



SPEED PROJECT

Sport & Prevention of Emerging Eating Disorders

Micronutrients, bone health, and immunity

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Micronutrients really matter

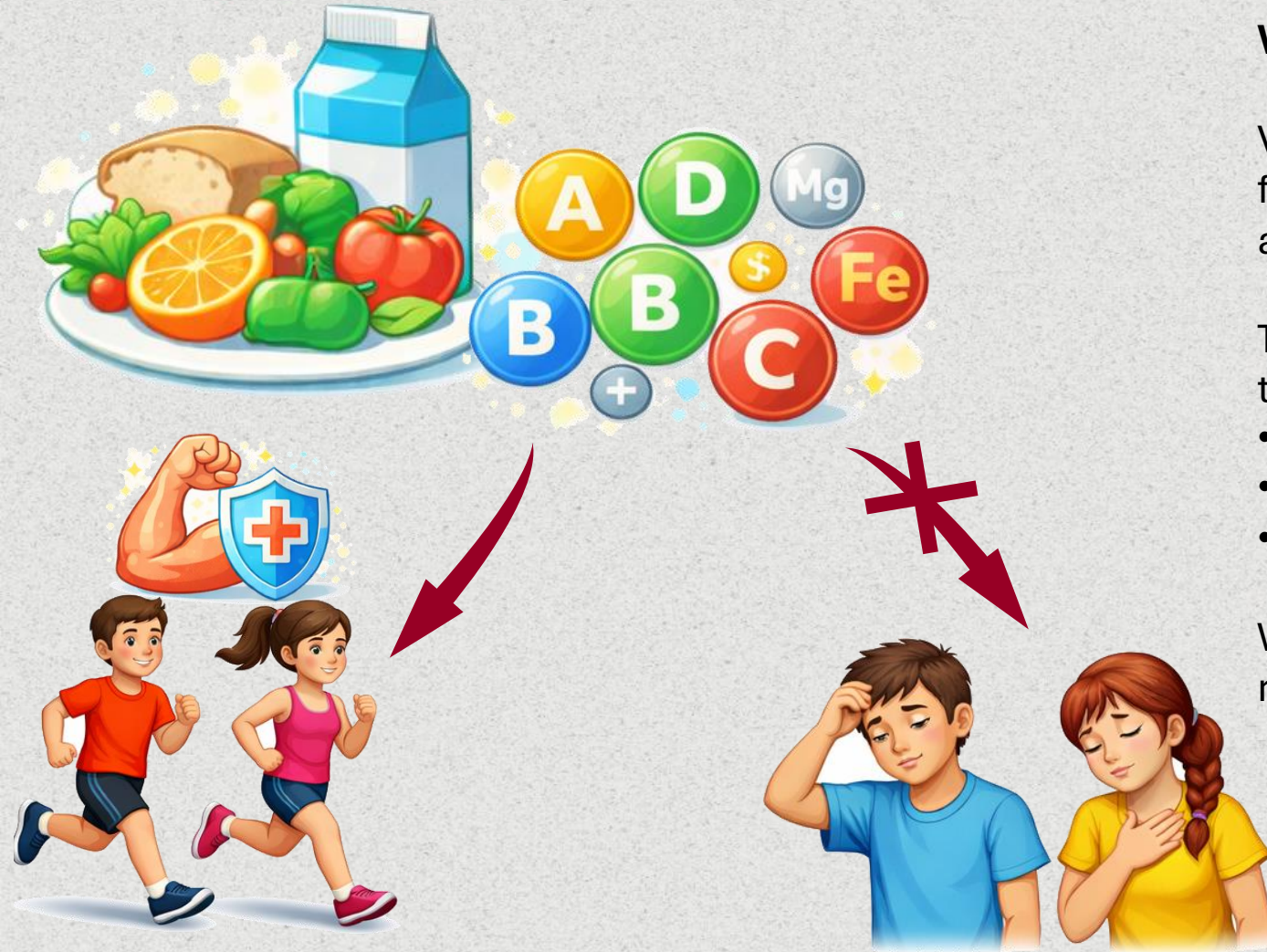
What micronutrients do:

Vitamins and minerals work silently, underpinning fundamental processes for an adolescent's growth and performance.

They do not provide energy directly, but allow the body to:

- Use energy from macronutrients
- Build and repair tissues
- Maintain an effective immune system

Without them, an athlete may train well but fail to recover — or eat enough but not grow as they should.



Bone health: calcium and vitamin D



Calcium and vitamin D:

Adolescence is when most bone mass is built. Two key 'building blocks' are needed:

Calcium sources:

- Water, milk, yogurt, cheese, almonds, leafy greens

Vitamin D:

- Depends largely on sun exposure — often insufficient in winter or for those indoors many hours

A diet too restrictive or unbalanced can cause effects not visible immediately, but apparent as training loads increase.

Iron and energy: when fatigue is not just “tiredness”



Iron: oxygen for the muscles

Iron allows blood to carry oxygen to muscles. Without oxygen, no performance is possible.

Signals of low iron — especially in girls:

- Persistent fatigue despite rest
- Shortness of breath during exertion
- Difficulty maintaining pace and concentration
- Pallor, frequent feelings of weakness

Sources:

- Meat, fish, eggs, legumes — vary regularly
- Observe changes in performance and consult a doctor if needed

Vitamins and antioxidants: the role of fruit and vegetables



B-vitamins, vitamin C, and antioxidants:

B-group vitamins and vitamin C activate the reactions that convert food into energy. Antioxidants in fruit and vegetables protect muscles from intense training stress.

Why it matters:

- Many adolescents consume little fruit and few vegetables out of habit or time constraints
- This leads to a less efficient immune system and slower recovery between sessions

Simple daily steps:

- A piece of fruit at snack time
- A portion of vegetables at main meals
- Aim for 5 portions of fruit and vegetables per day

Ensuring adequate intake without overcomplicating daily life



The key: variety, not control

A varied diet almost always covers micronutrient requirements. Supplements should not be the first solution — consult a doctor or nutritionist if in doubt.

Small daily actions that build a complete diet:

- Alternate different cereals
- Eat fruit of different colours
- Include vegetables at more moments of the day
- Choose legumes once or twice a week
- Complement animal proteins with plant-based ones

The coach's role: observe, support, educate

Observe, support, educate:

A coach does not need to know every vitamin, but must understand when something 'does not add up'.

Watch for these signs:

- Frequent tiredness on arrival at training
- Poor recovery between sessions
- Frequent illness or recurring pain

The true goal: help young athletes understand that food is not just for filling up, but for making a growing, training body function well.

