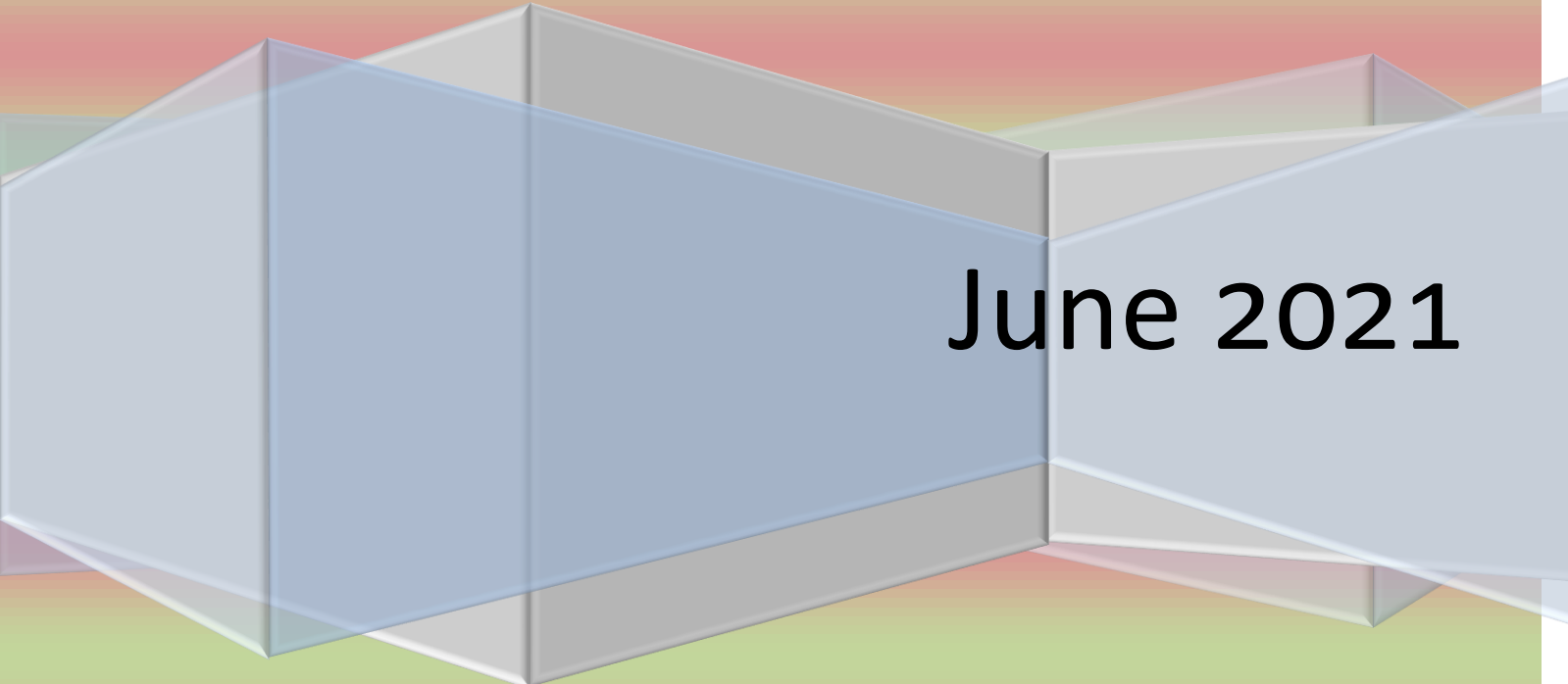


UNIVERSITY OF WALES, TRINITY SAINT DAVID, OVAL, LONDON

# INTRODUCTION TO PHYSIOLOGY

POSTER PRESENTATION STUDENT NUMBER  
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# Public Health Issue: Diabetes

## Physiology

Indicates the working of the human body based on normal condition

## Diabetes

Diabetes is a public health disease where the pancreas cannot produce sufficient insulin to the body cells. House of Parliament (2012) indicates that diabetes is as a result of the pancreas inability to release enough insulin to the cells. The insufficient insulin in human body is a serious illness and may result to the liver with plenty glucose to causes unclear vision, limb amputation, kidney failure as well as heart disease

## Types of Diabetes

Type 1 and 2 diabetes Type 1 diabetes life expectancy is 20 years, compared to people having Type 2 diabetes (Public Health England, 2014)

## Causes of Diabetes

Poverty, unemployment, high social inequality, and lack of insulin

## Acknowledgement to

Cooke & Plotmick (2008)

UK Diabetes (2016)

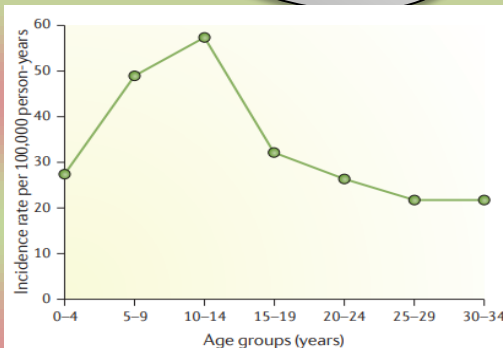
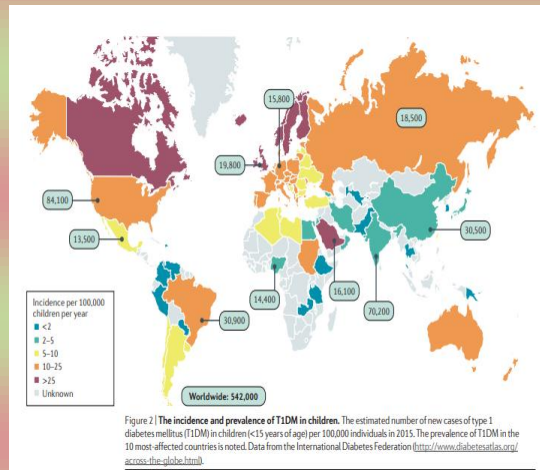


Figure 3 | Age-specific incidence rates of T1DM. The incidence rates of type 1 diabetes mellitus (T1DM) per 100,000 person-years in Sweden by age group. The graph shows the incidence of T1DM in men and women combined, and is based on data from the Prescribed Drug Register; data on insulin prescriptions were used as a proxy for T1DM diagnosis. Adapted with permission from REF. 30, Springer.

## Risk Factors of diabetes (Type 1 & 2)

- Overweight
- Storing fat in the abdomen
- Lack of physical activity
- Family history
- Blood lipid levels
- Age (40 above)
- Prediabetes
- high blood pressure,
- Heart attack or a stroke
- Women with polycystic ovary syndrome

## Intervention

- Promoting community physical activity
- Healthy dietary change program to induce a 7 percent weight loss
- Health-check programs
- Introducing food taxes as an intervention to reduce obesity/diabetes
- Design building with stair case
- Education campaign for eating behavior

Table 1. Risk of Developing Type 1 Diabetes for Individuals Who Have an Affected Relative

| Sibling             | Risk |
|---------------------|------|
| Overall             | 6%   |
| Identical twin      | <50% |
| HLA identical       | 15%  |
| HLA haploidentical  | 6%   |
| HLA nonidentical    | 1%   |
| Offspring           | Risk |
| Overall             | 5%   |
| Father who has IDDM | 6%   |
| Mother who has IDDM | 2%   |

HLA=human leukocyte antigen, IDDM=insulin-dependent diabetes mellitus

## References

- Cooke & Plotmick (2008) Type 1 Diabetes: Melitus in Pediatrics, American Academy of Pediatrics
- House of Parliament (2012) Preventing Diabetes, Post Note, No. 415
- Katsarou et al. (2017) Type 1 Diabetes Mellitus, Primer, Vol. 3, (17): p 1-17