

THE COTTER MEDICAL HISTORY MUSEUM



Why Do We Weigh Things?

The oldest recovered weighing scales were in use in Egypt between 2613 and 2494 B.C. Wooden beam balances probably pre-dated these artifacts but were not preserved. The Egyptian balances were usually made of bronze or lead and were used to determine the weight of an object relative to a known standard, a measure essential for the progress of commerce and fair trading. During the era of the Roman Republic and Empire (509 – 476 B.C.), a complex universal system of weights was developed. The impact of this is apparent in this recently restored box of weights dating from the 1950's.

One Roman 'scruple' = 20 grams.

One Roman 'grain' = The weight of a plump, dry grain of barley or wheat.

One Roman 'uncia' (ounce) = 1/12 of another unit, the pound.

Apothecary is an archaic term for a medical professional who formulated, created and dispensed medicines to physicians and surgeons (analogous to the modern pharmacist or chemist). The profession dates to at least 2000 B.C., but in Europe it was not until the 15th century that apothecaries were officially recognised as skilled practitioners.

The weights used by apothecaries were originally based on a modified version of the system used in the precious metal industries. That was abolished by the United Kingdom's 1858 Medicines Act and replaced by the Avoirdupois system. In the United States, adoption of the modern and universally accepted metric system did not occur until 1971. In New Zealand, pharmacists continued to use the apothecary system until the 'Weights and Measure Amendment Act 1976' made the metric system the method by which we measure length, volume and weight.

The need for a universally recognised, standard system for determining the weight of an object is highlighted by the following:

In 19th century Italy, Spain and Portugal the values of 'standard' weights varied considerably – 1 pound in Venice = 301.2 grams, while in the Kingdom of Spain it was set at 345.1 grams.