The aims of this project are
- Provide a clear and easy knowledge to the population about what are the vitamins and how they perform in the metabolism
- Show the amount that we need and why and from which foods we can get it
- Explain the consequence of a deficit

Vitamins in metabolism

- **Thiamine (B1)**
  - Coenzyme: thiamine pyrophosphate (TPP)
  - Deficiency: Beriberi

- **Riboflavin (B2)**
  - Coenzyme: Flavin adenine dinucleotide (FAD) and Flavin mononucleotide (FMN)
  - Deficiency: Ariboflavinosis

- **Niacin (B3)**
  - Coenzyme: nicotinamide adenine dinucleotide (NAD) and nicotinamide adenine dinucleotide phosphate (NADP)
  - Deficiency: Pellagra

- **Pantothenic acid (B5)**
  - Component of CoA enzyme
  - Deficiency: Unusual. Headaches and loss of vision

- **Pyridoxine (B6)**
  - Coenzyme: pyridoxal 5’-phosphate
  - Deficiency: Neurological problems and inflammation

- **Biotin (B7)**
  - Coenzyme of carboxylases
  - Deficiency: Unusual. Hair loss and rashes

- **Cobalamin (B12)**
  - Cofactor of enzyme methionine synthase and L-methylmalonyl-CoA mutase
  - Deficiency: Atrophic gastritis and pernicious anemia

Background

- **Vitamins**
  - **Liposoluble**
  - **Hydrosoluble**: vitamins of complex B and C. Are involved in metabolism as coenzymes.

- **Metabolism**
  - It involves chemical reactions that take place in the organism to extract energy, synthesize proteins, carbohydrates and fats.
  - **Catabolism**
  - **Anabolism**

Coenzymes

- It required for the action of some enzymes in the metabolism.

Take home message

- Vitamins are vital for appropriate functioning of our body.
- Deficits will be unlikely, except for cases of poor nutritional habits.