

# The Change-Over To Insulin U-100

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Insulin was first used in the treatment of diabetic keto-acidosis in a diabetic patient in January 1922. Since then, especially in the last ten years, remarkable progress has been made in the types of Insulin and their mode of administration to the patient. One advance has been the change-over to Insulin U-100 strength which has already taken place in the UK, USA, Canada, Australia and New Zealand and is now being introduced in Malta as from August 1988.

Insulin strengths previously available included:

Insulin U-20 i.e. 20U insulin/ml

Insulin U-40 i.e. 40U insulin/ml

Insulin U-80 i.e. 80U insulin/ml.

Insulin strengths that are currently used are Insulin U-100, and in cases of Insulin resistance, Insulin U-500 or U-5000.

Considering Insulin U-100 further, one must first note that Insulin U-100 is not a new type of Insulin. It is merely a more concentrated form with each ml containing a larger number of units of Insulin i.e. 100U per ml as compared to the other Insulin strengths previously in use namely the Insulin U-40 and U-80. Yet one unit of Insulin U-100 is equivalent to one unit of U-40 and one unit of U-80. Thus Insulin U-100 allows one to inject a smaller volume of Insulin to obtain the same dosage of Insulin and same effect on blood glucose; generally speaking, the smaller the volume of Insulin injected, the lesser the discomfort at the injection site. In addition, the use of only one strength of Insulin allows standardization of Insulin treatment minimizing the risk of dosage errors as may have previously occurred with the availability of Insulin of varying strengths, e.g. using U-80 Insulin instead of U-40 possibly leading to hypoglycaemia or

using U-40 Insulin instead of U-80 leading to hyperglycaemia.

Furthermore with Insulin U-100, one measures the dose of Insulin required directly in units of Insulin as opposed to previous methods of measuring Insulin in cc or ml which resulted in greater variation of dosage especially if different strengths of Insulin were used.

Insulin U-100 is administered in U-100 syringes only. These are available in 0.5 ml (50U) or 1ml (100U) sizes. They have minimal dead space allowing accurate measurement of low doses and less wastage of Insulin. They are disposable, plastic syringe — needle units packaged to preserve sterility. Although disposable, they can safely be used up to 6 times on the same patient and then discarded.

It is envisaged that by March 1989 the change over will be completed. A national campaign was organised to make sure that all interested

individuals be properly informed about Insulin U-100. Lectures and meetings with medical and paramedical staff were held to inform them of the proposed change. Programmes were also transmitted on the radio and television media. Two leaflets — “Getting Started with U-100 Insulin” by Better Diabetes Care and “Changing to Novo U-100 Insulin” by Novo, the latter in English and Maltese, were distributed to all medical doctors and diabetic patients on Insulin treatment. In addition, diabetic patients on Insulin received individual explanations on U-100 Insulin and mode of delivery with U-100 syringes from the staff at the Diabetic Clinic, SLH. An expert from Novo was brought over to Malta to advise on the process.

Summarising, the changeover to Insulin U-100 has made Insulin injections more simple, more safe and more comfortable for the Insulin-dependent diabetic patients.

