

# AMA Manual of Style

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## SI Units

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The International System of Units (Le Système International d'Unités or SI) represents a modified version of the metric system that has been established by international agreement and currently is the official measurement system of most nations of the world. The SI promotes uniformity of quantities and units, minimizes the number of units and multiples used in other measurement systems, and can express virtually any measurement in science, medicine, industry, and commerce. In 1977, the World Health Organization recommended the adoption of the SI by the international scientific community. Since then, many biomedical publications throughout the world have adopted SI units

## Base Units

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The SI is based on 7 fundamental units (base units) that refer to 7 basic quantities of measurement (see the tabulation below). These units form the structure from which other measurement quantities are composed. Although not included among the 7 base units, the liter is widely used in the SI as a fundamental measure of capacity or volume. The liter is the recommended unit for measurement of volume for liquids and gases, whereas the cubic meter is the SI unit of volume for solids. Although the kelvin is the SI unit for thermodynamic temperature, the degree Celsius is used with

## Derived Units

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Other SI measurement quantities are referred to as derived units and are expressed as products or quotients of the 7 base units. Certain derived SI units have special names and

symbols and may be used in algebraic relationships to express other derived units. See the following tabulation. |

## Prefixes

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Prefixes are combined with base units and derived units to form multiples of SI units. The factors designated by prefixes are powers of 10, and most prefixes involve exponents that are simple multiples of 3, thereby facilitating conversion procedures using successive multiplications by  $10^3$  or  $10^{-3}$ . Compound prefixes formed by the combination of 2 or more SI prefixes generally are not used. It is preferable to use an expression with a single prefix. The kilogram is the only SI base unit with a prefix as part of its name and symbol (kg). However, because compound prefixes are not recommended, prefixes