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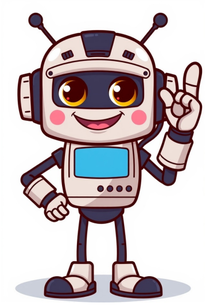

The apothecary system, a historical unit of measurement used in pharmacy and medicine, was once widely employed in the US before being replaced by the metric system. Despite its obsolescence, it remains essential for pharmacists to comprehend the apothecary system, particularly when handling old medical records. The Grain: A Fundamental Unit of Measurement The grain is the primary unit of measurement in the apothecary system, weighing approximately 64.8 milligrams and denoted by the symbol "gr." Other units, such as the scruple (20 grains), dram (3 scruples or 60 grains), ounce (8 drams or 480 grains), and pound (12 ounces or 5,760 grains), are also used. Apothecary Scales and Measurement Apothecary scales featured a unique design with a base, pillar, and beam, where weights were placed in one pan and the substance to be measured in the other. The beam was balanced when equilibrium was reached, indicating the precise measurement. These scales were often made of brass and came in various sizes. Acronyms and Abbreviations The apothecary system employed a distinct set of acronyms to denote dosage and potency. For example, "gr. j" represented one grain, while "3ss" stood for three scruples, with "ss" equivalent to 30 grains and derived from the Latin word "semis," meaning half. The Metric System Takes Over Although the apothecary system provided more precise measurements than the metric system, some pharmacists continue to use it for mixing medications. As a result, the grain remained a vital unit of measurement in pharmacy and medicine. Preservation and Continued Use The apothecary system, despite being largely replaced by the metric system, is still necessary for understanding old medical records and continues to be employed in some pharmacies for compounding medications. The Fraction System The apothecary system is also referred to as the fraction system, where parts of units are expressed using fractions. However, this system can be confusing due to its unusual notations. Elimination of Apothecary Measures There has been a recent trend to eliminate apothecary measures from use and adopt the metric system instead. The Institute for Safe Medication Practices (ISMP) recommends that all medications be prescribed and calculated with metric measures.The use of apothecary measures is becoming increasingly obsolete with the widespread adoption of the metric system. Although minim scales are still present on some syringes and medication cups, their use has been discouraged due to inaccuracies. In contrast, newer syringe designs do not include these scales. It is essential that those involved in medication administration be familiar with apothecary measures when they are necessary, as understanding the information on medication labels and orders directly impacts safety. The text focuses on common apothecary measures and their metric equivalents but emphasizes the need to convert them for accuracy. Apothecary notations differ significantly from metric notations, with conversions being approximations that require caution. When ordering medications with apothecary measures, it is crucial to convert them to metric measures using an equivalency table or reference guide. Given the potential risks associated with apothecary measures, it is wise to double-check references whenever uncommon measurements are used. ==========Using scruples to measure medicine was a common practice among apothecaries but it led to many issues due to various measurements being used. There were different units like teaspoons, wineglassfuls, and even dessertspoonfuls that could vary greatly in measurement between houses and people. Apothecary tools such as weights and balances were well made however the use of oils from apothecaries hands on the scales made them prone to errors if not handled properly and hence they used tweezers for weighing. The system was mainly based on brass, lead, aluminum or copper with different shapes like cylinders or geometric wire figures that showed their weight in grains.