

# Nutritional Elements

## Trace Elements (microelements)

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



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# Nutritional Elements

H																		He
Li	Be											B	C	N	O	F		Ne
Na	Mg											Al	Si	P	S	Cl		Ar
K	Ca	Sc	Ti	V	Cr	Mn	Fe	Co	Ni	Cu	Zn	Ga	Ge	As	Se	Br		Kr
Rb	Sr	Y	Zr	Nb	Mo	Tc	Ru	Rh	Pd	Ag	Cd	In	Sn	Sb	Te	I		Xe
Cs	Ba	*	Lu	Hf	Ta	W	Re	Os	Ir	Pt	Au	Hg	Tl	Pb	Bi	Po	At	Rn
Fr	Ra	**	Lr	Rf	Db	Sg	Bh	Hs	Mt	Ds	Rg	Cn	Nh	Fl	Mc	Lv	Ts	Og

\* La Ce Pr Nd Pm Sm Eu Gd Tb Dy Ho Er Tm Yb

\*\* Ac Th Pa U Np Pu Am Cm Bk Cf Es Fm Md No

-  The four basic organic elements
-  Quantity elements
-  Essential trace elements
-  Deemed essential trace element by U.S., not by European Union
-  Suggested function from deprivation effects or active metabolic handling, but no clearly-identified biochemical function in humans
-  Limited circumstantial evidence for trace benefits or biological action in mammals
-  No evidence for biological action in mammals, but essential in some lower organisms.

(In the case of lanthanum, the definition of an essential nutrient as being indispensable and irreplaceable is not completely applicable due to the extreme similarity of the [lanthanides](#). The stable early lanthanides up to Sm are known to stimulate the growth of various lanthanide-using organisms.)<sup>[15]</sup>

Dietary element	RDA/AI Male/Female (US) [mg]	UL (US and EU) [mg]	Category
<u>Potassium</u>	4700	NE; NE	A systemic <u>electrolyte</u>
<u>Sodium</u>	1500	2300; NE	A systemic electrolyte
<u>Chlorine</u>	2300	3600; NE	Needed for production of hydrochloric Acid in the stomach and in cellular pump functions

Dietary element	RDA/AI Male/Female (US) [mg]	UL (US and EU) [mg]	Category
<u>Calcium</u>	1000	2500; 2500	Needed for muscle, heart and digestive system health, builds bone (see <u>hydroxyapatite</u> ), supports synthesis and function of blood cells, helps in blood clotting

Dietary element	RDA/AI Male/Female (US) [mg]	UL (US and EU) [mg]	Category
<u>Copper</u>	0.9	10; 5	Required co-factor for <u>cytochrome c oxidase</u>
<u>Iron</u>	8/18	45; NE	Required for many proteins and enzymes, notably <u>hemoglobin</u> to prevent <u>anemia</u>
<u>Zinc</u>	11/8	40; 25	Required for several classes of enzymes such as <u>matrix metalloproteinases</u> , <u>liver alcohol dehydrogenase</u> , <u>carbonic anhydrase</u> and <u>zinc finger proteins</u>

Dietary element	RDA/AI Male/Female (US) [mg]	UL (US and EU) [mg]	Category
<u>Phosphorus</u>	700	4000; 4000	A component of bones (see <u>hydroxyapatite</u> ), cells, in energy processing, in DNA and ATP (as phosphate) and many other functions
<u>Cobalt</u>	none	NE; NE	Vitamin B12

<b>Dietary element</b>	<b>RDA/AI Male/Female (US) [mg]</b>	<b>UL (US and EU) [mg]</b>	<b>Category</b>
<u>Iodine</u>	0.150	1.1; 0.6	Required for the synthesis of <u>thyroid hormones</u>
<u>Magnesium</u>	420/320	350; 250	Required for processing <u>ATP</u> and for bones

Dietary element	RDA/AI Male/Female (US) [mg]	UL (US and EU) [mg]	Category
<u>Selenium</u>	0.055	0.4; 0.3	Essential to activity of <u>antioxidant</u> enzymes like <u>glutathione peroxidase</u>

Dietary element	RDA/AI Male/Female (US) [mg]	UL (US and EU) [mg]	Category
<u>Chromium</u>	0.035/0.025	NE; NE	Involved in glucose and lipid metabolism, although its mechanisms of action in the body and the amounts needed for optimal health are not well-defined

<u>Manganese</u>	2.3/1.8	11; NE	Required co-factor for <u>superoxide</u> <u>dismutase</u>
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Dietary element	RDA/AI Male/Female (US) [mg]	UL (US and EU) [mg]	Category
<u>Molybdenum</u>	0.045	2; 0.6	Required for the functioning of <u>xanthine oxidase</u> , <u>aldehyde oxidase</u> , <u>sulfite oxidase</u>

برای مطالعه بیشتر به سایت دز آزما مراجعه فرمایید:

[www.dezazma.com](http://www.dezazma.com)



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