

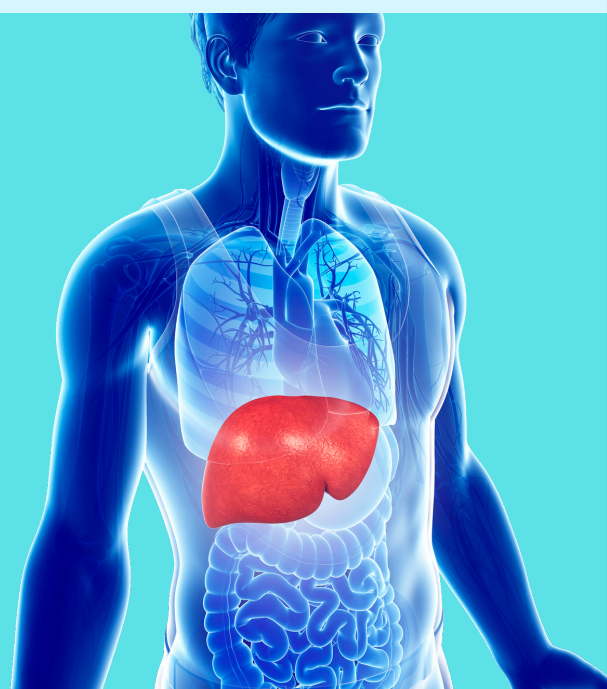
FAT-SOLUBLE VITAMINS



Fat-soluble vitamins
are **not**
dissolved in the body

are **not**
excreted through urine

Our bodies
store them
here (**liver**).



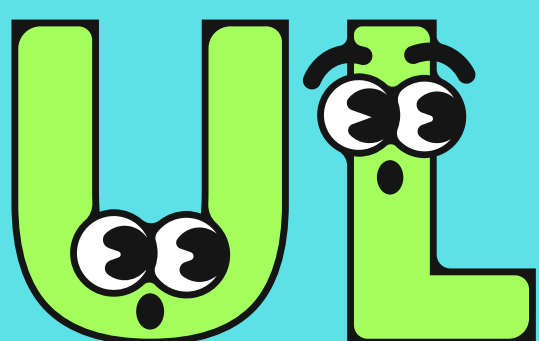
And here
(**fat tissue**).

Then we access
the vitamins
when **needed**.



They help our
bodies function
& stay **healthy**.

But consuming too many can make us **sick** or damage our bodies.

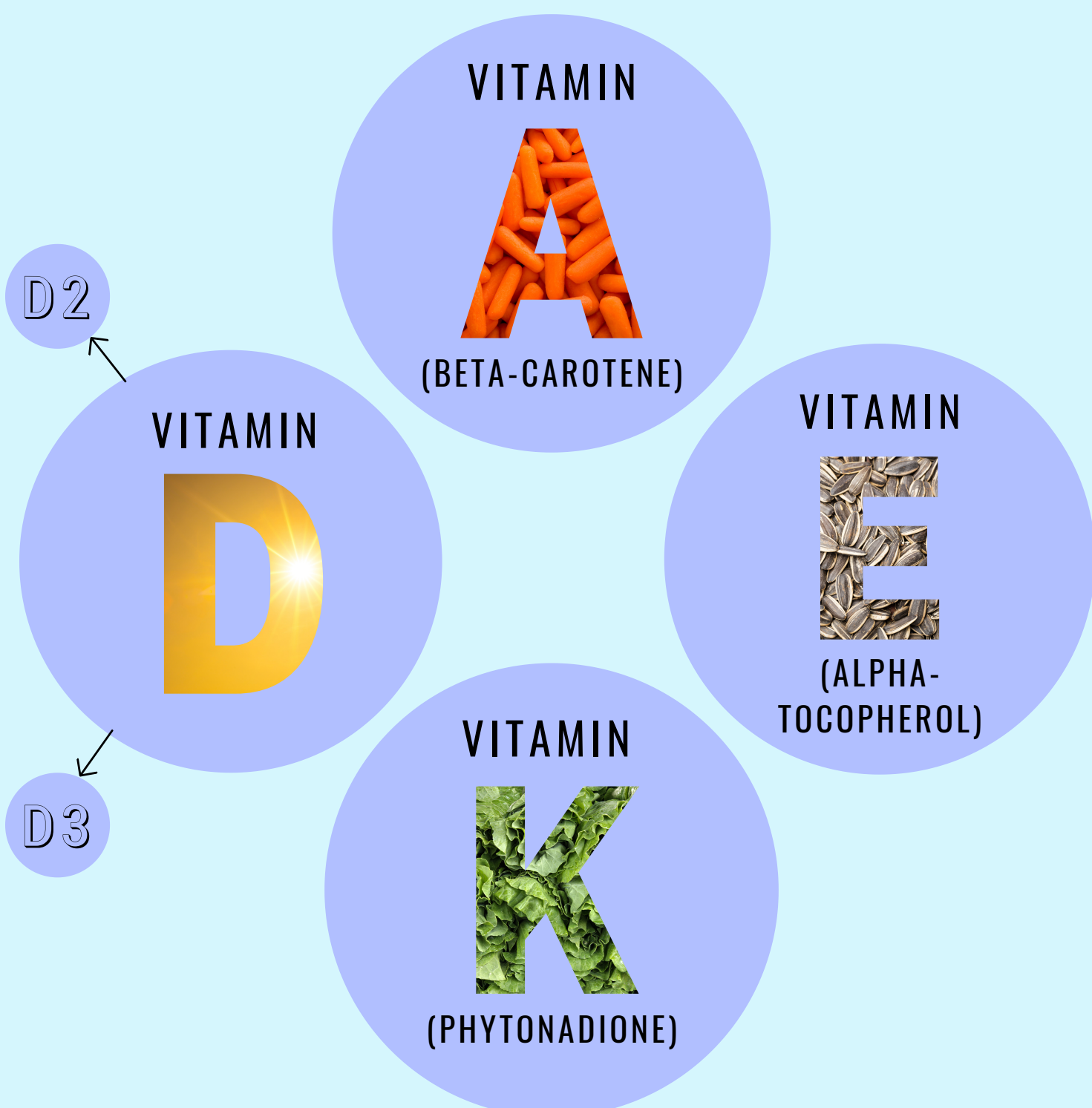


The Tolerable Upper Intake Level (**UL**) of a nutrient is the maximum amount we should consume in a day.

Try to consume fat-soluble vitamins in quantities **below** the UL to stay healthy.



THERE ARE 4 FAT-SOLUBLE VITAMINS: A, D, E, AND K



VITAMIN



(BETA-CAROTENE)

- HELPS WITH VISION & EYE HEALTH
- PROMOTES HEALTHY SKIN
- SUPPORTS BONE & TOOTH GROWTH
- MAINTAINS HEALTHY IMMUNE SYSTEM

Recommended daily intake: 700-900 mcg*

UL: 3,000 mcg



1 cup
cantaloupe
299 mcg



1 cooked cup
carrots
1,329 mcg



1 cooked cup
sweet potato
1,096 mcg



1 cooked cup
butternut squash
1,144 mcg



1 cooked cup
bell peppers
198 mcg



1 cup pink
grapefruit
133 mcg



1 cooked cup
spinach
943 mcg



1 cooked cup
broccoli
120 mcg



1 cup
lettuce
205 mcg

*When nutrients are needed in small amounts, you will often see them measured in micrograms (mcg) instead of milligrams (mg).

1 mcg = 1,000 mg

VITAMIN

D

D2

(ergocalciferol)

comes from food

D3

(cholecalciferol)

comes from sun

- HELPS BODY ABSORB CALCIUM
- SUPPORTS BONE HEALTH
- REDUCES/CONTROLS INFLAMMATION
- SUPPORTS IMMUNE SYSTEM
- HELPS WITH MUSCLE FUNCTION
- SUPPORTS BRAIN CELL ACTIVITY

Recommended daily intake: 10-20 mcg

UL: 100 mcg

If you live in a sunny place, the best way to get vitamin D is through skin exposure to the sun's UVB rays.

Expose skin to direct sunlight for 10-30 minutes a few days per week (that's it!)

- If you wear sunscreen during this time, make sure **SPF ≤ 30**
- Do this **outdoors** (the sun's UVB rays cannot penetrate windows)
- Lighter skin tones generally need ≈10-15 minutes
- Darker skin tones generally need ≈15-30 minutes

What if it's winter and the sun disappears?
What if you live in a non-sunny place year-round?
What if you stay indoors?

No worries, you can consume vitamin D through supplements and **fortified foods**.



Vitamin D supplement
≈ 20 - 125* mcg



1 cup fortified non-dairy milk
(almond, soy, flax, rice, etc.)
≈ 3 mcg



1 cup fortified cereal
≈ 3 mcg

*Many vitamin D supplements have 125+ mcg. The UL for vitamin D is 100 mcg. Overconsumption of fat-soluble vitamins can be toxic to your body. Taking "Extra Strength" supplements is not recommended unless instructed to do so by your doctor.

If you choose to take a vitamin D supplement, try to find one with ≤ 20 mcg.

VITAMIN



(PHYTONADIONE)

- PLAYS KEY ROLE IN BLOOD CLOTTING
- PREVENTS EXCESSIVE BLEEDING

Recommended Daily intake: 90-120 mcg

UL: N/A

**(Vitamin K has low potential for toxicity,
so a UL has not been established)**



1 cooked cup
spinach
544 mcg



1 cooked cup
brussels sprouts
219 mcg



1 cooked cup
broccoli
220 mcg



1 cooked cup
asparagus
91 mcg



1 cooked cup
cabbage
163 mcg



1 cooked cup
string beans
60 mcg

VITAMIN



(ALPHA- TOCOPHEROL)

- SUPPORTS BRAIN, EYE, & HEART HEALTH
- SUPPORTS IMMUNE SYSTEM
- FUNCTIONS AS AN ANTIOXIDANT

Recommended Daily intake: 15 mg

UL: 1,000 mg



1 cooked cup
broccoli
2.3 mg



1oz handful
sunflower seeds
7.4 mg



1 cooked cup
spinach
3.7 mg



1oz handful
almonds
7.3 mg



1 avocado
4.2 mg



1 cooked cup
butternut squash
2.6 mg