# BARRIERS TO EARLY DIABETES DIAGNOSIS AND MANAGEMENT IN ASIAN AMERICANS

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WHAT IS DIABETES?

Diabetes mellitus is a metabolic disorder in which the body either produces insufficient amounts of insulin or becomes resistant to insulin.
- Type 1 (early onset): caused by insufficient insulin production
- Type 2: caused by insulin resistance
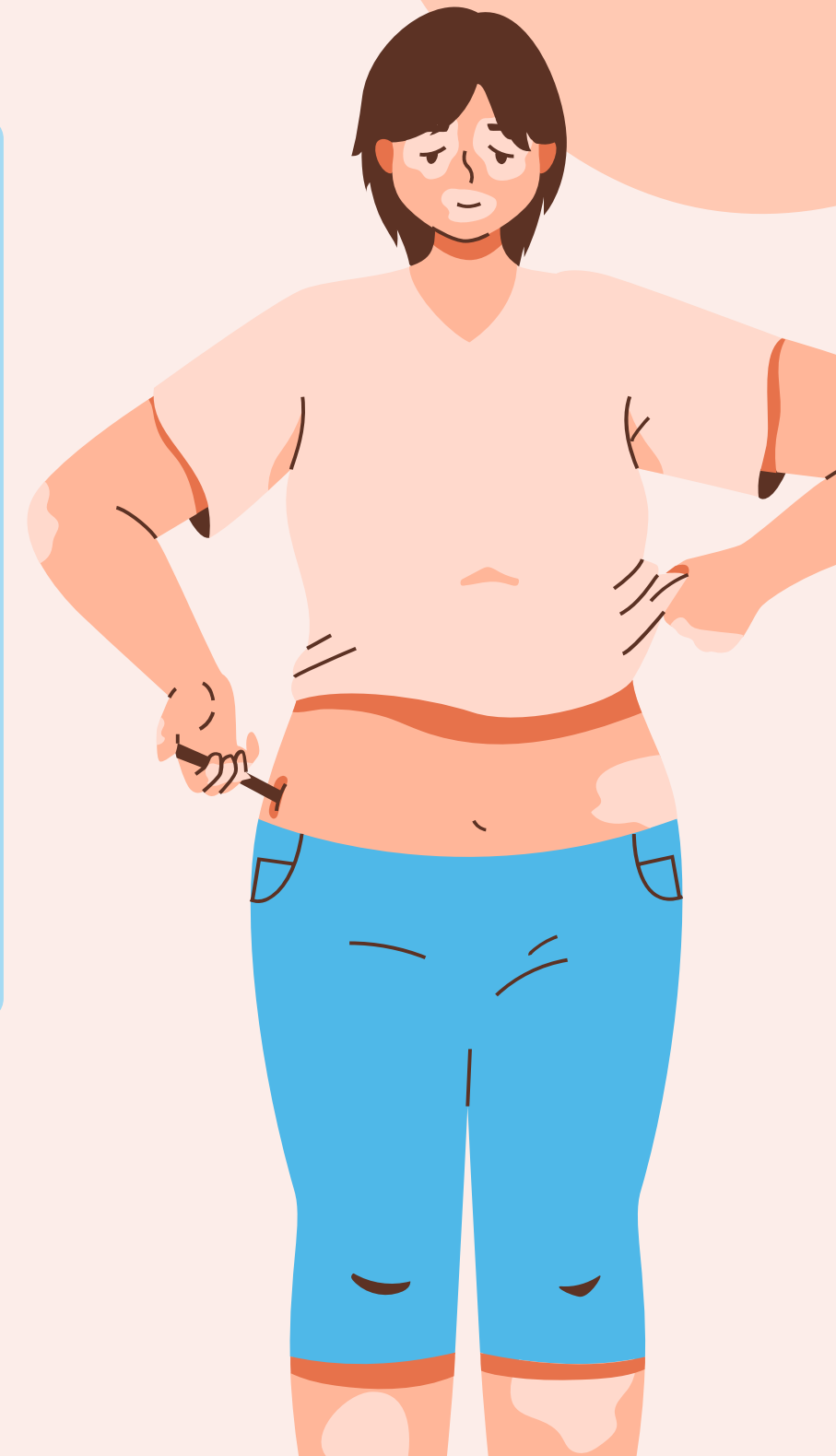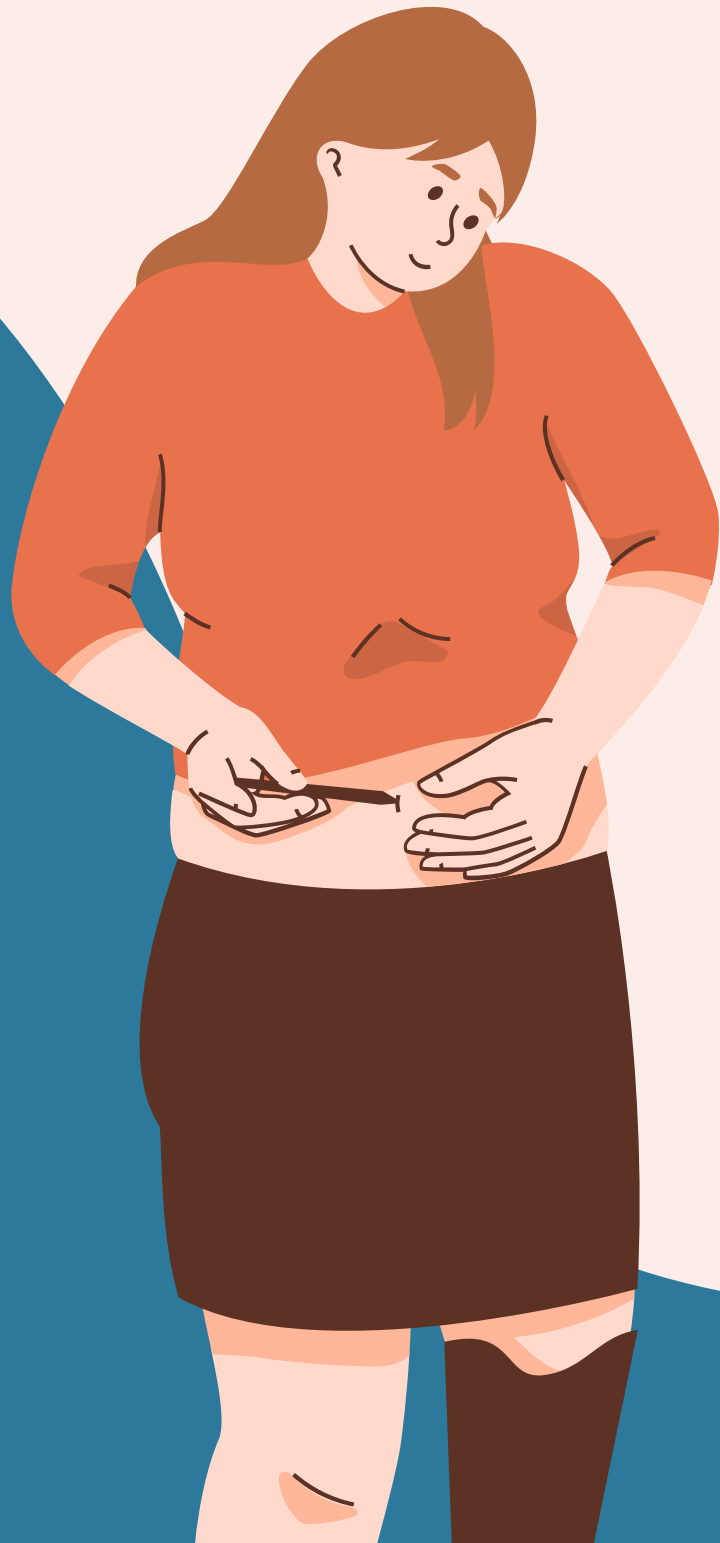
DIABETES STATISTICS

- Approximately 1 in 10 Americans have diabetes
- 90-95% of the diabetes diagnoses in America are type 2 diabetes
- 10% of the Asian American population has been diagnosed with diabetes
- The rate of undiagnosed diabetes in Asian Americans is about three times higher than in non-Hispanic whites

RISK FACTORS

- Obesity (BMI ≥30)
- Sedentary lifestyle
- 45 years old or older
- Gestational diabetes
- Family history of type 2 diabetes mellitus

WHAT SETS ASIAN AMERICANS APART?

- Earlier onset of disease
- Lower body weight and BMI
- Low prevalence of anti-islet antibodies
- Lower levels of education and health literacy
- Less access to diabetes screening

USUAL PARAMETERS FOR TYPE 2 DIABETES DIAGNOSIS:

- A fasting plasma glucose (FPG) level of 126 mg/dL (7.0 mmol/L) or higher, or
- A 2-hour plasma glucose level of 200 mg/dL (11.1 mmol/L) or higher during a 75-g oral glucose tolerance test (OGTT), or
- A random plasma glucose of 200 mg/dL (11.1 mmol/L) or higher in a patient with classic symptoms of hyperglycemia or hyperglycemic crisis, or
- A hemoglobin A1c (HbA1c) level of 6.5% (48 mmol/mol) or higher

RESULTS

- Asian Americans have a relatively lower BMI in comparison to other ethnicities and their onset of disease is earlier
- Low prevalence of anti-islet antibodies, which is usually present at the time of diagnosis of 90% of Caucasian patients
- Overall health literacy scores for Korean American immigrants with type 2 diabetes were lower than in non-Hispanic whites
- Diabetes screening may be less effective in this population in general because the typical anthropometric criteria do not accurately reflect degrees of insulin resistance and associated risks of metabolic disease

DIABETES SEQUELAE

- Neuropathy: damage to nerve fibers
- Coronary Artery Disease: buildup of plaque (atherosclerosis), causing narrowing of the coronary arteries
- Retinopathy: damage to the light-sensitive tissue making up the retina
- Cerebrovascular Accident: interruption of blood flow or bleeding in the brain
- Myocardial Infarction: blockage of blood flow in the heart, causing cardiac tissue damage
- Gangrene: loss of blood supply leading to tissue death

CONSEQUENTLY,

Asian Americans are more likely to face costly preventable hospitalizations. In fact, native Hawaiians had the most and Americans of Japanese descent had the third most occurrences of preventable hospitalizations due to cardiovascular disease and diabetes.

RESULTS

In order to improve diabetic patient outcomes for Asian Americans, culture-specific resources and patient education should be shared because improving self-care skills and encouraging self-efficacy helps foster health literacy, glucose control, and overall quality of life.

FUTURE SCREENING

Adipocyte fatty acid binding protein could be an indicator used to screen for diabetes in the Asian American population since body weight and BMI alone are not sufficient to predict insulin resistance. A longitudinal study conducted in Hong Kong indicated that serum fatty acid binding proteins were associated with glucose intolerance and predicted the development of type 2 diabetes in a group of Chinese people over 10 years.
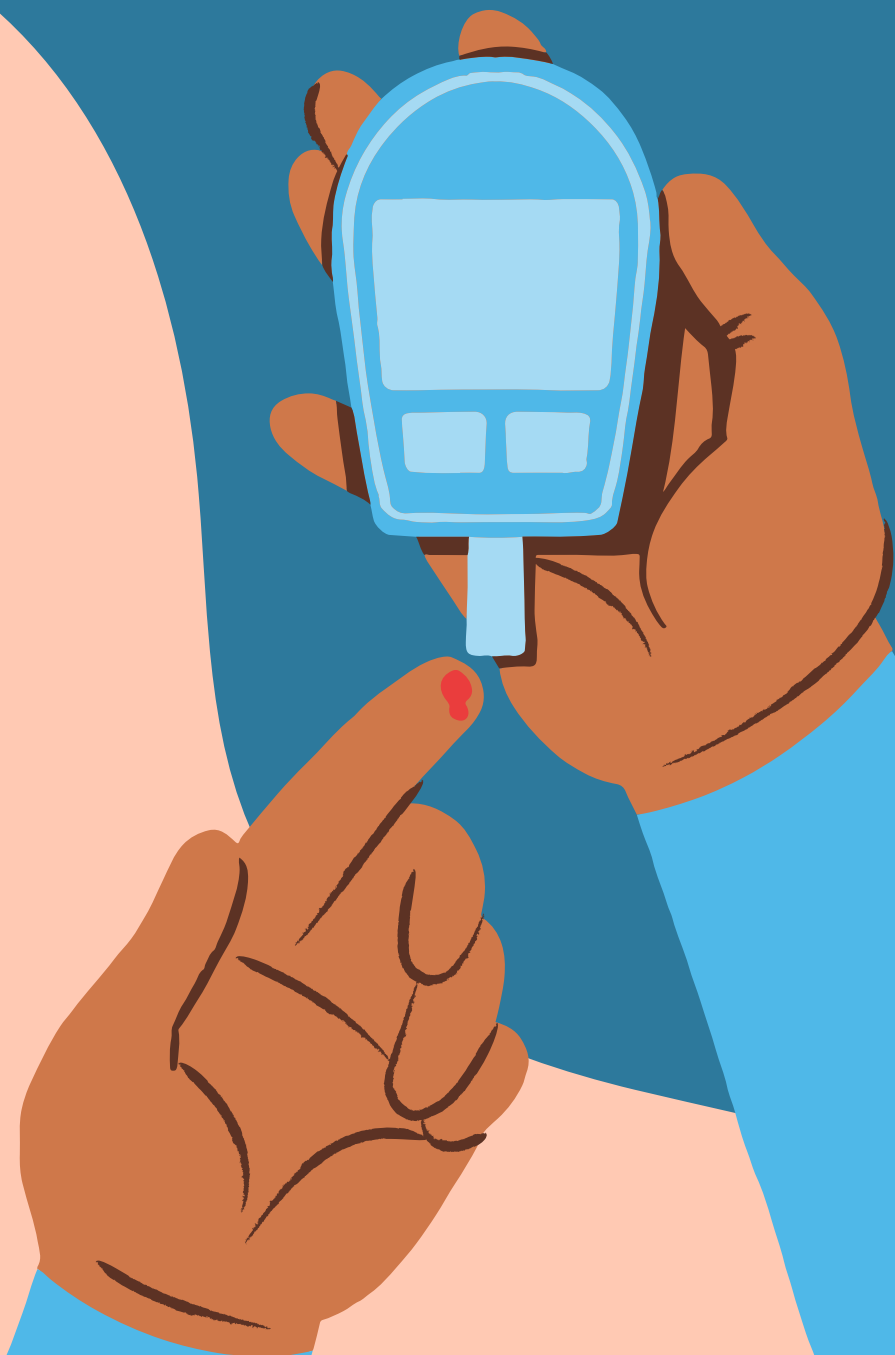
DISCUSSION

This integrative review points to a large disparity in Asian American diabetes detection and management, largely due to limited individualization of diabetes screening and patient education. Asian American immigrants have much more difficulty reaching proper glycemic control through lifestyle changes without resources that are in their native languages that also include culturally appropriate information.

IMPLICATIONS TO NURSING PRACTICE

Nurses should be prepared to:

- assess barriers to learning such as lower fluency in English and different cultural practices
- provide guidance on where to find resources more tailored to their patients' cultural beliefs
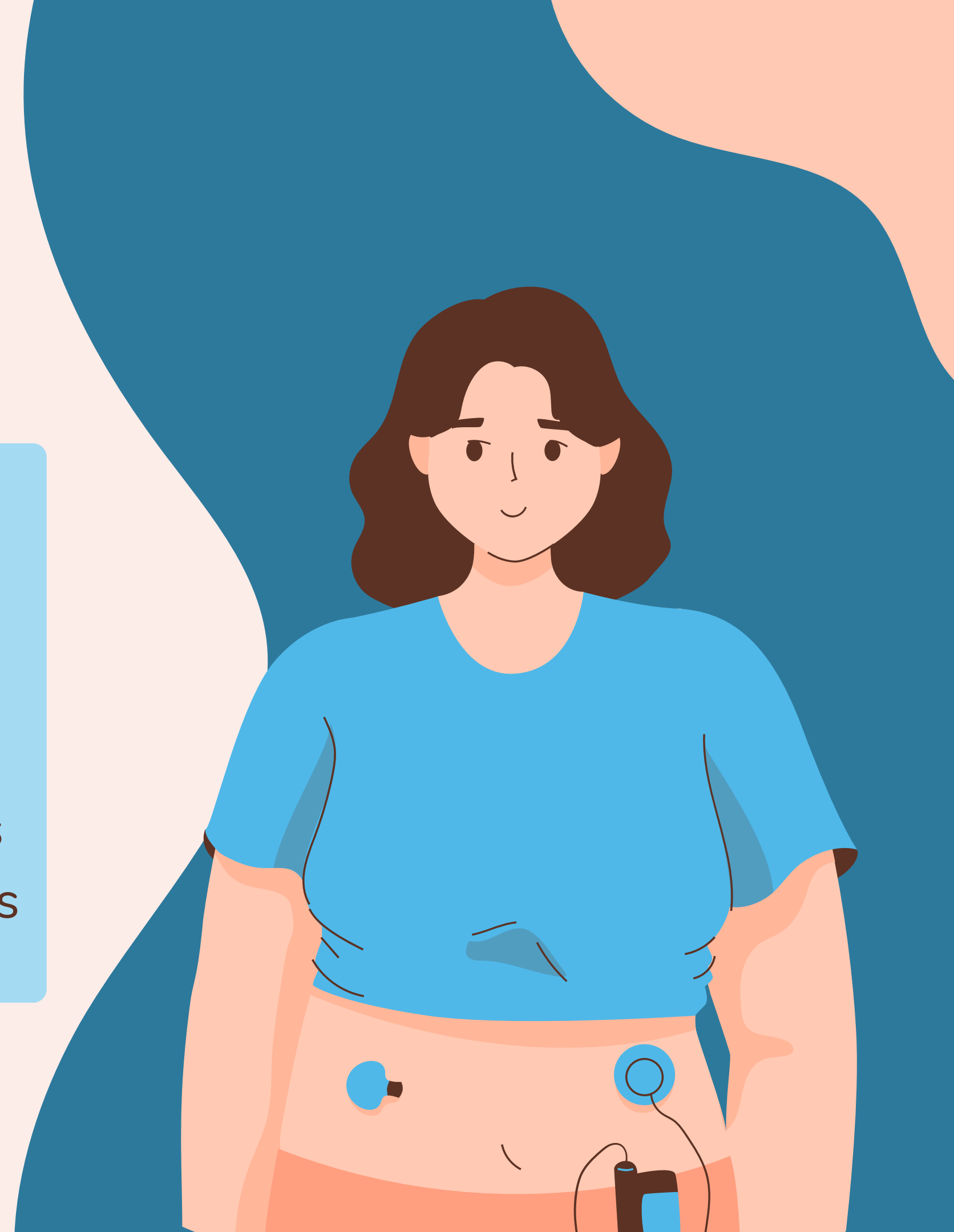
LIMITATIONS

- Many of the articles available regarding this topic are more than five years old
- Most of the data is based on self reported information

THANK YOU FOR WATCHING!

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grateful for all

REFERENCES