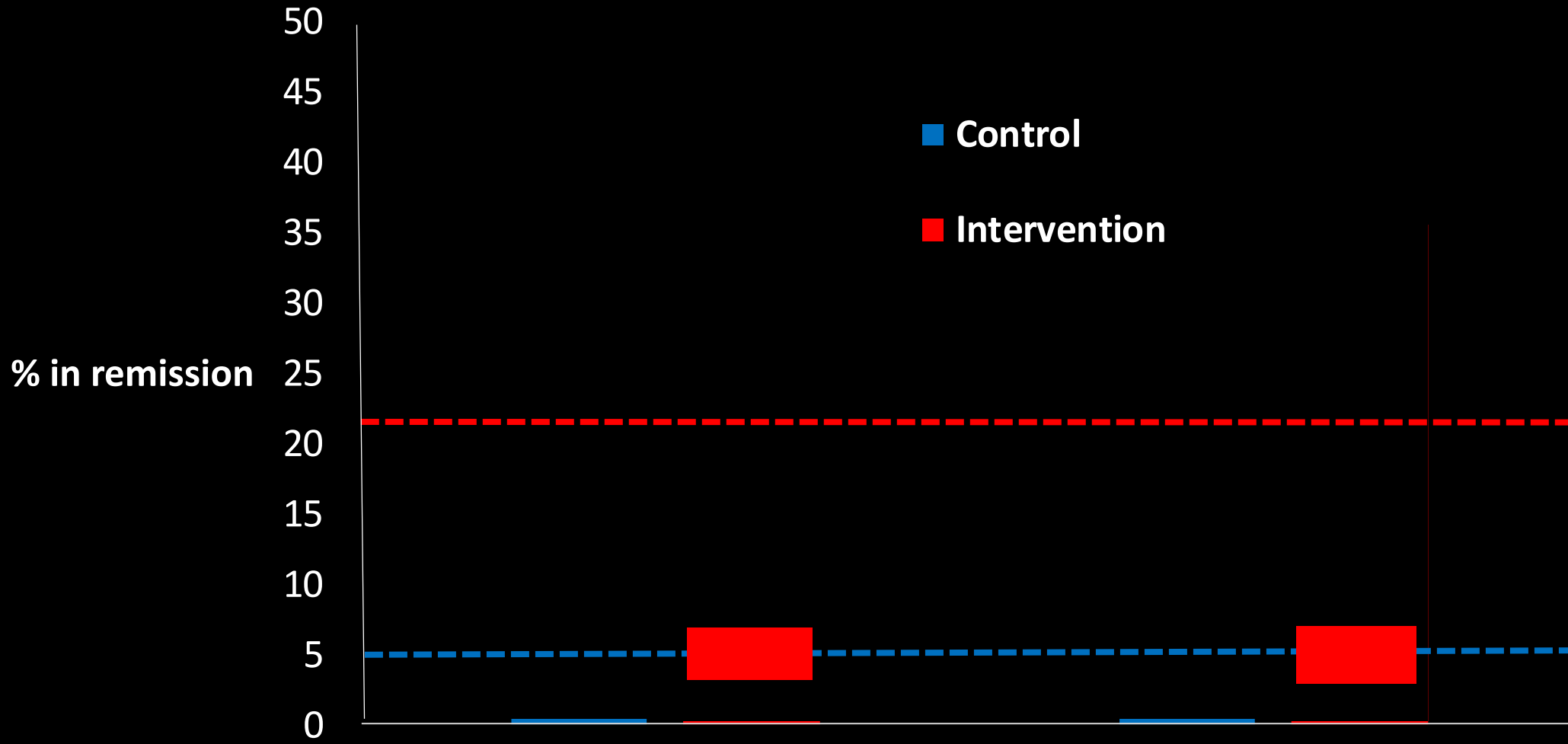
Creates
'blank slate'
for improved
eating habits

Triggers for
eating stand
out

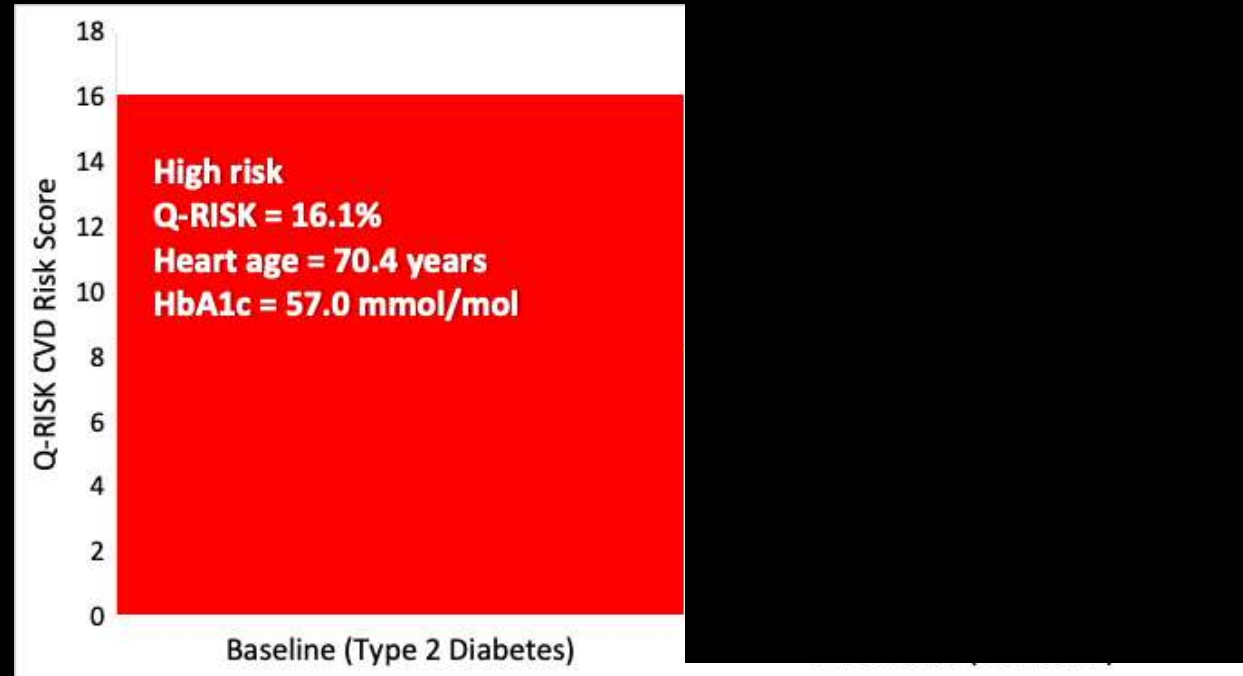
Break habits

Motivation
from rapid
weight loss

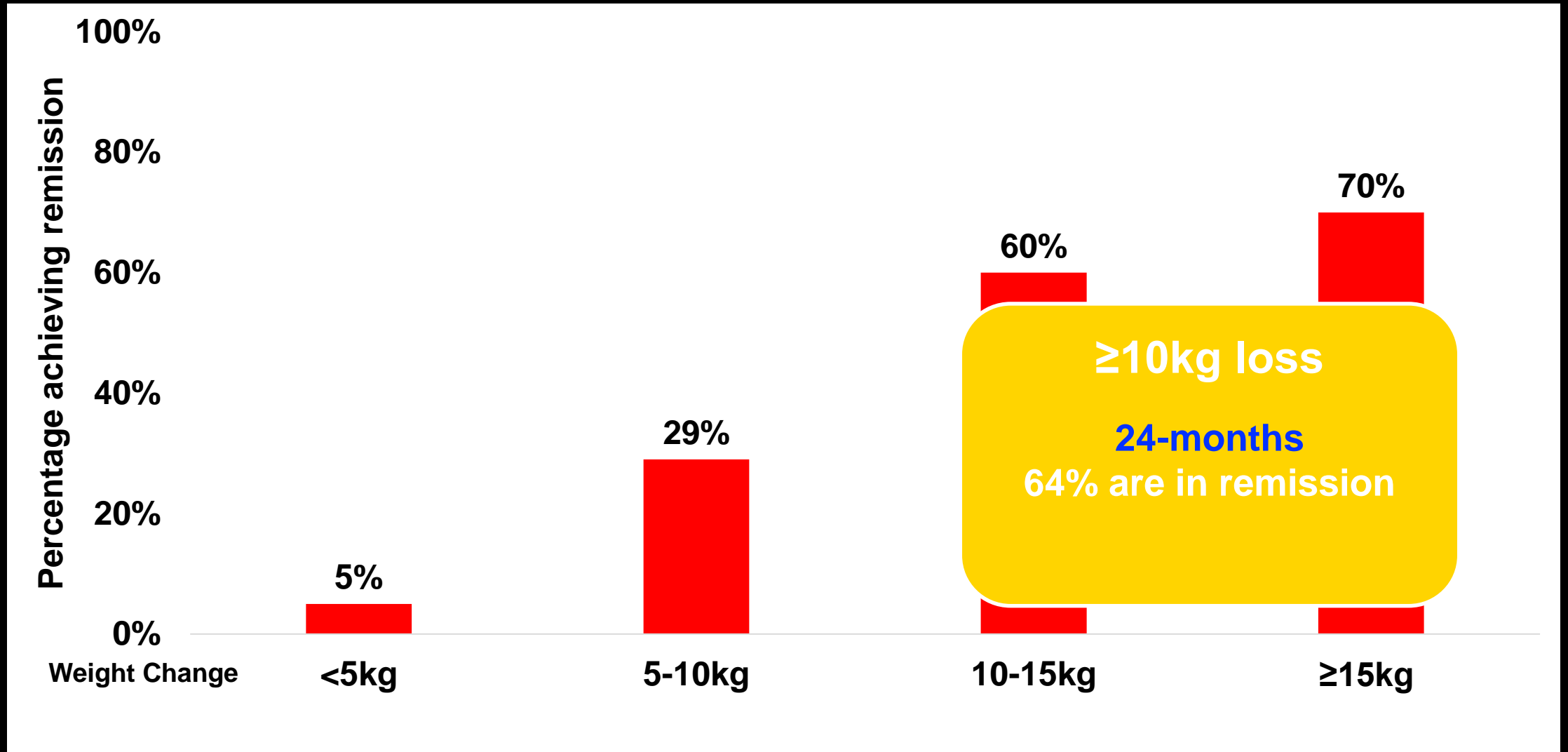
DiRECT Remissions vs Standard Diabetes Care



CVD Risk Reduction with remission

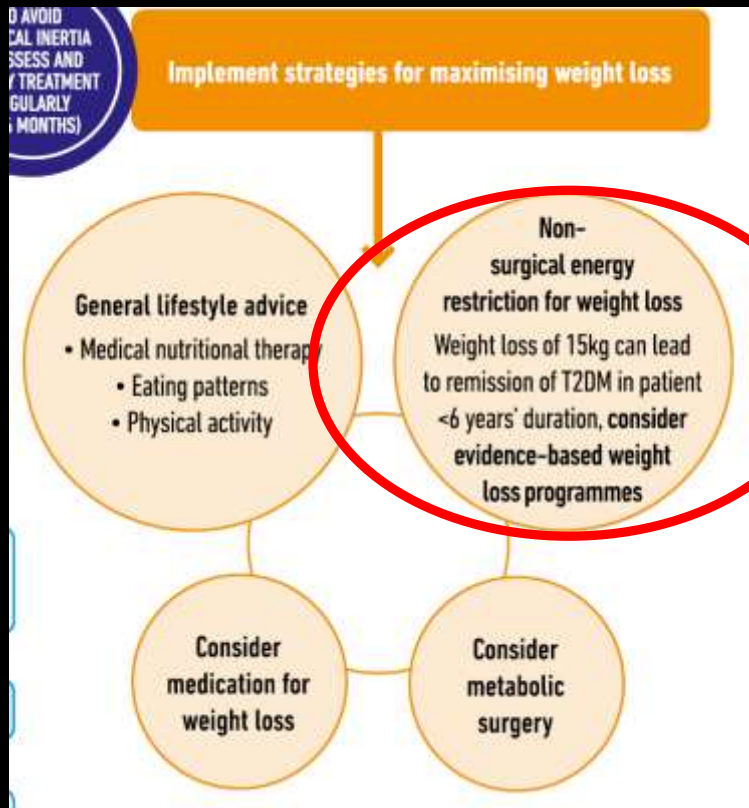


Remissions by 24-month weight loss in DiRECT



T2DM Remission in

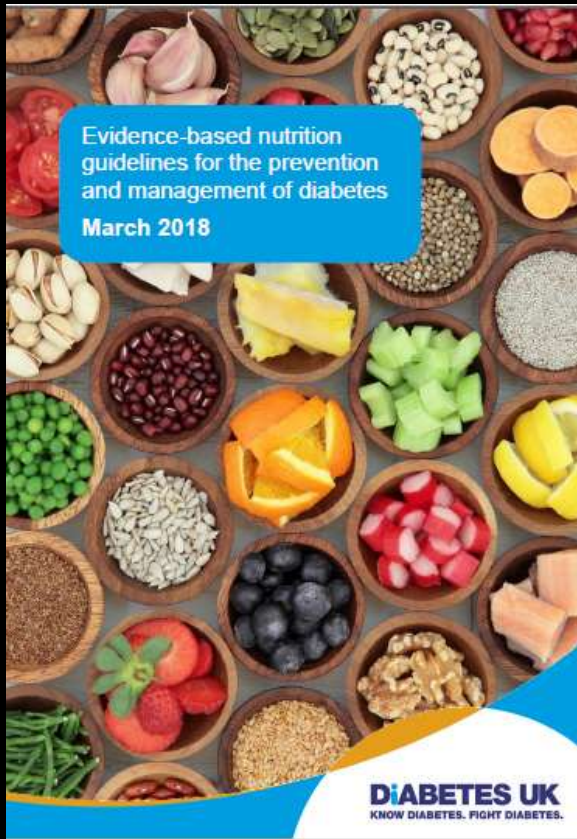
Diabetes Guidelines: EASD/ADA (Sept 2018)



“If a patient wishes to aim for remission of type 2 diabetes, particularly within 6 years of diagnosis, evidence-based weight management programmes are often successful.

T2DM Remission in

Diabetes Guidelines: Diabetes UK (March 2018)



For **remission of type 2 diabetes** aim for weight loss of approximately 15kg, as soon as possible after diagnosis (if overweight/obese)



https://diabetes-resources-production.s3.eu-west-1.amazonaws.com/resources-s3/2018-03/1373_Nutrition%20guidelines_0.pdf

Discussing Remission

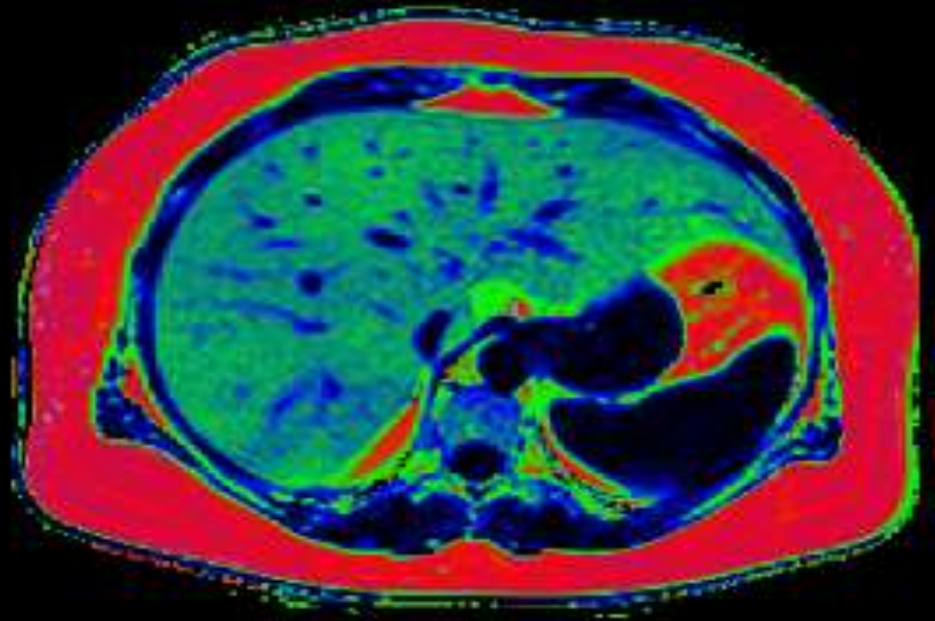
Poll Question

How confident would you currently feel discussing Type 2 Diabetes Remission in a patient consultation? (1= not confident at all, 10 = extremely confident)

Main Principles of Remission

1. Only in **Type 2** Diabetes
2. More likely in **short duration** T2DM (<6y)
3. Requires significant **weight loss** (15Kg, 2.5 stones)
4. It is **not a 'cure'** – susceptibility to T2DM remains
5. Maintenance of remission requires **maintenance** of lower weight

Reduced liver fat with low calorie diet

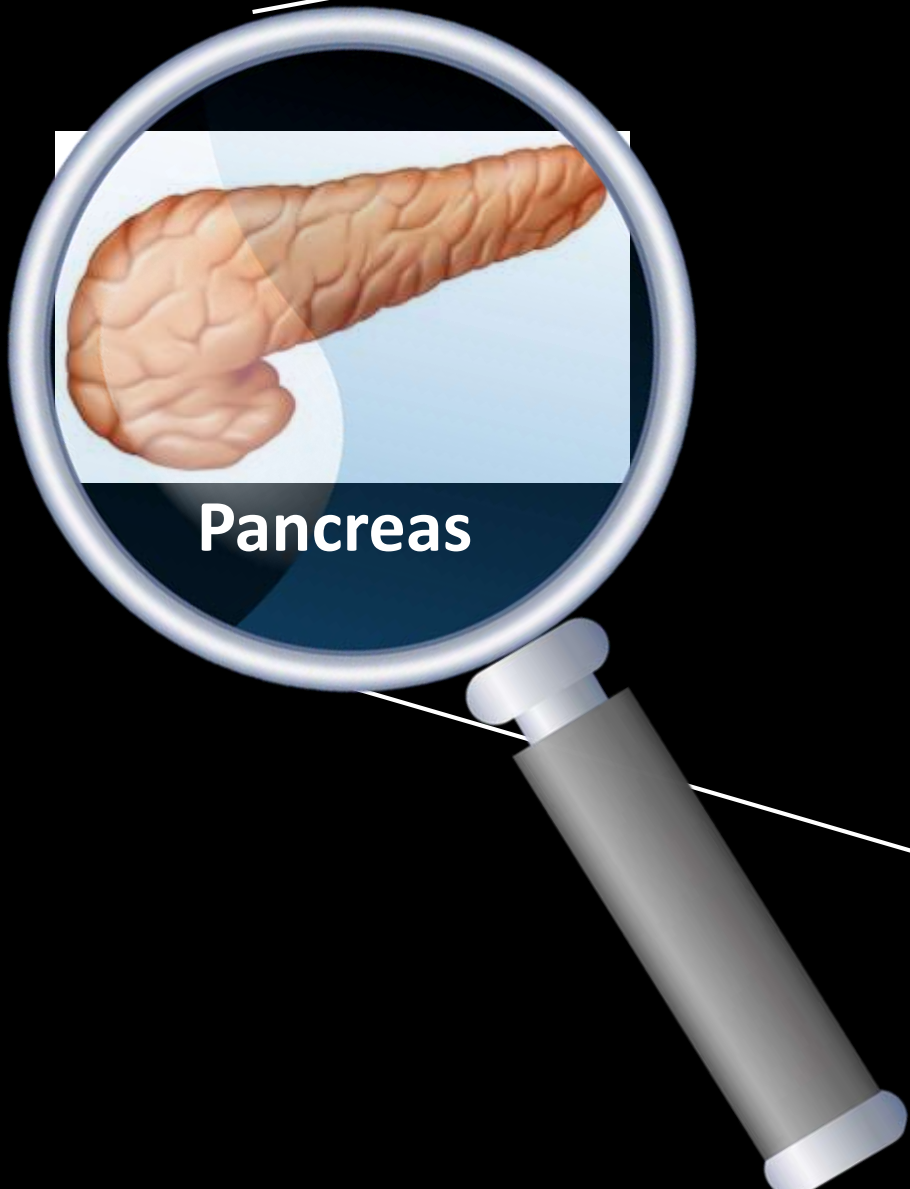


Baseline

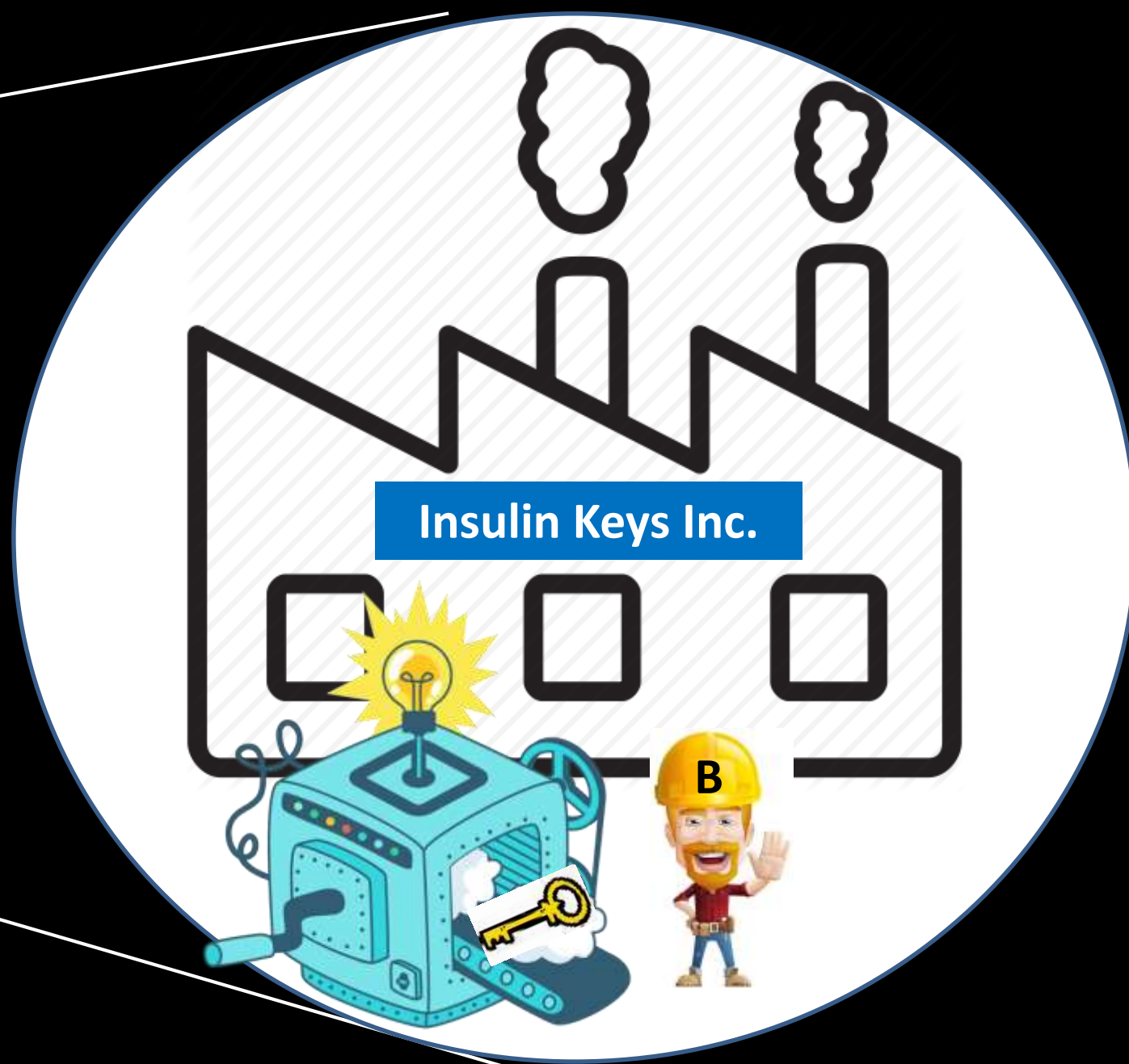
36% liver fat



Remission Physiology



Pancreas




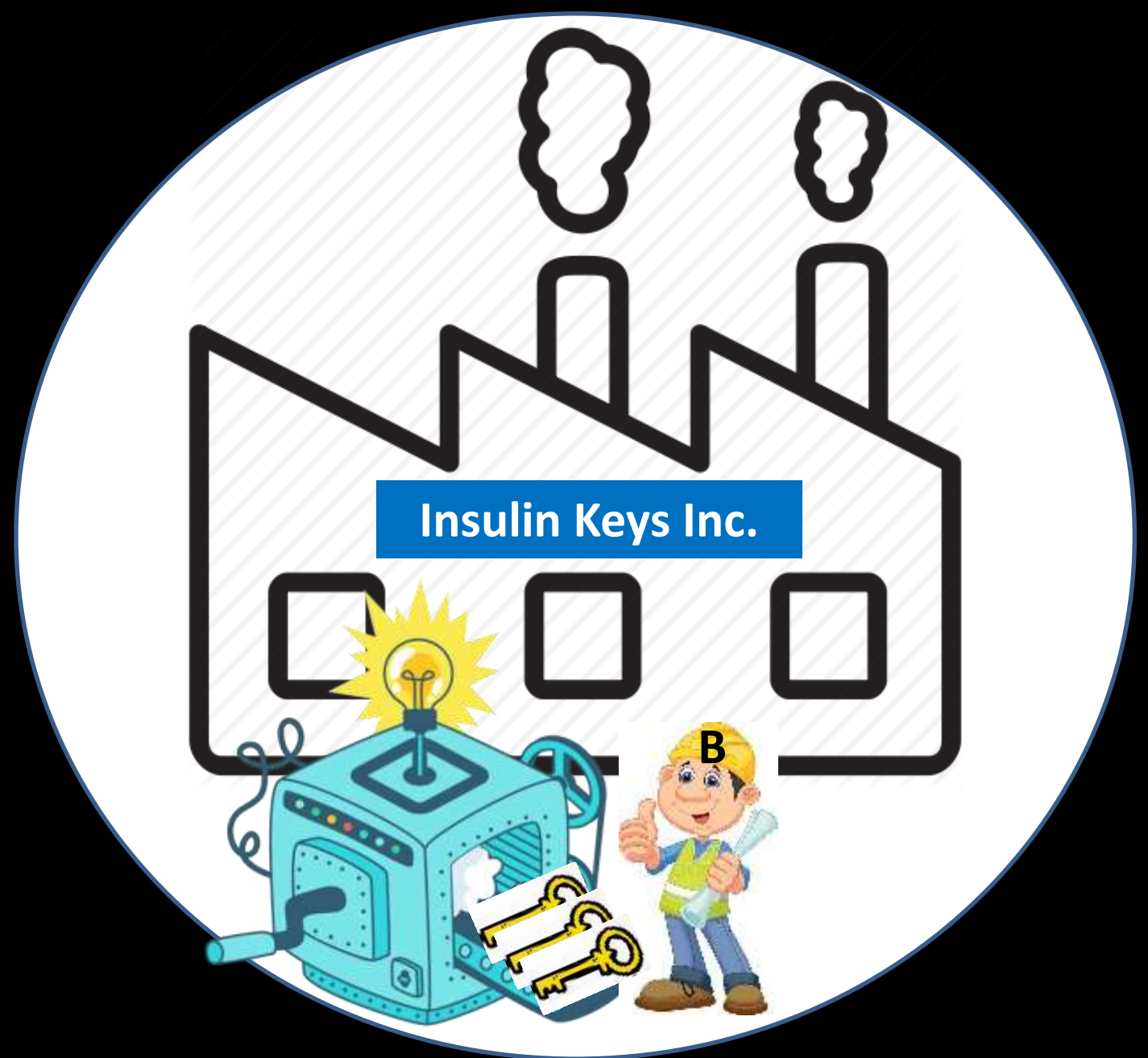
Insulin Keys Inc.

B

Muscle Insulin Resistance -

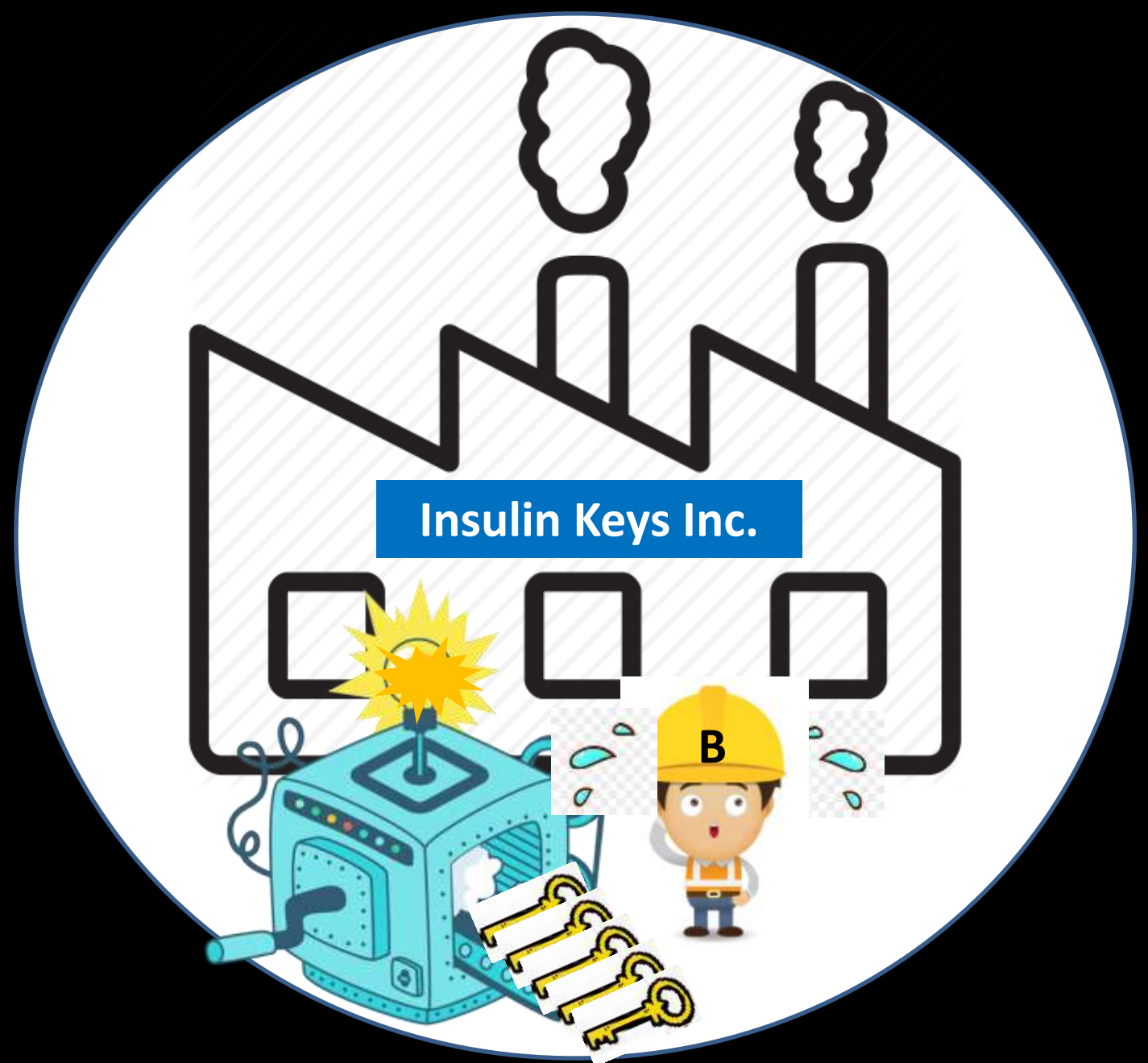
genetic/lifestyle causes

-  demand for insulin
- Beta cell workers work harder



Fat deposits in Liver

- Disrupts liver function
- ↑ Glucose from liver
- Beta cells now working overtime



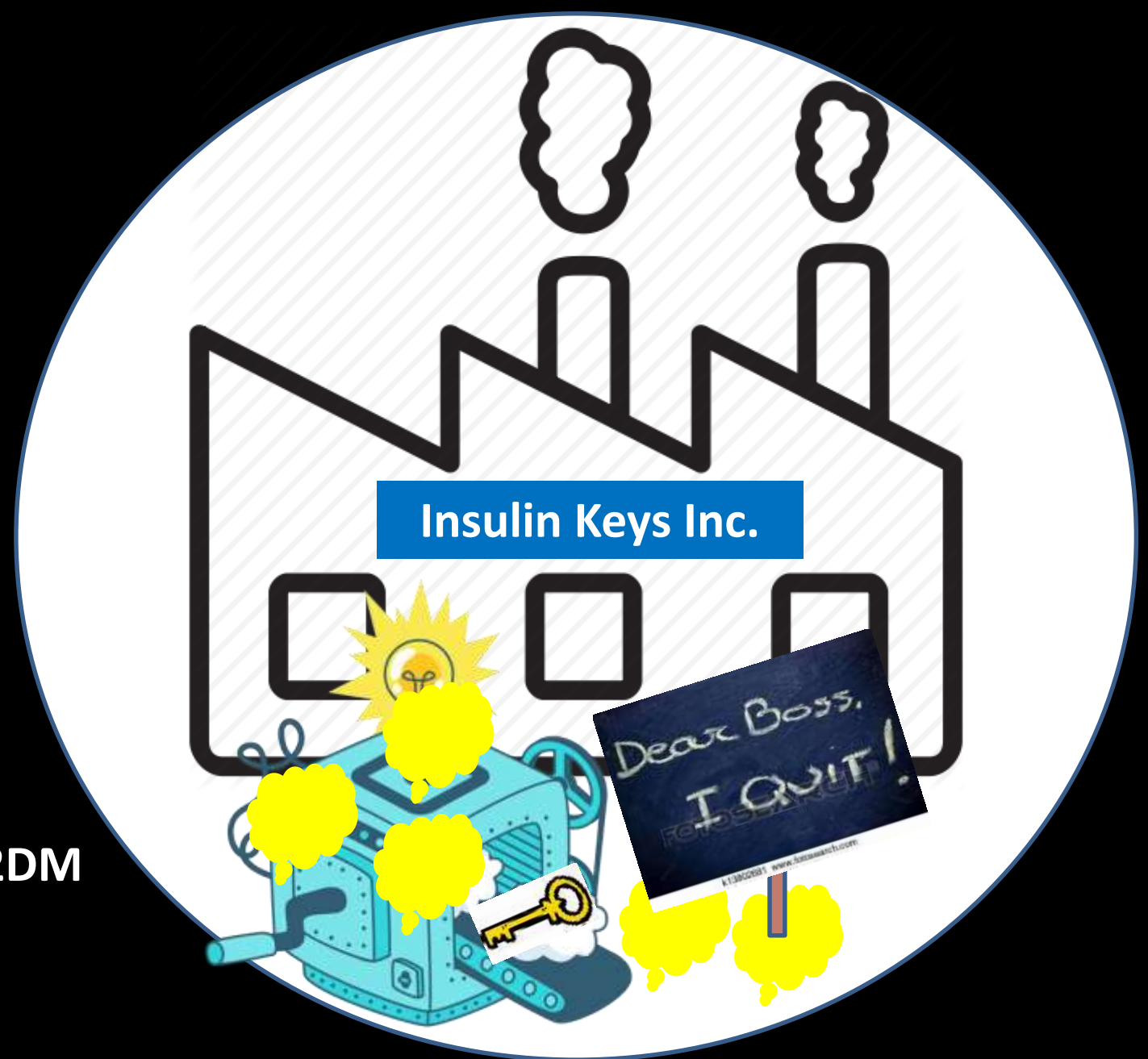
Fat deposits in Pancreas

- Fat overflows from the liver
- Poor working conditions



**Some Beta Cell workers have
had enough!**

- Remaining workers can't keep up
with demand
- Increased blood glucose levels/T2DM



**In early T2DM it is possible to get
your workers back**

- Energy restriction to use fat stores
 - liver (1-2 weeks)
 - pancreas (8-12 weeks)
- Whether they come back is beyond your control
- Maintain improved conditions or lose them again



Type 2 Diabetes Remission: definition



1. **HbA1c < 48mmol/mol (2 tests, 6 months apart)**
 2. **After intentional weight loss**
 3. **Off all diabetes medications**
- **Diabetes UK/ADA to announce International definition early 2020**

DUK Remission Information Prescription

Diabetes UK
SUPPORT, ADVICE, HELP, HOPE

Type 2 diabetes remission

Information Prescription

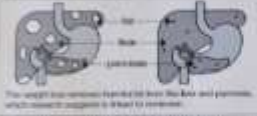
My last two HbA1c results were on I'm aiming for on

My weight was on I'm aiming for on

If you are overweight or obese, research shows it is possible to put Type 2 diabetes into remission by losing a substantial amount of weight quickly. Even if your diabetes does not go into remission, there are still huge benefits to losing this amount of weight and then keeping that weight off.

What is Type 2 diabetes remission?

Remission of Type 2 diabetes means returning blood glucose levels below the diabetes range without needing glucose lowering medications. This usually means keeping your HbA1c below 5.7%. To have the best chance of putting your diabetes into remission, aim to lose a substantial amount of weight (10kg/22lb) within three to five months. Studies show remission is more likely within six years of diagnosis.



Research shows remission is more likely if you lose 10kg/22lb and keep it off for at least six months, which research suggests is likely to be achieved.

Remission does not occur overnight. You need to commit to making long-term healthy lifestyle changes to maintain your weight loss and keep your diabetes in remission. It is essential to continue going to your diabetes reviews and have screening each year to check your diabetes is still in remission and you are free from complications.

What are the benefits of remission?

Remission can be life-changing. You could:

- Stop taking diabetes medications
- Reduce your risk of diabetes complications
- Improve your quality of life and overall health

Can everyone who loses a substantial amount of weight achieve remission?

Not everyone who loses weight will be able to put their diabetes into remission and researchers are still working out why. Even if your diabetes does not go into remission, there are still benefits to losing weight if you are overweight.

- Reduced risk of diabetes complications
- Taking fewer medications
- Better mental well-being
- Improved mobility, energy and sleep

How can I work towards putting my diabetes into remission?

Strong evidence for remission comes from following a substantially balanced low-calorie weight management programme (around 800 calories) or having bariatric surgery. Both involve long-term behavioural change, but there are different ways to lose weight and it's important to find the right approach for you.

☐ Talk to your healthcare team about services available in your area to support you to lose weight and maintain weight loss.

☐ Access information and tips on losing weight: www.diabetes.org.uk/info-weight

Safety note

If you have other health conditions, talk to a healthcare professional before you begin any exercise weight loss plan. Also, check if you need to reduce or stop any medications, as you begin losing weight. Rapid weight loss is not advised if you are pregnant, breastfeeding or have ever been diagnosed with an eating disorder.

Agreed action plan

My personal goal is:

To be achieved when:

The two steps that I will take to achieve this are:

1. Discuss and agree with your doctor or nurse. Think about what, where, when and how?

2.

For information or support, call Diabetes UK's helpline: 0344 123 2399 Monday to Friday, 9am to 6pm, or go to www.diabetes.org.uk/info-remission

Please think about you and this Information Prescription. Complete it and return it to your GP or healthcare professional.

- Remission is possible – not for all
- Requires significant weight loss
- Other benefits if remission not achieved
- Individual Action Plan
- Via GP systems
- Diabetes Update Spring 2020

<https://www.diabetes.org.uk/Guide-to-diabetes/Managing-your-diabetes/information-prescriptions>

Case Study 1: Adam

- 52 years old
- BMI 35 kg/m²
- HbA1c 59 on Metformin 500mg bd
- T2DM diagnosed 2 years ago

Poll Question

Would you discuss remission with Adam?

a. Yes

b. No

c. I'm not sure

Conversation Considerations

If your patient is not aware of remission & has had T2DM <6 years:

- 1. Ask if they are aware remission may be possible**
- 2. Explain how remission works**
- 3. Evaluate motivation – it's a choice not an expectation**
- 4. Discuss potential ways of achieving 10-15kg weight loss**
- 5. Find out what support would be helpful, and when**
- 6. Agree Action Plan/Refer to local services**

Case Study 2: Kath

- 65 years old
- BMI 27.5 kg/m²
- HbA1c 64mmol/mol on Metformin 1g bd, Gliclazide 160mg bd and Sitagliptin 100mg od
- T2DM 12 years

Poll Question

Would you discuss remission with Kath?

a. Yes

b. No

c. I'm not sure

Conversation Considerations

If your patient asks about remission with T2DM > 6 years:

- 1. Establish what they already know**
- 2. Discuss factors affecting likelihood of remission**
- 3. Recognise motivation to make changes & support them!**
- 4. Discuss other benefits of weight loss**
- 5. Goals: improved glycaemia/health/QoL, reduce medications**

Remission work continues...

1. **DUK/ADA consensus on remission criteria**
2. **DiRECT Extension results (5 years follow up)**
3. **Remission in other ethnicities**
4. **ReTUNE (Weight loss in BMI < 27)**
5. **NHS England Low Calorie Diets for T2DM – pilot in 5,000 people**

Summary

1. Early Type 2 diabetes can be put into remission
2. It is not a 'cure' & will relapse with weight regain
3. Appropriate conversations at an early stage
 - Message of hope
 - Motivate change
 - Informed patient choice
 - Positive practitioner experience

Poll Question: review

How confident do you feel discussing Type 2 diabetes remission in a patient consultation?

(1= not confident at all, 10 = extremely confident)

Thank you – questions?

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CHAMPION**
DiABETES UK
CARE. CONNECT. CAMPAIGN.