

Dr. P. Rayas

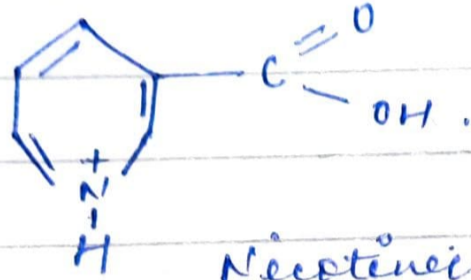
NICOTINIC ACID OR NIACIN (B₃)
(Pellagra-Preventing, PP, factor of Goldberger).

B.Sc (H) 2000
Jan - II
Sept - IV

Pellagra was recognized as early 1735, by GASPARD CASAL, Physician to Phillip V of Spain. The identification of nicotinic acid as the responsible factor was made by ELVENTEM, WOOLLEY, and their associates in 1937.

— CHEMISTRY :-

Nicotinic acid or Niacin is Pyridine-3-carboxylic acid. It's amide is Nicotinamide.



— SOURCES :-

Niacin is found most abundantly in yeast. Lean meats, liver and poultry are good sources. Milk, tomatoes, Canned Salmon, and several leafy green vegetables contribute sufficient amounts of the vitamin to prevent disease. Body can synthesise this vitamin from the amino acid tryptophan.

— FUNCTIONS :-

It is convertible into nicotinamide and thus functions metabolically as a component of the 2 co-enzymes: Nicotinamide adenine dinucleotide (NAD) and nicotinamide adenine dinucleotide phosphate (NADP). These coenzymes which operate as hydrogen & electron transfer agents by virtue of reversible oxidation and reduction, play a vital role in metabolism, leading to the formation of ATP in the electron transport system (ETS).

— DEFICIENCY :-

Pellagra was established as a deficiency disease by Goldberger. The disease is symptomized by three D's namely diarrhoea, dermatitis of those areas which are exposed to sunlight, and dementia, due to disturbances of the central nervous system. Stomatitis and glossitis are also associated with other symptoms. Alcohol also causes deficiency of this vitamin and is an important precipitating factor of the disease.