

Vitamins

How to prevent vitamin loss

The amount of vitamins in a meal depends on:

- The amount found naturally in the food used.
- Factors such as temperature, light, oxygen, acid and alkali affect the stability of vitamins.

Stability

Vitamin	Acid (low pH)	Alkali (high pH)	Heat (>70 °C)	Light	O ₂
C	●	●	●	●	●
B ₆	●	●	●	●	●
Folic acid	●	●	●	●	●
A	●	●	●	●	●
D	●	●	●	●	●
E	●	●	●	●	●

● no effect ● sensitive ● very sensitive

Vitamin loss by different cooking methods

Cooking methods	Vitamin loss in % (C, B ₁ , B ₂ , B ₆)
Boiling	35–60
Poaching	Less than boiling
Steaming	10–25
Pressure cooking	5–10
Microwave cooking	5–25
Roasting	10–47
Stewing/Braising	10–12
Grilling	10–12
Baking	10–12
Frying	7–10



Tips to prevent vitamin loss during:

Purchasing and storing

- Use regional vegetables and fruits whenever possible → vitamins are lost during transportation
- Keep vegetables and fruits covered and refrigerated during storage to prevent rapid vitamin loss → exception: sweet potatoes, winter squash and vegetables which are sensitive to low temperature
- Do not store fresh fruits and vegetables too long → guide time: fruits: 4–5 days, vegetables/salads: 2–3 days
- Store high-quality vegetable oil in a dark place to prevent oxidation
- Store milk in an opaque cardboard container

Preparing

- Wash vegetables (and fruits) under running water whole and before peeling
- Cutting vegetables into large pieces prevents vitamin loss
- Cover fruits and vegetables immediately after cutting them up to prevent vitamin loss through light and air
- Prepare food rich in folic acid (e.g. green leafy vegetables, broccoli, corn) very carefully – folic acid is extremely sensitive to heat and light

Processing/cooking

- The best cooking methods to prevent vitamin loss in vegetables are steaming, stewing/braising and pressure cooking
- Do not heat high-quality vegetable oil too high
- Braise, bake, or broil meat instead of frying
- Cook with the lid on
- Use the cooking liquid whenever possible
- Cook for the shortest possible time
- Cook until just tender, not mushy
- Cooked vegetables should be quickly heated to 70 °C (158 °F) to destroy enzymes which threaten the vitamins
- The quick defrosting of fruits and vegetables decreases vitamin loss
- Serve immediately → keeping food warm causes vitamin loss
- If you use frozen vegetables:
 - Don't thaw them before cooking
 - Heat the water first, then add the vegetables
 - If you use them for cold dishes, cook them thoroughly beforehand
 - Use the microwave for heating them
- If you use canned vegetables:
 - Use the juice to cook the vegetables
 - Never boil canned vegetables
 - Use the microwave for heating them
 - Avoid excessive stirring while warming them up