

Inquiry into Diabetes 2023

Dr James Muecke AM
Australian of the Year 2020



Ophthalmologist Dr Muecke examining the eye of a patient

Up to 200,000 Aussies with sight-threatening eye disease due to diabetes

*Estimate from Out of Sight. A report into diabetic eye disease in Australia.
Baker IDI and Centre for Eye Research Australia 2013*

Diabetes

Type 1

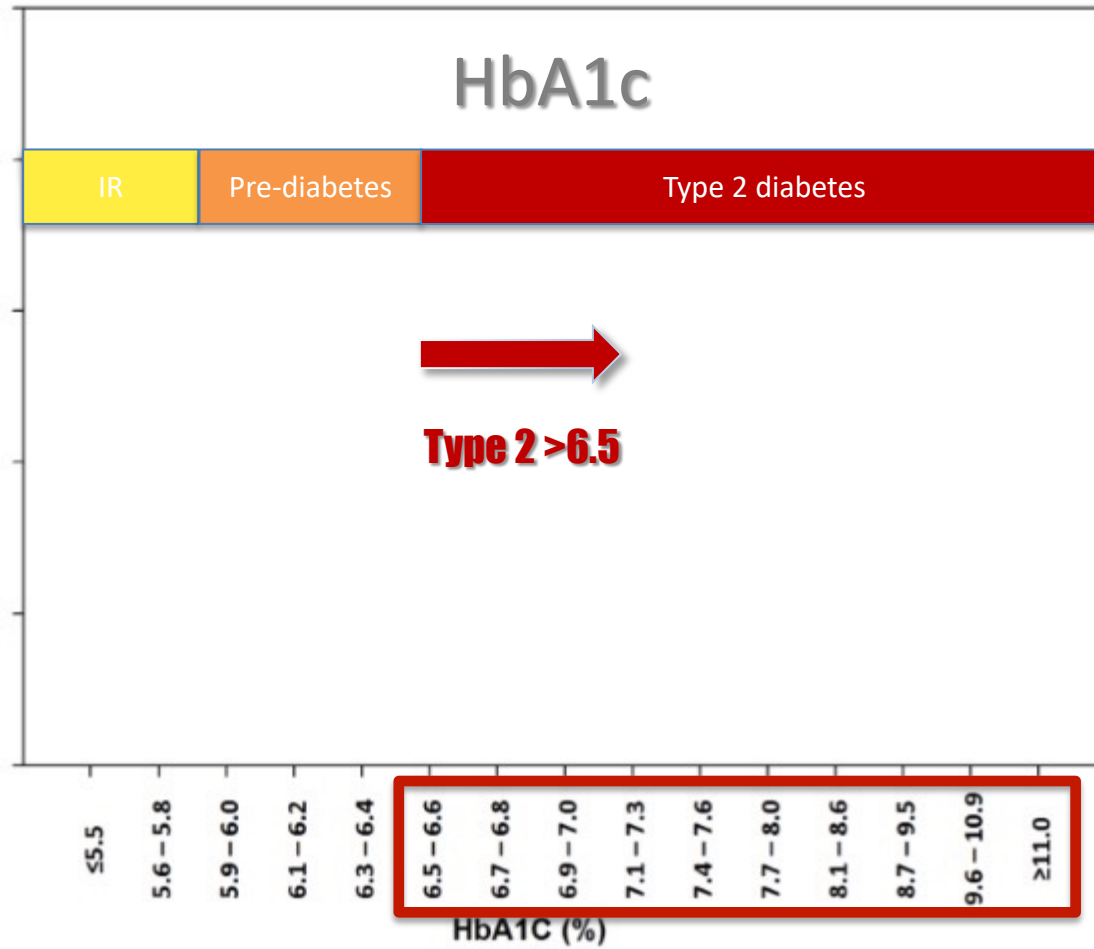
(a categorical
disease)



Yes

No

**Type 2 = end-stage of a
continuum of metabolic
dysfunction**



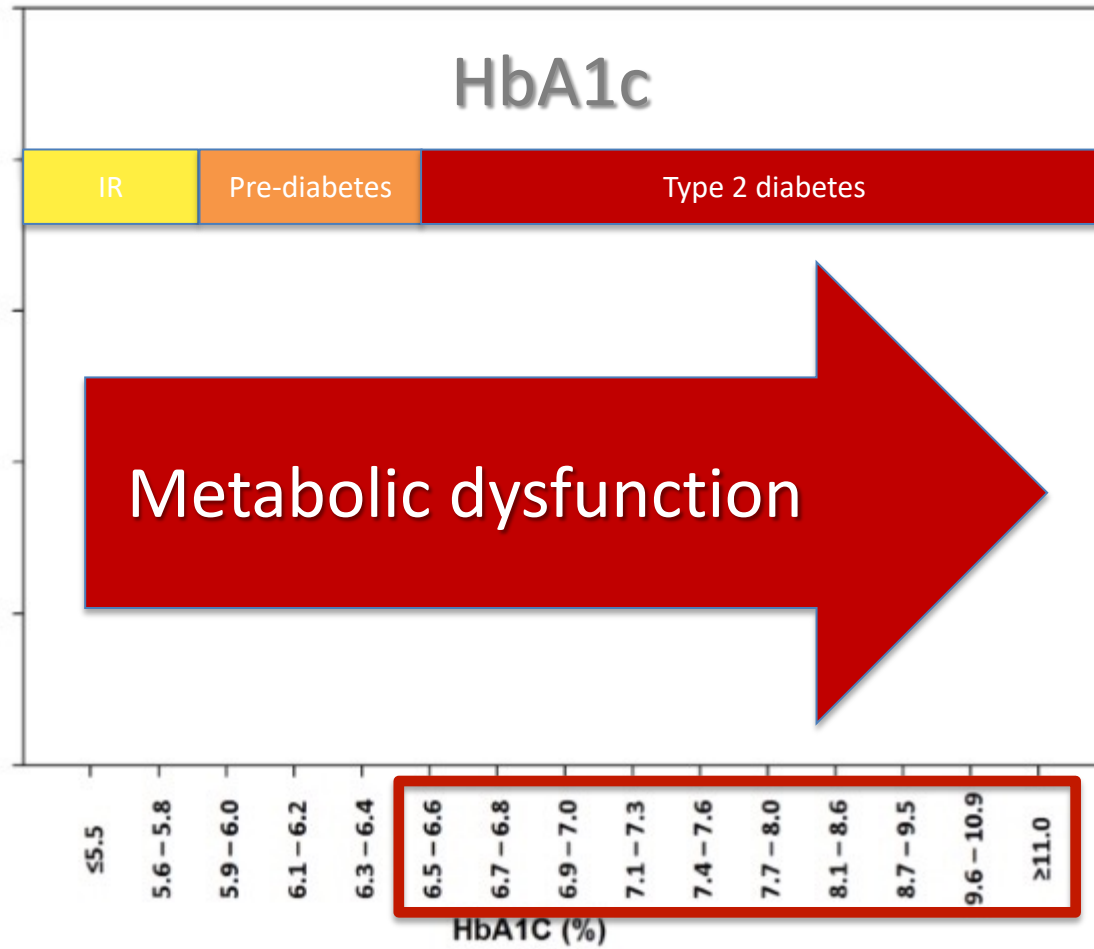
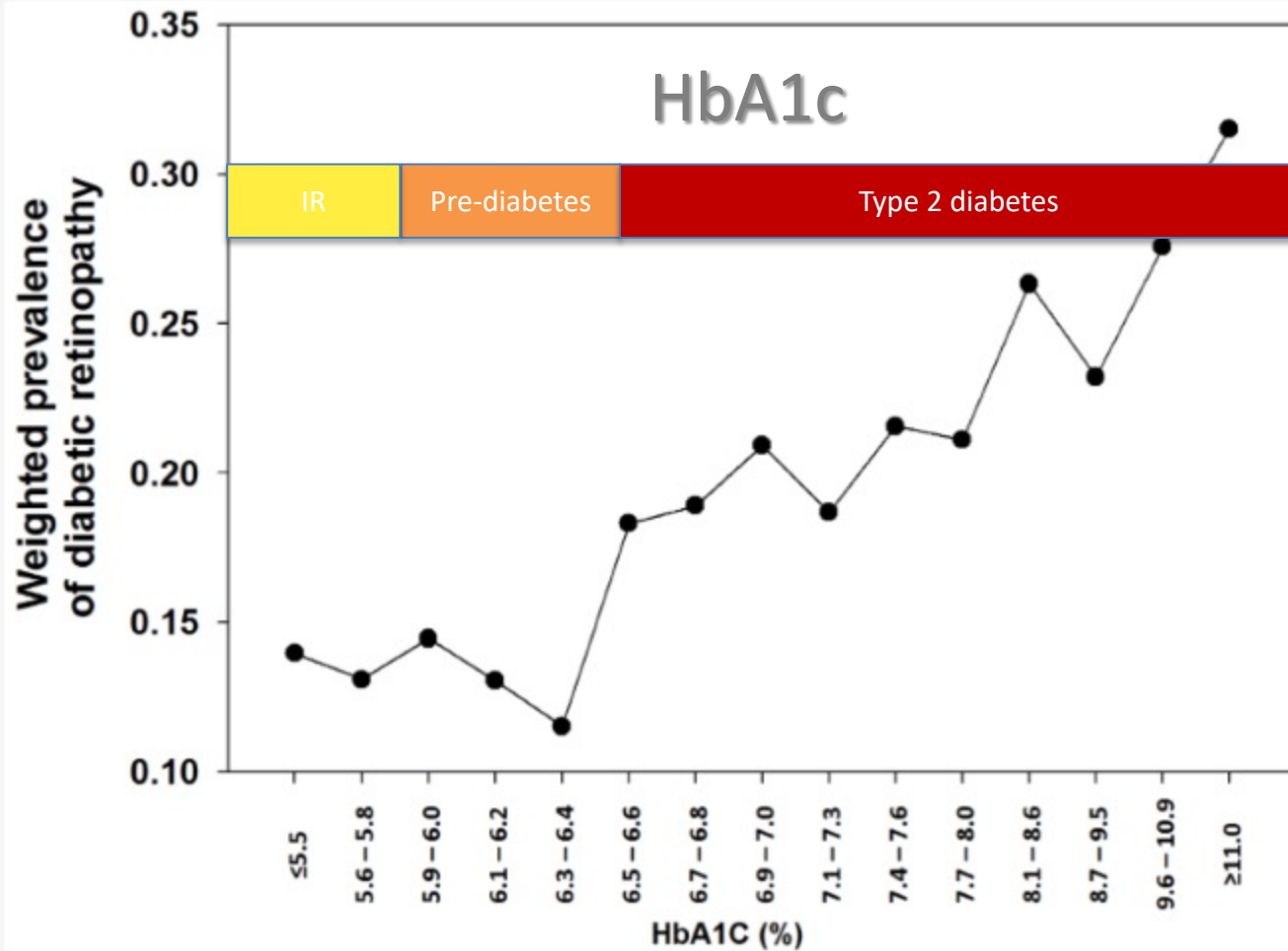
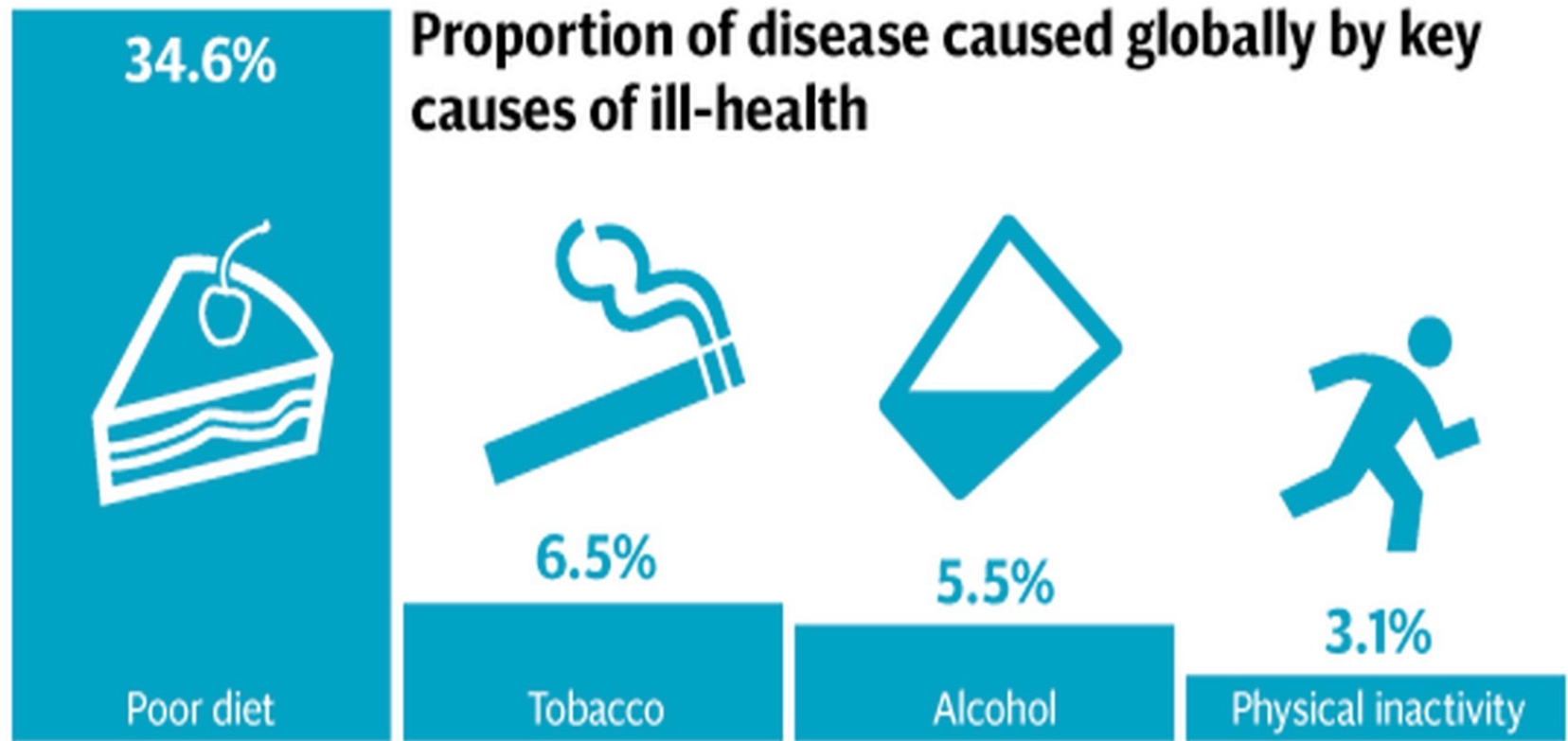


Figure 1. Weighted prevalence of diabetic retinopathy in subjects with established diabetes.



Death from CVD increases with HbA1c >5.5

Ikeda F et al. HbA1c even within non-diabetic level is a predictor of cardiovascular disease in a general Japanese population. *Cardiovasc Diabetol* 2013



Source: Prof Simon Capewell, Professor of Clinical Epidemiology, University of Liverpool, analysis of Lancet global burden of disease report

Our food is killing us



Source: Prof Simon Capewell, Professor of Clinical Epidemiology, University of Liverpool, analysis of Lancet global burden of disease report

Ultra-processed food-like substances





**Ultra-processed
'foods'
>40% of our diet**

Australian Bureau of Statistics 2020-2021

Fructose Seed oils (UPFs)

Fructose Seed oils



(UPFs)



Insulin resistance

Fructose Seed oils



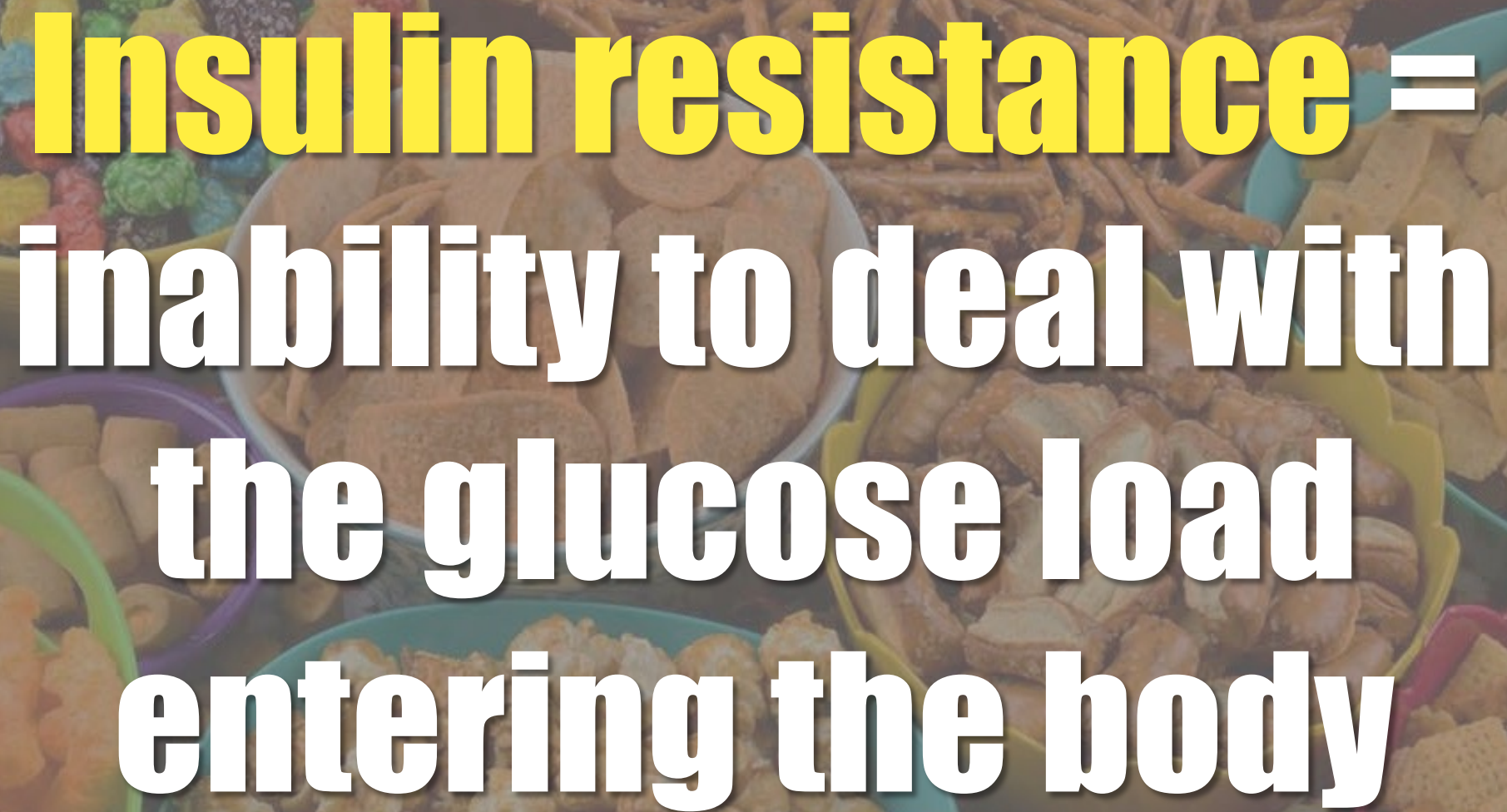
(UPFs)



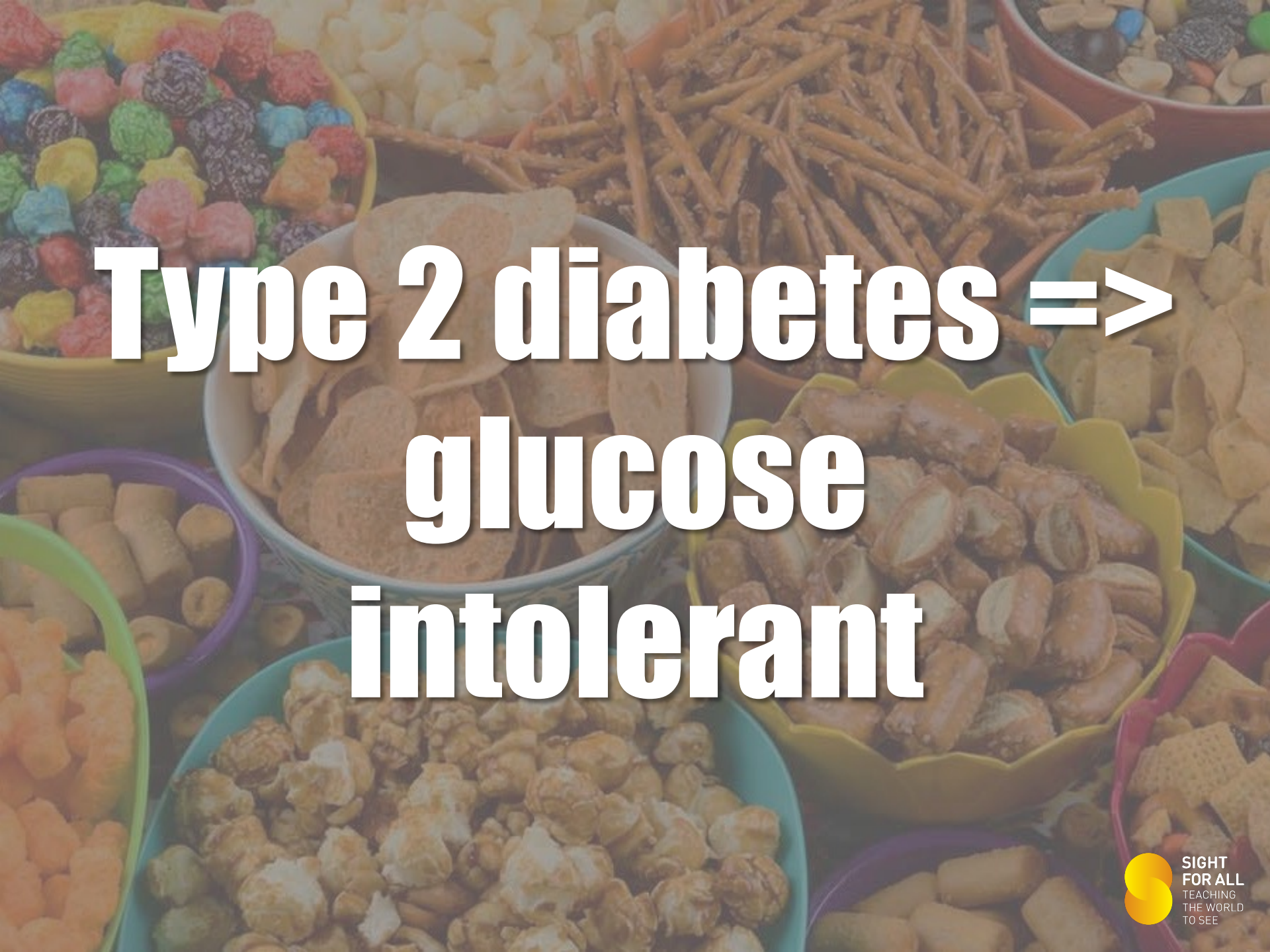
Insulin resistance



'type 2 diabetes'



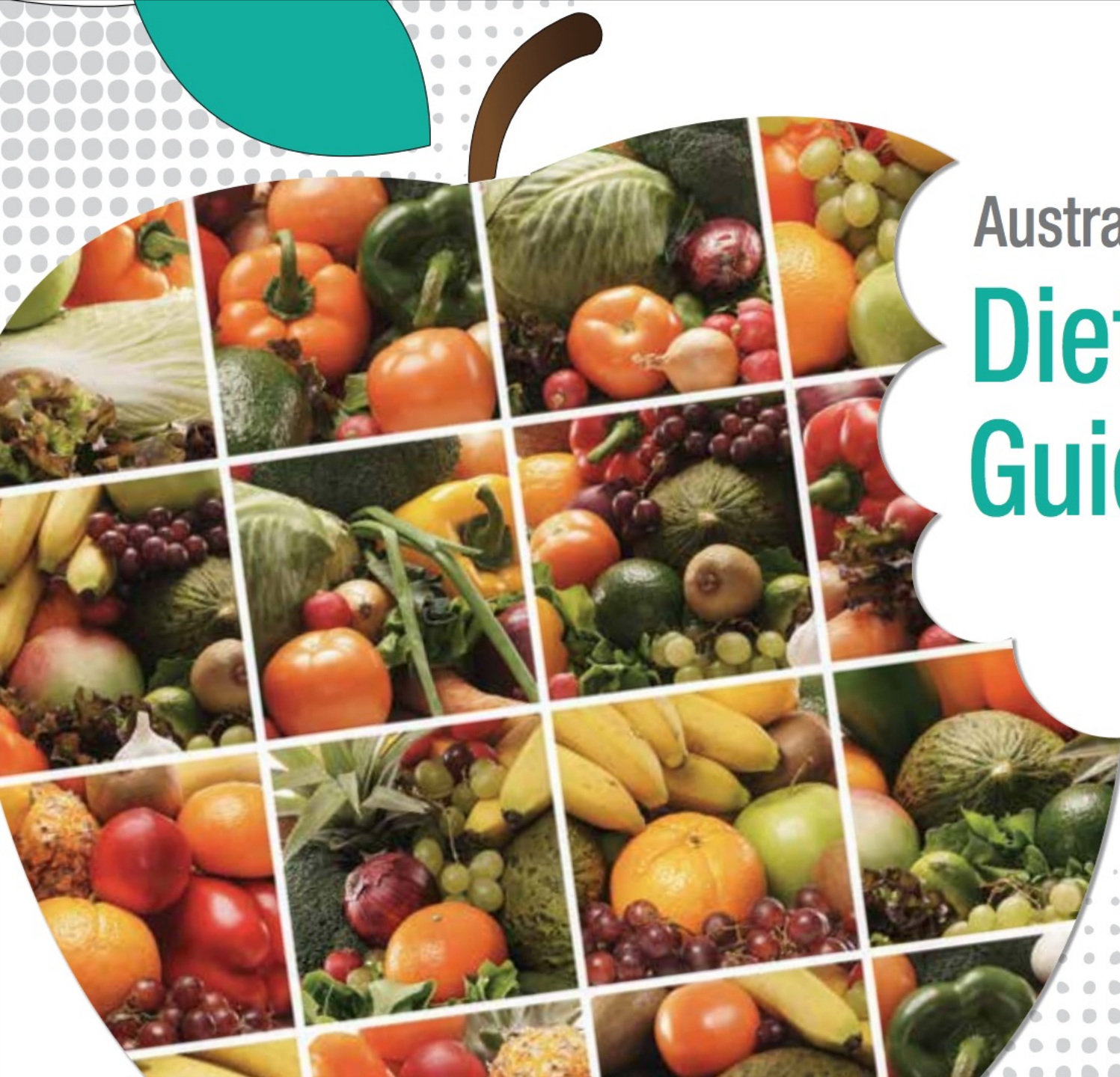
Insulin resistance =
inability to deal with
the glucose load
entering the body



**Type 2 diabetes =>
glucose
intolerant**



Nutrient-poor refined carbohydrates = starch = chains of glucose



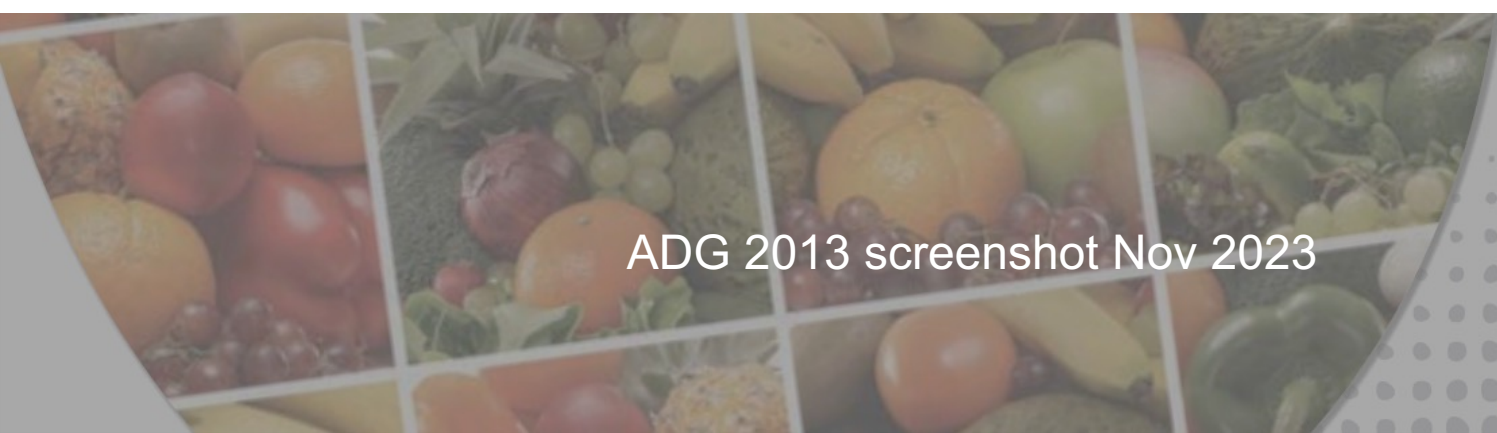
Australian
**Dietary
Guidelines**

Energy from macronutrients

Macronutrients (proteins, fats and carbohydrates) all contribute to dietary energy intake.⁸ There is a growing body of evidence that the relative proportions of macronutrients consumed affect the risk of chronic disease and may also affect micronutrient intake.⁸ Optimal proportions of the type of fat (e.g. saturated, polyunsaturated or monounsaturated, or specific fatty acids within these categories) and carbohydrate (e.g. complex [starches] or simple [sugars]) may also be important in reducing chronic disease risk.⁸

The estimated Acceptable Macronutrient Distribution Ranges (AMDR) related to reduced risk of chronic disease are:⁸

- 20–35% of total energy intake from fat
- 45–65% from carbohydrate
- 15–25% from protein.

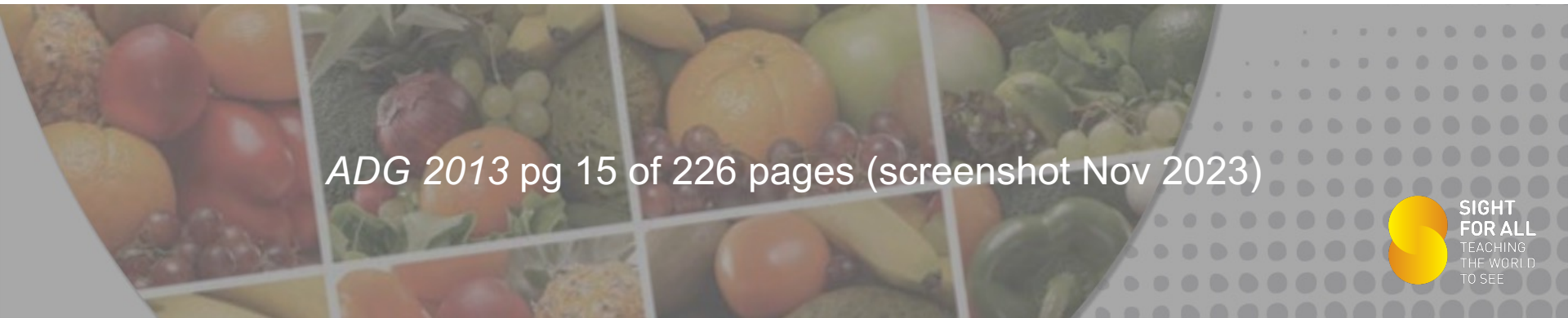


ADG 2013 screenshot Nov 2023

The Guidelines apply to all healthy Australians

The Guidelines aim to promote the benefits of healthy eating, not only to reduce the risk of diet-related disease but also to improve community health and wellbeing. The Guidelines are intended for people of all ages and backgrounds in the general healthy population, including people with common diet-related risk factors such as being overweight.

The Guidelines do not apply to people with medical conditions requiring specialised dietary advice, or to frail elderly people who are at risk of malnutrition.




ADG 2013 pg 15 of 226 pages (screenshot Nov 2023)

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ADG 2013 pg 15 of 226 pages (screenshot Nov 2023)

Type 2 diabetes: Goals for optimum management

The following table lists goals for optimum management for all people with type 2 diabetes. For guidance on specific assessment intervals, advice and arrangements, refer to the relevant sections of this handbook.

Individual goals	
Encourage all people with type 2 diabetes to approach/reach these goals.	
Diet	Advise eating according to the <i>Australian dietary guidelines</i> , with attention to quantity and type of food Advise individual dietary review for people with difficulty managing weight, difficulty maintaining glucose levels in target range, CVD risk, or if otherwise concerned



Encourage all people with type 2 diabetes to approach/reach these goals.

Diet

Advise eating according to the *Australian dietary guidelines*

Alcohol consumption	Advise ≤ 2 standard drinks (20 g of alcohol) per day for men and women
Blood glucose monitoring	Advise 4–7 mmol/L fasting and 5–10 mmol/L postprandial SMBG is recommended for patients with type 2 diabetes who are using insulin. Education should be provided regarding frequency and timing of insulin dose For people not on insulin, the need for and frequency of SMBG should be individualised, depending on type of glucose-lowering medications, level of glycaemic control and risk of hypoglycaemia, as an aid to self-management SMBG is recommended in pregnancy complicated by diabetes or gestational diabetes SMBG is also recommended for people with hyperglycaemia arising from intercurrent illness. It may be helpful in haemoglobinopathies or other conditions where HbA1c measurements may be unreliable

Home

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Research &
AdvocacyFor Health
Professionals

News & Resources

Eating Well

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› Should I drink alcohol?

› Eating Out

› Takeaway

› Between-Meal Snacks

› Healthy eating for Older People

› Cholesterol

Home > Food & Activity > Eating Well

Eating Well

✉ Email

Healthy eating and an active lifestyle are important for everyone, including people with diabetes. Having a healthy diet and being active is an important part of managing diabetes because it will help manage your blood glucose levels and your body weight.

- Meals that are recommended for people with diabetes are the same as for those without diabetes
- There is no need to prepare separate meals or buy special foods
- Everyone including family and friends can enjoy the same healthy and tasty meals together
- As a starting point, we recommend people follow the Australian Dietary Guidelines [Healthy Eating for Adults](#) and [Healthy Eating for Children](#)

- **As a starting point, we recommend people follow the Australian Dietary Guidelines**

information, visit an Accredited Practising Dietitian. To find a dietitian in your area, contact:

- [The Dietitians Association of Australia](#) or call 1800 812 942
- the NDSS Helpline on 1800 637 700.

Dietitians are accessible and are usually based in many local hospitals, diabetes centres and community health centres and are also listed in the telephone directory.

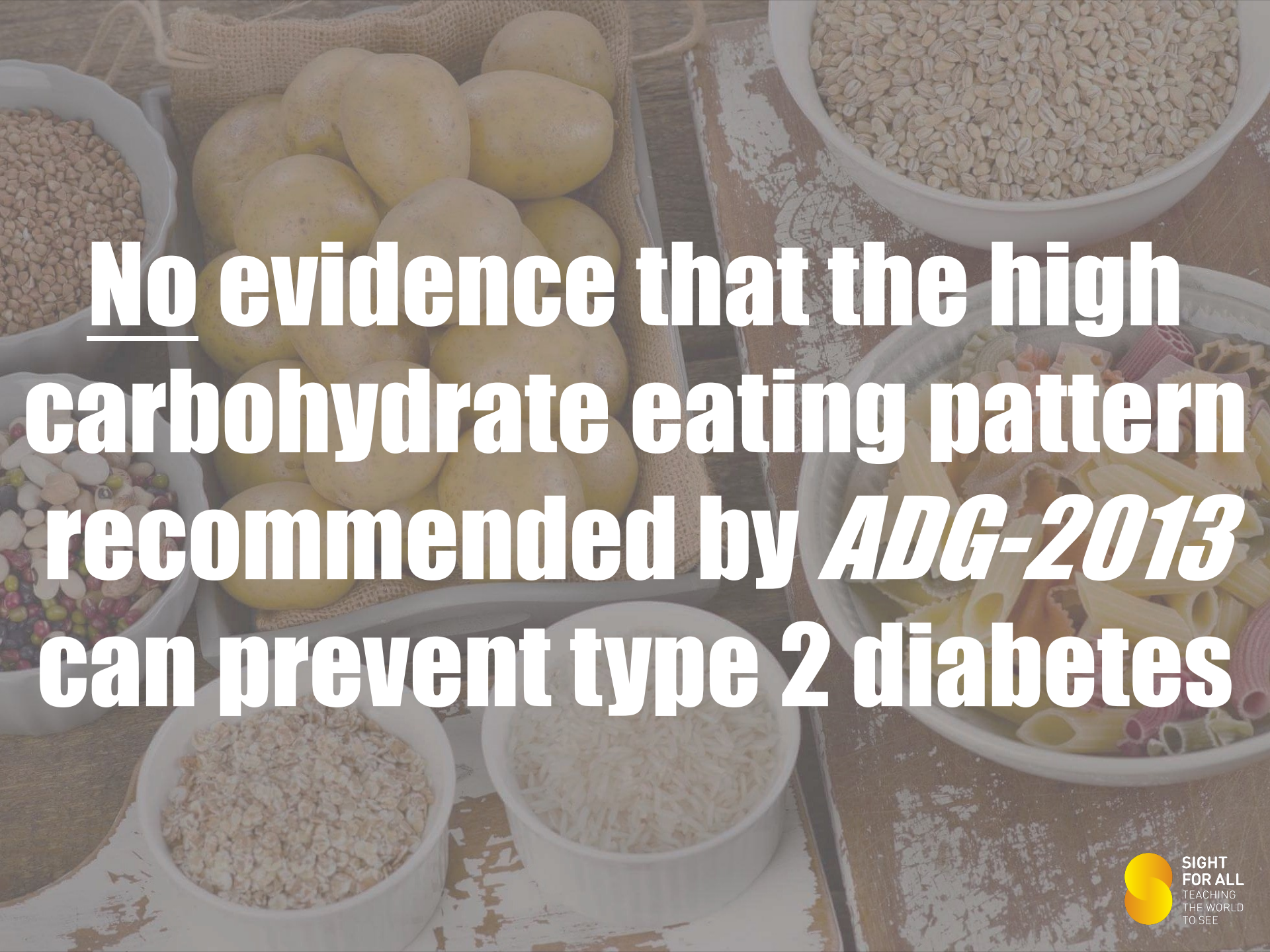
Donate now

There are many ways to donate to Diabetes Australia and help support our case.

**Source: www.diabetesaustralia.com.au
Nov 2023**

TYPE 2 DIABETES IS
PREVENTABLE





No evidence that the high carbohydrate eating pattern recommended by *ADG-2013* can prevent type 2 diabetes



Avoid...
added sugar
sugary drinks
seed oils
ultra-processed 'foods'

TYPE 2 DIABETES IS
REVERSIBLE





Australian Government
Department of Health

Australian National Diabetes Strategy

2021 – 2030





Figure 1. Weighted prevalence of diabetic retinopathy in subjects with established diabetes.

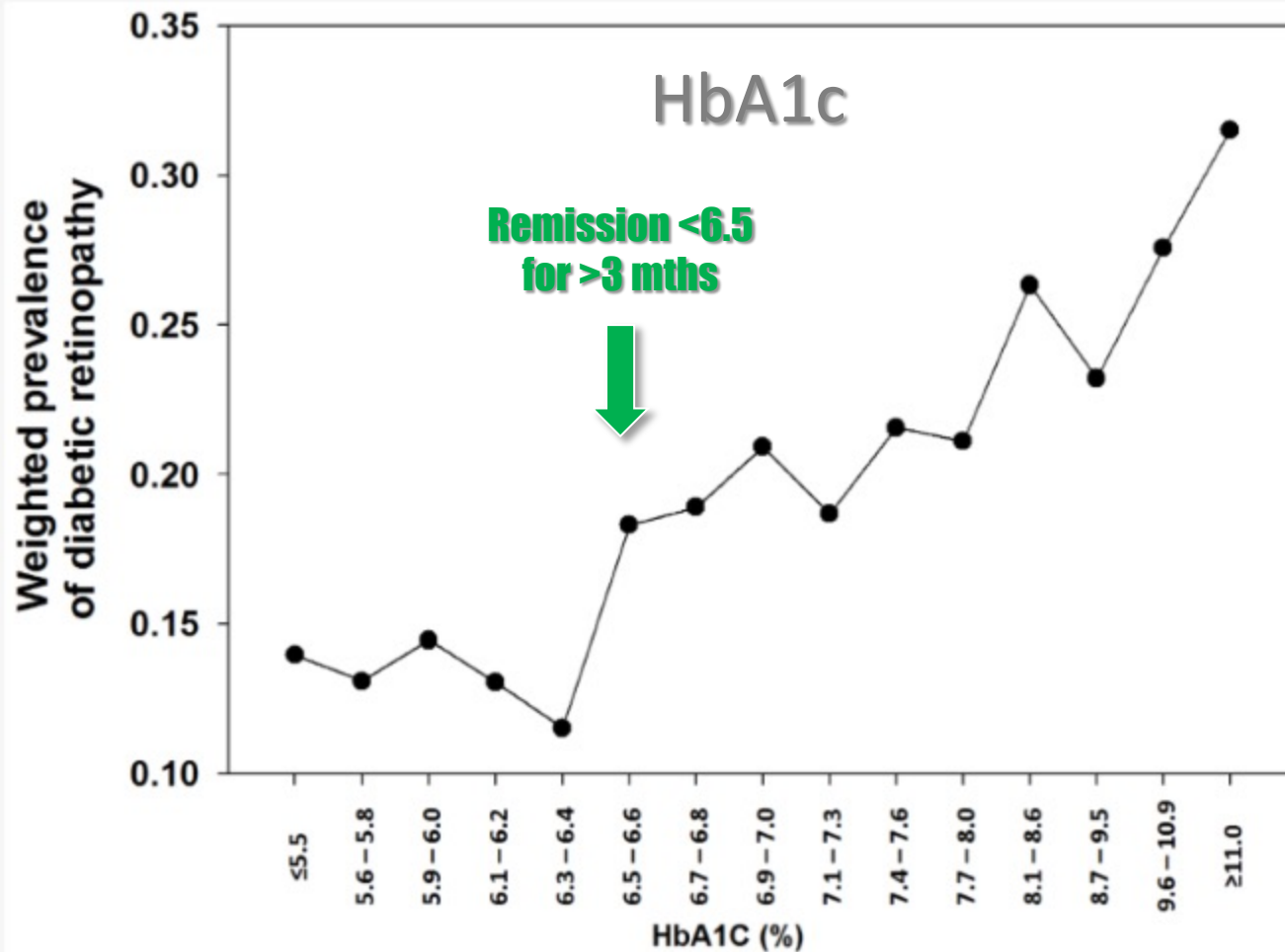
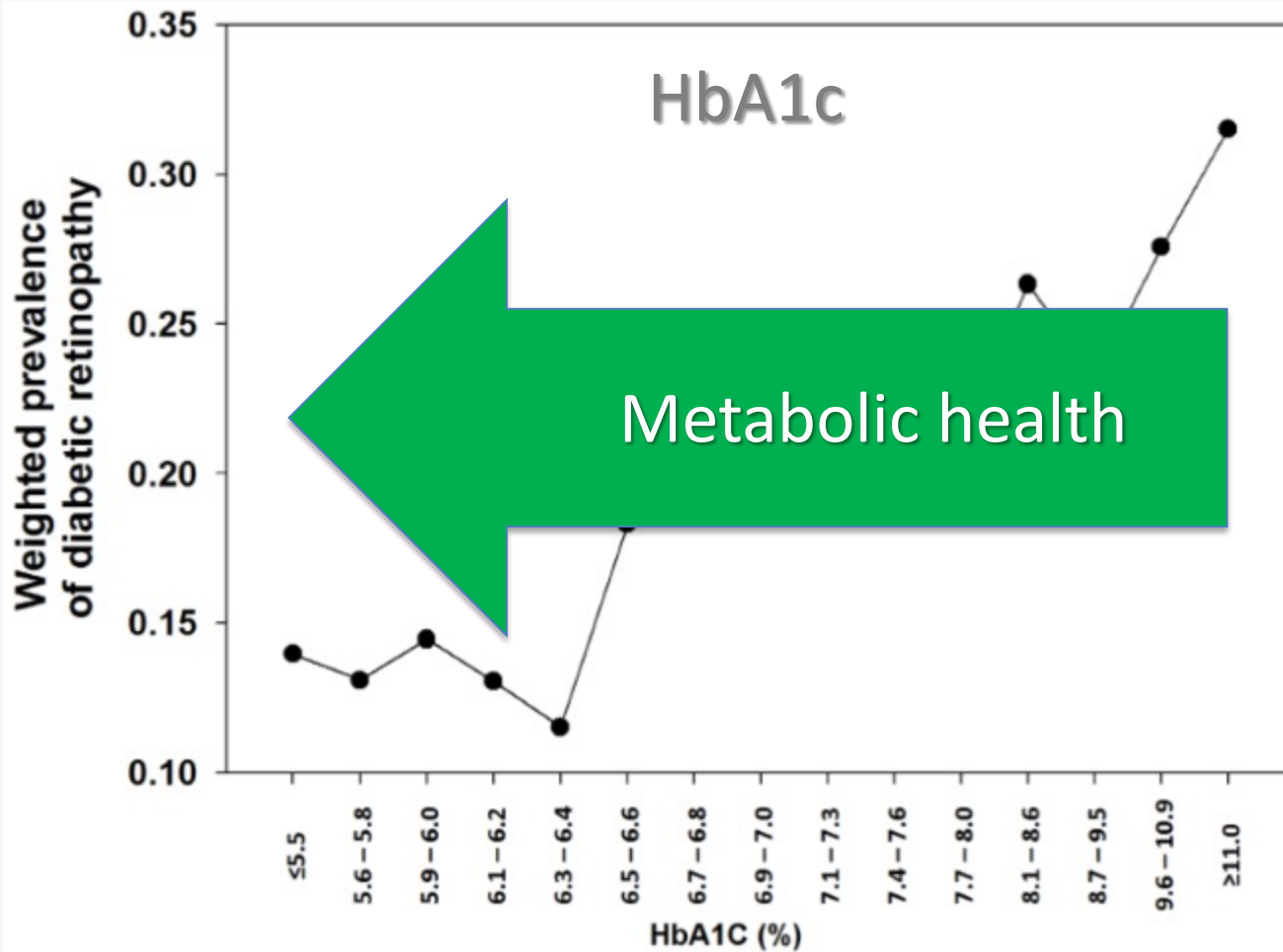


Figure 1. Weighted prevalence of diabetic retinopathy in subjects with established diabetes.



Prescribing real food as medicine

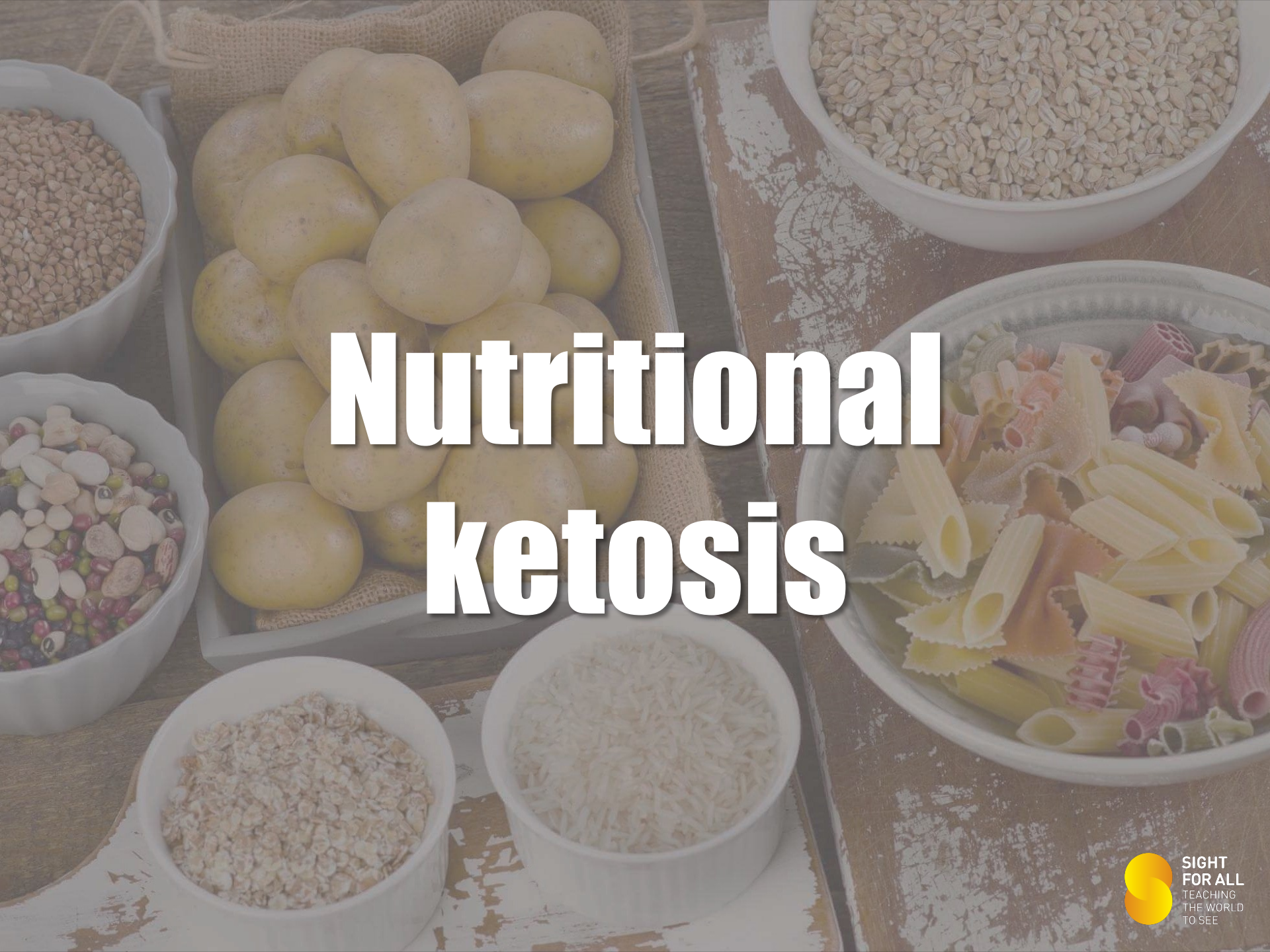


Avoid ultra-processed metabolic disruptors



A collage of various starchy carbohydrates including potatoes, lentils, chickpeas, beans, rice, and pasta. The text is overlaid on the image.

**+ therapeutic
reduction of
starchy carbs
<50g/day**



Nutritional ketosis

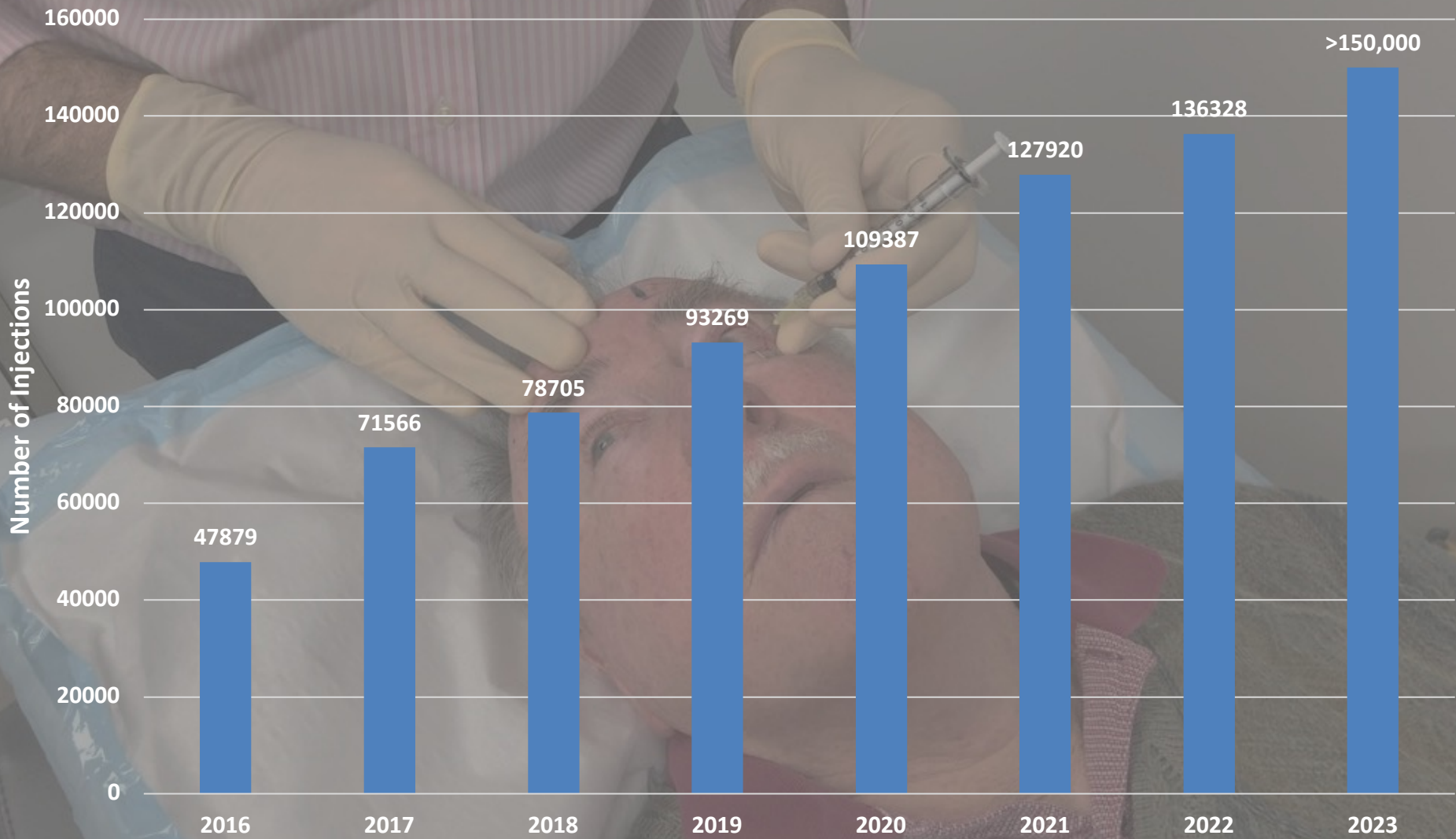


**100+ controlled
clinical trials**



Dr Muecke injecting the eye of a patient with diabetes-related eye disease

Eye Injections for diabetic macular oedema: 2016 - June 2023 (with projected 2023 numbers)

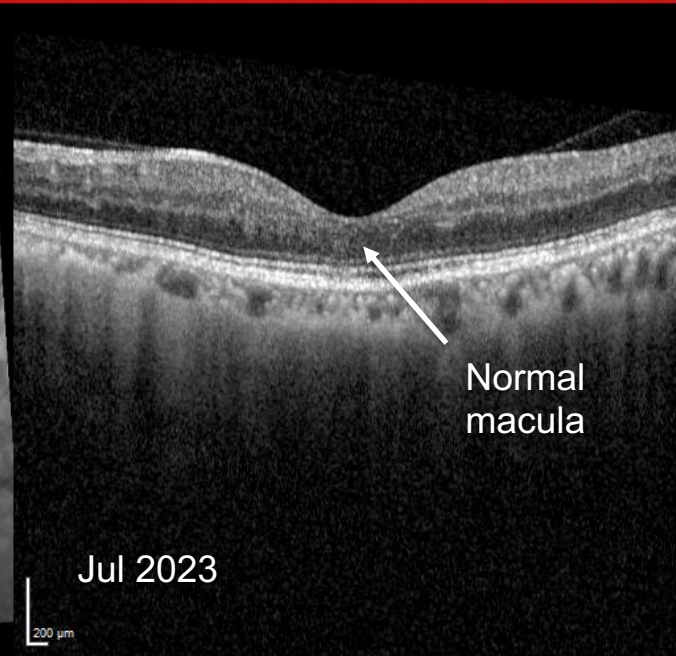
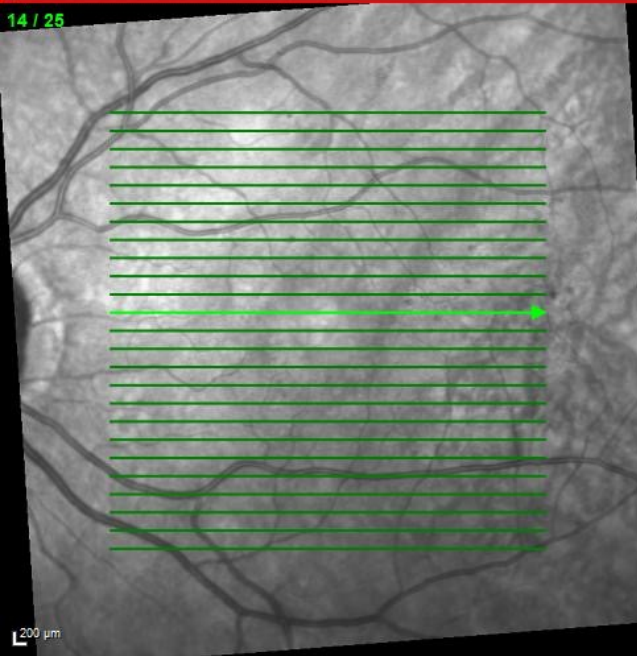
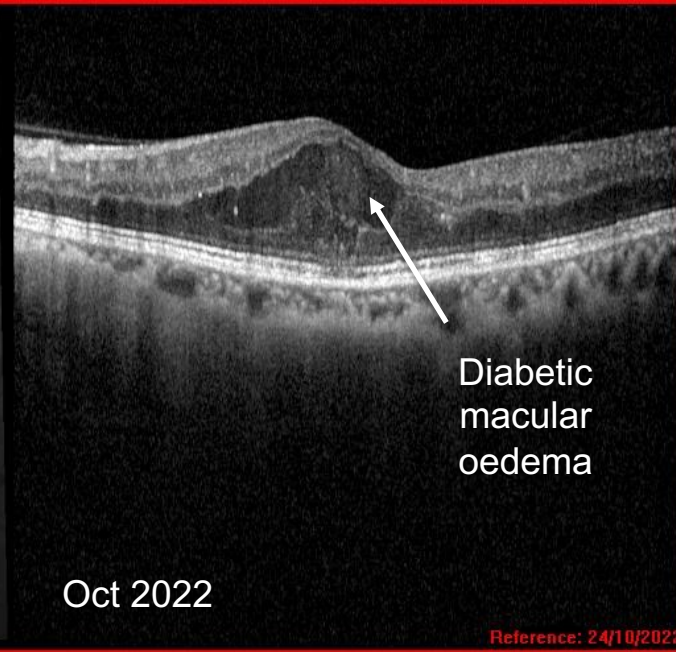
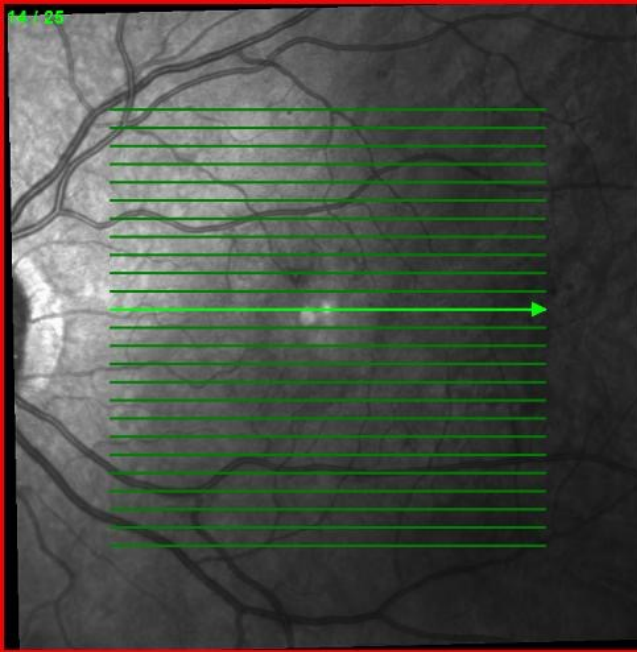


Medicare 2023



Dr Muecke with patient after he achieved remission from his type 2 diabetes (*consent given for use of personal image)

46 year old female



Consent given for use of image of personal test

17/07/2023, OS

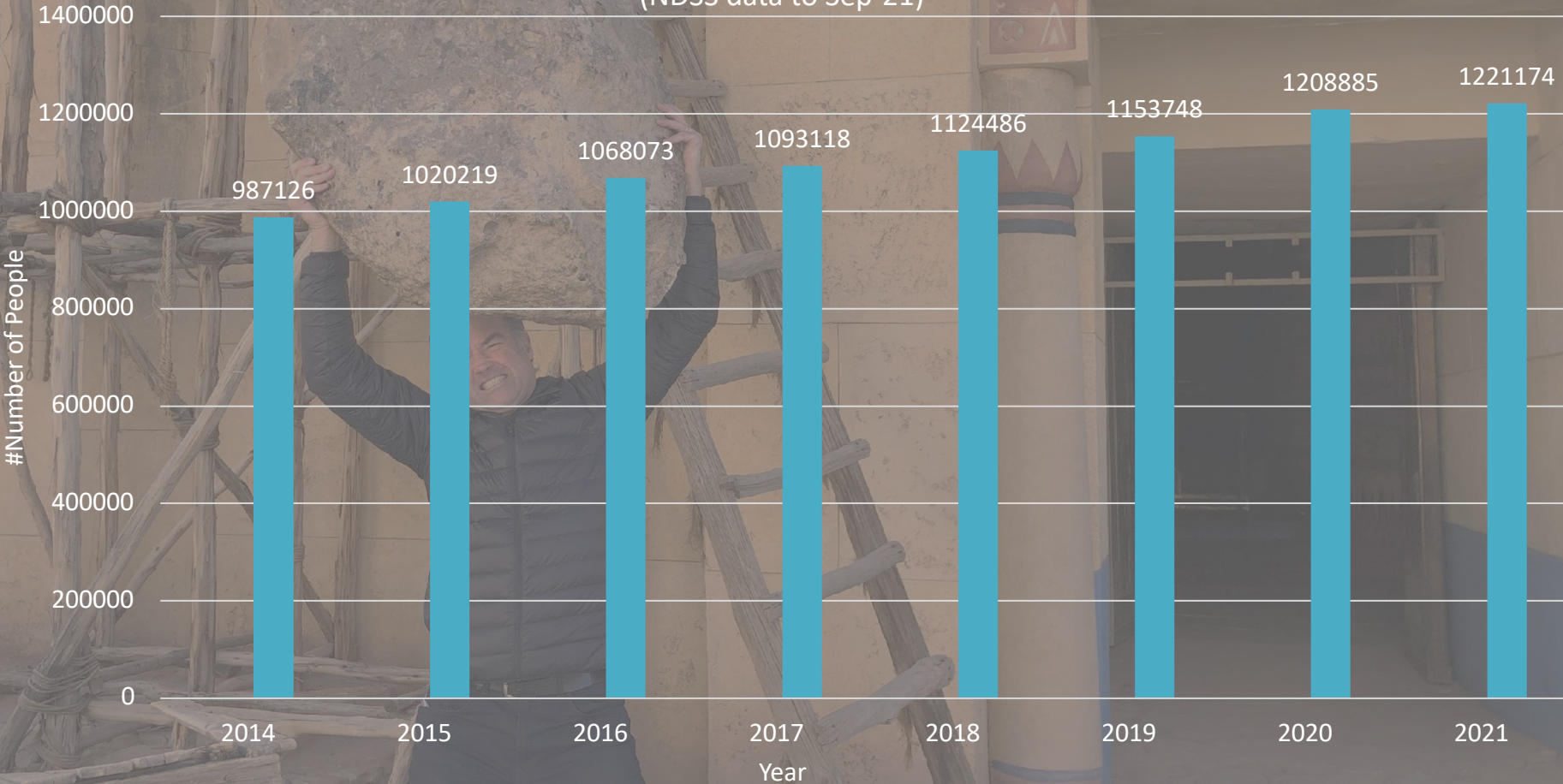
IR&OCT 30° ART [HS] ART(7) Q: 30

HEIDELBERG
ENGINEERING



People with type 2 diabetes in Australia

(NDSS data to Sep-21)





WE NEED
ACTION

A man in a dark jacket and pants is carrying a large, heavy brick on his shoulder. He is standing in an ancient Egyptian setting, with a wall featuring hieroglyphs and a doorway in the background. The scene is dimly lit, suggesting an indoor or shaded outdoor environment. The text is overlaid on the image in a large, bold, white font with a black outline.

**TOR 5... “The effectiveness
of current Australian
Government policies and
programs to prevent,
diagnose and manage
diabetes”**

A few policy suggestions...

- **Dietary guidelines**
- **Food environment**
- **Medical education**



Australian
Dietary
Guidelines

Overhaul our dietary guidelines...



SIGHT
FOR ALL
TEACHING
THE WORLD
TO SEE

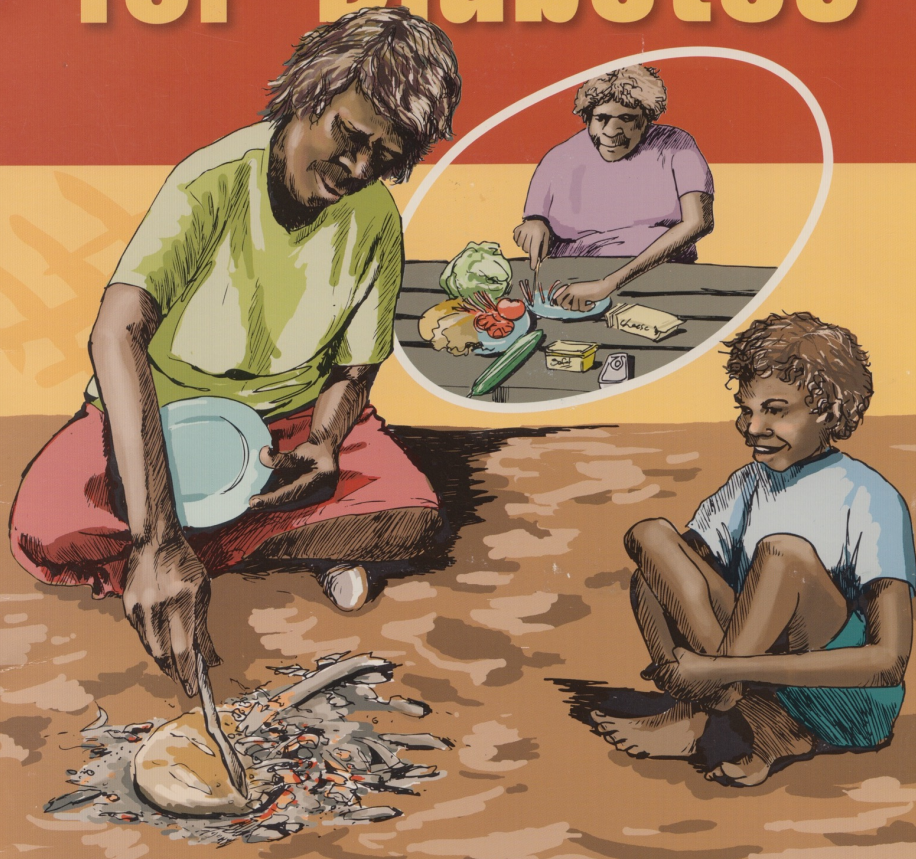
Need critical review of *ADG* 2013...

Australian

Dietary
Guidelines

- **Lack of impartiality**
- **Have they achieved their objective?**
- **Have they caused harm?**

Good Food for Diabetes



THE ABORIGINAL AND TORRES STRAIT ISLANDER GUIDE TO HEALTHY EATING

Eat good food to be Healthy and Strong

Vegetables
(including legumes – baked beans, kidney beans & split peas).

Fruit

Milk, cheese and yoghurt

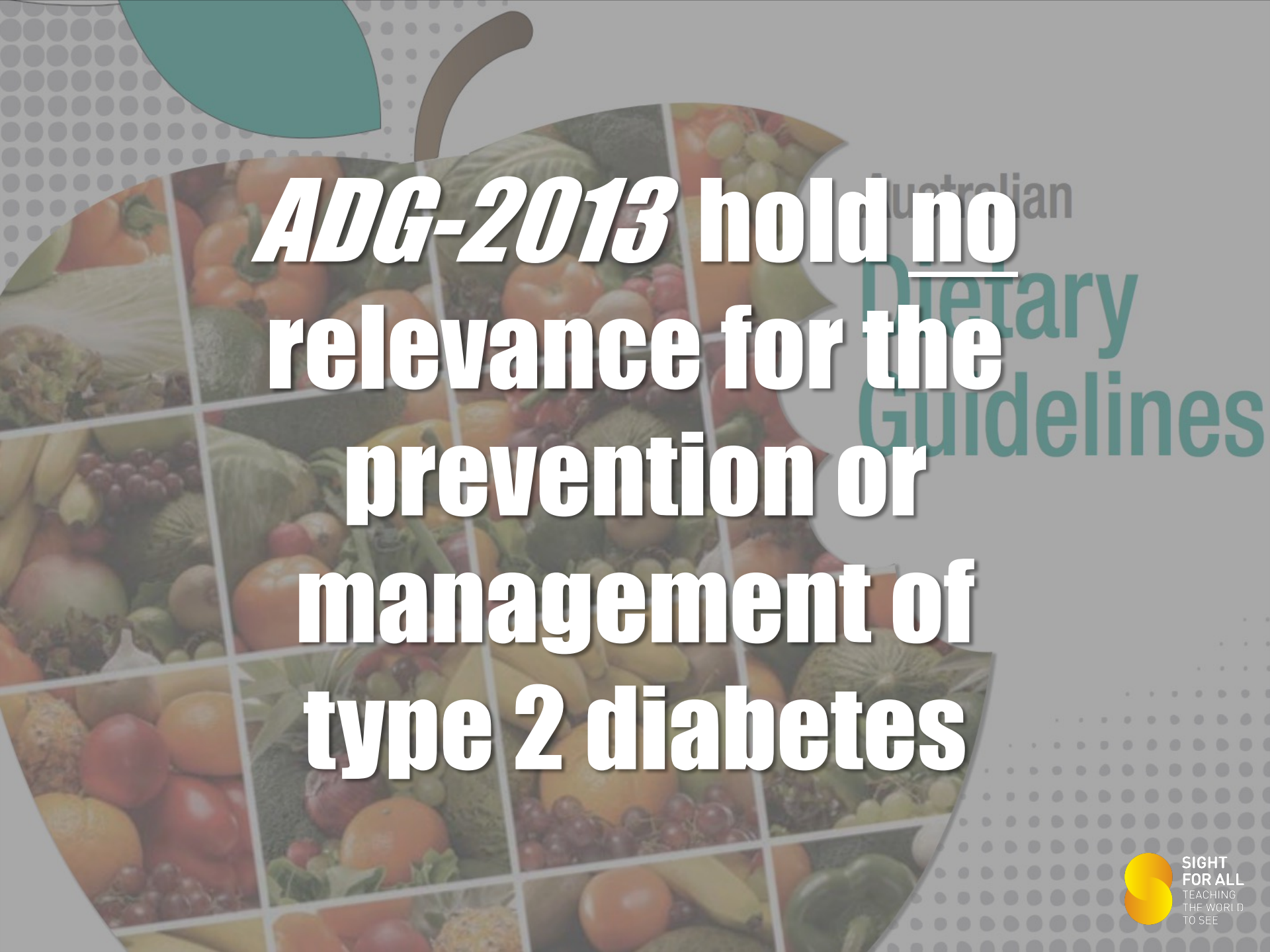
Meat
including bush meat, chicken, eggs & fish (including nuts & legumes – baked beans).

Breads, cereals, rice, spaghetti & noodles

Drink plenty of water

Eat in small amounts

THE ABORIGINAL AND TORRES STRAIT ISLANDER GUIDE TO HEALTHY EATING WAS ADAPTED WITH PERMISSION FROM THE AUSTRALIAN GUIDE TO HEALTHY EATING (1998, COMMONWEALTH DEPARTMENT OF HEALTH AND AGED CARE) AND PREPARED BY THE ABORIGINAL AND TORRES STRAIT ISLANDER GUIDE TO HEALTHY EATING WORKING PARTY.



***ADG-2013* hold no
relevance for the
prevention or
management of
type 2 diabetes**

Australian
Dietary
Guidelines



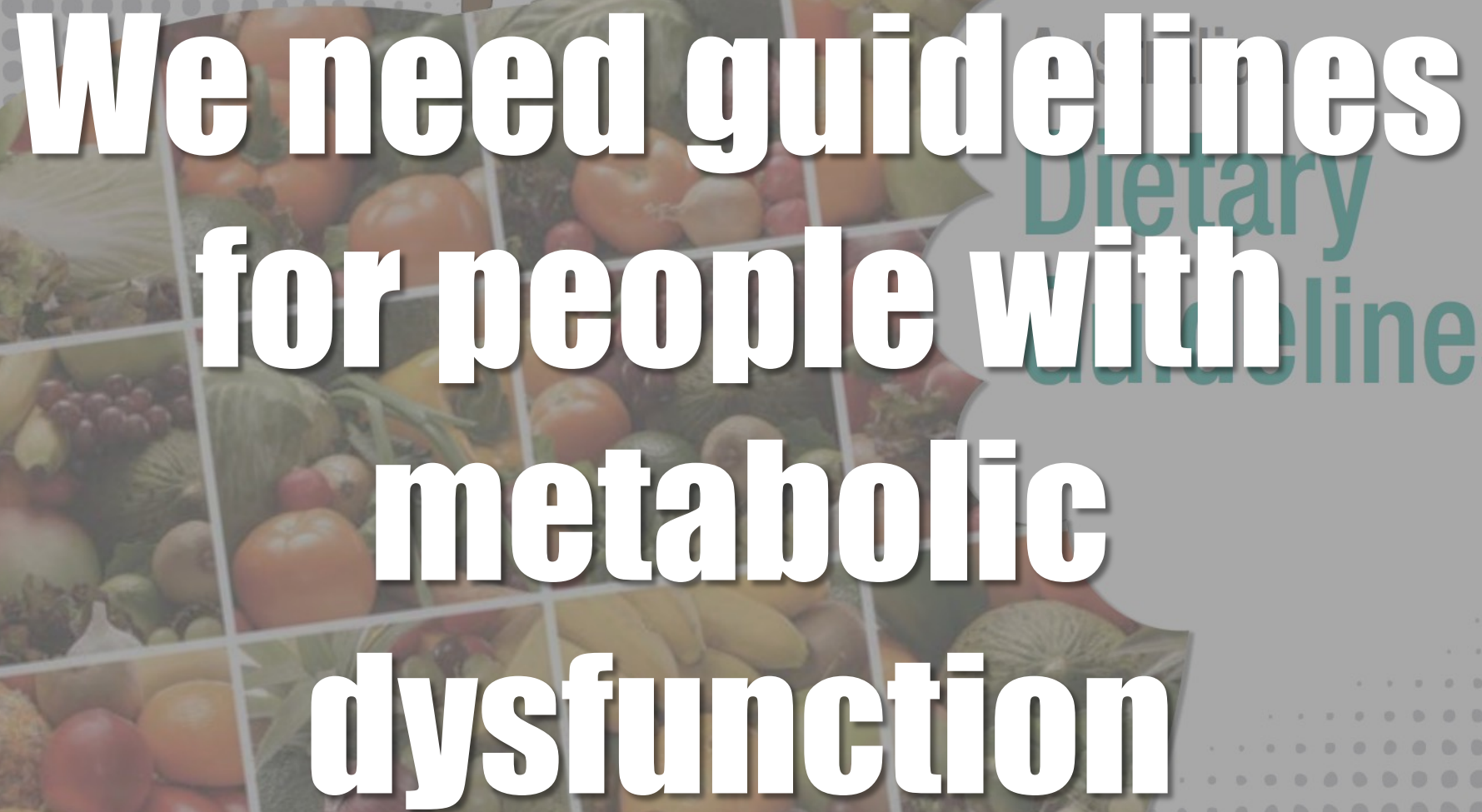
**A paradigm shift
is needed**

Australian

**Dietary
Guidelines**



**SIGHT
FOR ALL**
TEACHING
THE WORLD
TO SEE



**We need guidelines
for people with
metabolic
dysfunction**



Clinical Guidelines

These guidelines provide clinicians with a general protocol for implementing therapeutic carbohydrate restriction as a dietary intervention in hospitals or clinics. These guidelines are meant to be applied as a dietary intervention for specific conditions for which carbohydrate reduction has been shown to offer therapeutic benefits.

Adele Hite, PhD, MPH, RD has coordinated the effort to get this clinical guidelines document to the point where it is publishable. Her efforts have been nothing short of miraculous.

[Clinical Guidelines](#)
[Statement of Support](#)
[Commit Your Support](#)
[Current Supporters](#)



Overhaul our unhealthy food environment...




Price Proximity Temporality



A sugar levy would be an investment in the health of our nation and its people, says James Muecke

Remove the tax breaks for R&D and marketing of junk food...



Sugar shovelers are making us fat, sick and poor. Dr J Muecke.
Michael West Media Nov 2021

A sugar levy would be an investment in the health of our nation and its people, says James Muecke

Remove the tax breaks

for R&D and marketing





of junk food...

> \$5 billion

Sugar shovelers are making us fat, sick and poor. Dr J Muecke.

Michael West Media Nov 2021

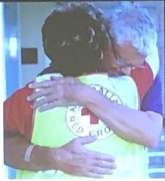
Price

Recharge your mobile now

Welcome



Scan your first item or flybuys card



Donate here to the Red Cross Disaster Relief and Recovery Fund

Can't Scan? [Look up item](#)

0.000

ScamAlert

Scammers are demanding customers buy items or other gift cards to pay for fake debts or fines and falsely claim they will face a penalty or financial penalty if they do not. Coles and the government would like to protect customers by the need to phone scammers impersonating the ATO, other government agencies or businesses such as Carphone Warehouse or the NBN.

Please be aware that legitimate Government departments or businesses will never demand payment with iTunes or other gift cards.

If you think you've been scammed please call the Fraud Department on the Service Desk, phone the ATO on 1800 008 540 or visit www.commbank.gov.au

coles

CHARGE here








10% OFF \$3.50
 10% OFF \$3.50
 REDUCED TO CLEAR \$1.85
 REDUCED TO CLEAR \$1.85
 1/2 Price \$1
 1/2 Price \$1
 1/2 Price \$1



Green light - you can remove a bag or scan your next item

South Australian supermarket 2020



SIGHT FOR ALL TEACHING THE WORLD TO SEE

Proximity

Children waiting to be seen in Casualty should not be given food or drink prior to examination.

Children waiting to be seen in Emergency should not be given food or drink prior to their examination.



Women's & Children's Hospital Kermode St entrance 2020

TUCK SHOP

What's up with the Tuckshop!!!

our preferred method of ordering + payment off our MENU is;

www.flexischools.com.au

open Monday-Friday from 8:15-9:00

convenient!! hassle free!!

No Cash needed!!

snack potato pies are available!! must be ordered

Halloween Meal Deal... \$6
30th October...
due back 25th Oct...
spooky

Ask our staff about our Gluten free food!! now available

Happy Halloween
25th Oct.

Term 4 - 2015

Meal Deal...

Mini Wrap, soft muffin + popper...
includes choice of ham
blueberry, tomato
cucumber +
onion... only \$4

Great Value!
Save time order online
via flexischools.com.au

Belly
Peach Reward...

Cheese
Slices
\$4
Soft Sided
Fats \$4

TUCK SHOP

Menu board with various food items and prices.



Temporality



**Overhaul the
education of
our health
practitioners...**

Undergraduate education free of vested interests





Prescribe real food as medicine

#improvementabolicfunction

#type2free

THANK
YOU



SIGHT
FOR ALL
TEACHING
THE WORLD
TO SEE