

HALEON

**Supporting patient
health and wellness
with dietary
supplements**

Brought to you by the experts at
Haleon, makers of **Centrum**®

Start



Pre-module survey

Before starting the module, we would like to understand how you would assess your current level of practice:

1

How would you rate your knowledge of the role of micronutrients in supporting your patients' health?

- Very poor
- Poor
- Average
- Good
- Very good

2

How would you rate your confidence in identifying signs of nutrient deficiency, such as increased fatigue and/or frequent infections?

- Not at all confident
- Not very confident
- Somewhat confident
- Confident
- Very confident

3

How comfortable are you in assessing and counselling patients who are asking about nutrition deficiencies?

- Not at all comfortable
- Not very comfortable
- Neutral
- Comfortable
- Very comfortable

4

How would you rate your confidence in recommending an appropriate dietary supplement to patients, based on their health concerns?

- Not at all confident
- Not very confident
- Somewhat confident
- Confident
- Very confident

Continue >

Introduction

Adequate nutrient intake is necessary to support overall health and optimal functioning.¹ Although most patients try to eat a balanced diet, it can be difficult to meet the daily vitamin and mineral requirements. Unfortunately, nutritional gaps in your patients' diet can lead to suboptimal health.²

With **only 1 in 10 Americans receiving adequate nutrients on a daily basis³**, Healthcare professionals have a critical role in bridging nutritional gaps. Pharmacists, registered dietitians and physicians can help patients identify micronutrient gaps, establish strategies to optimize dietary intake, and recommend appropriate multivitamins that fit the patient's needs.

This module will explore the role of nutrition and nutrition supplementation for the maintenance of good patient health.

Continue >



Nutrition is critical in supporting patient health

Obtaining an adequate level of nutrients is necessary for physical development, maintenance of normal body function, and good health.⁴

Essential Nutrients = Essential for Health

- ▶ Cell and tissue function⁵
- ▶ Metabolism, growth, and development⁶
- ▶ Immune function⁵
- ▶ Cognitive function⁶
- ▶ Bone health⁶
- ▶ Vision⁵

Did you know?

Nutritional gaps in your patients' diet can lead to suboptimal health.²

Continue >



**Nutrients can
be classified as
macronutrients
and micronutrients**

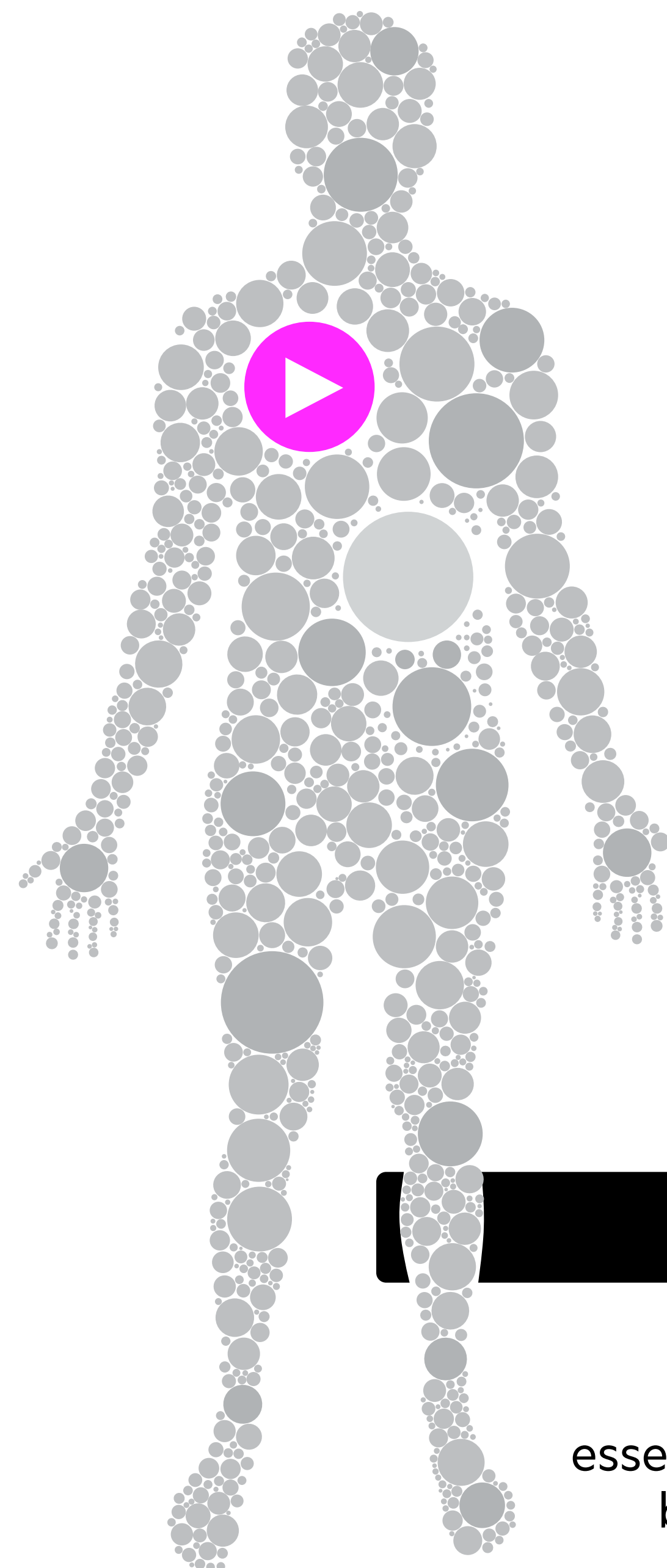
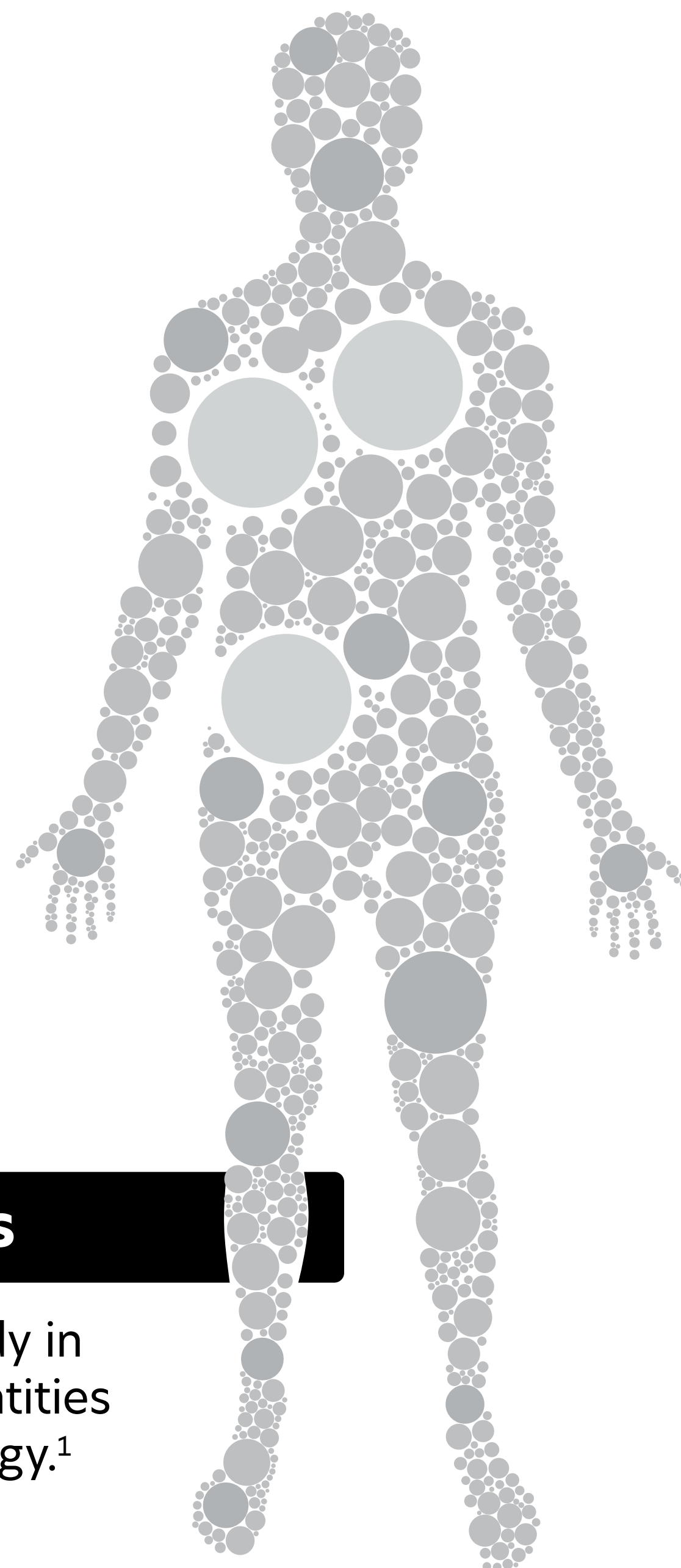


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Nutrients can be classified as macronutrients and micronutrients

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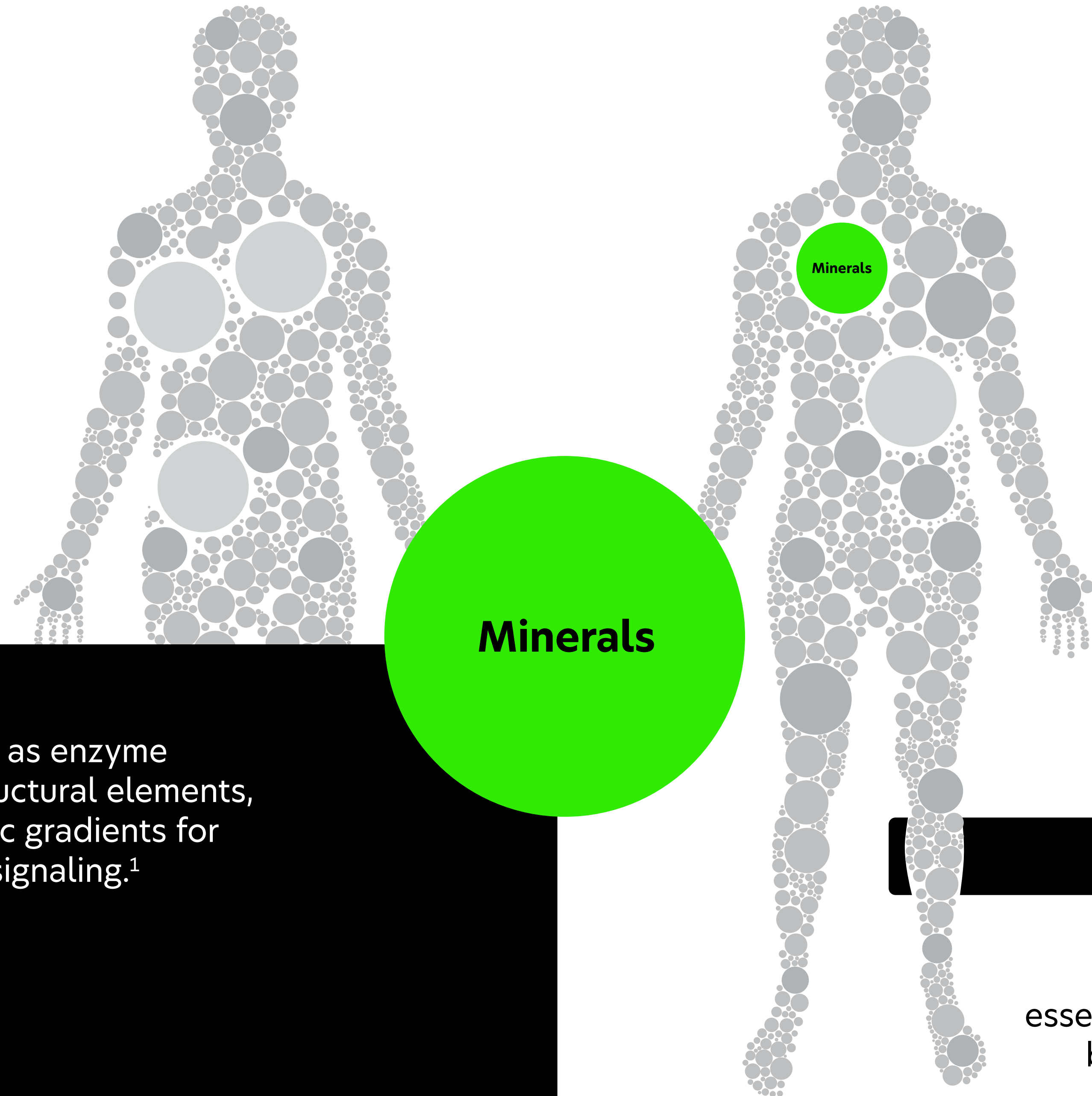
Macronutrients

Required by the body in relatively large quantities for growth and energy.¹

Micronutrients

Required by the body in small amounts for essential physiological and biochemical reactions.¹

Nutrients can be classified as macronutrients and micronutrients



Minerals

Minerals

Minerals play critical roles as enzyme catalysts, antioxidants, structural elements, and in maintenance of ionic gradients for transportation and nerve signaling.¹

Micronutrients

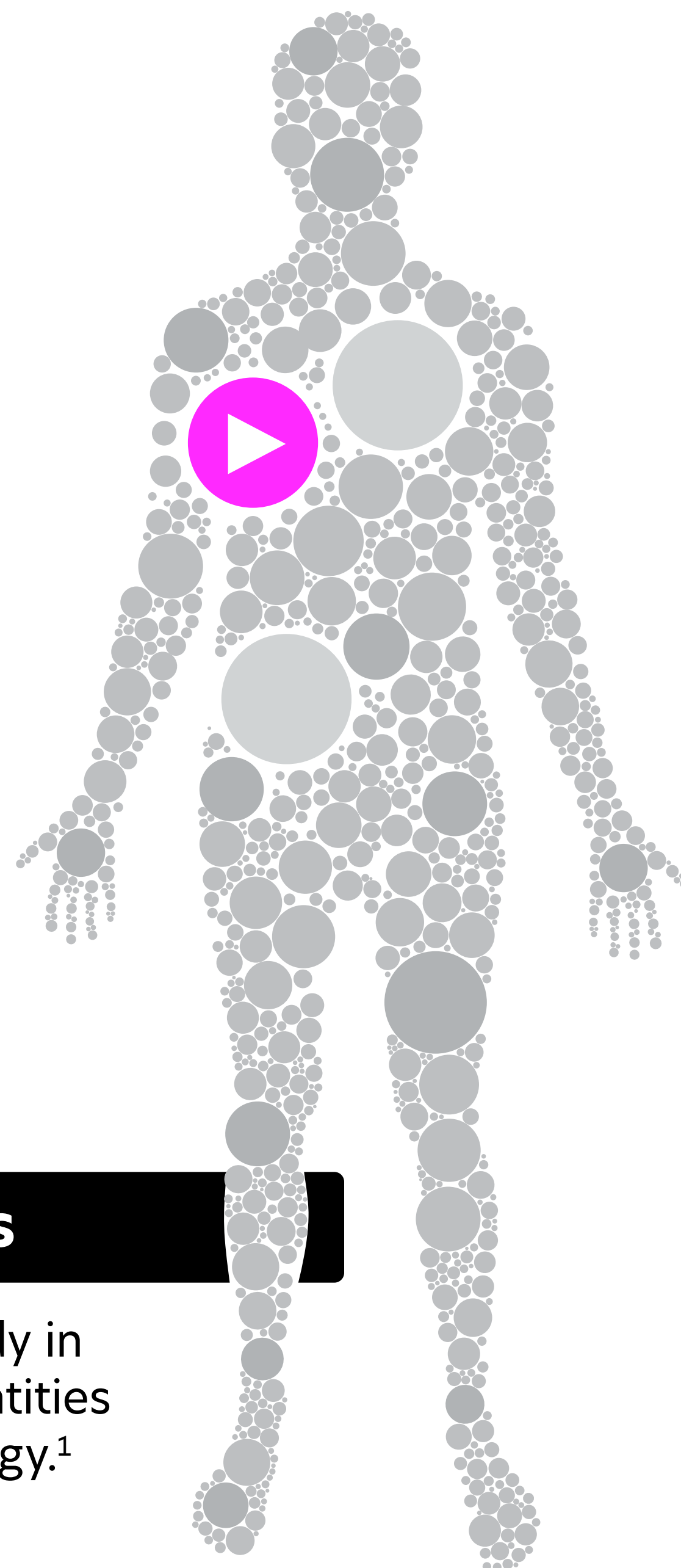
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Next



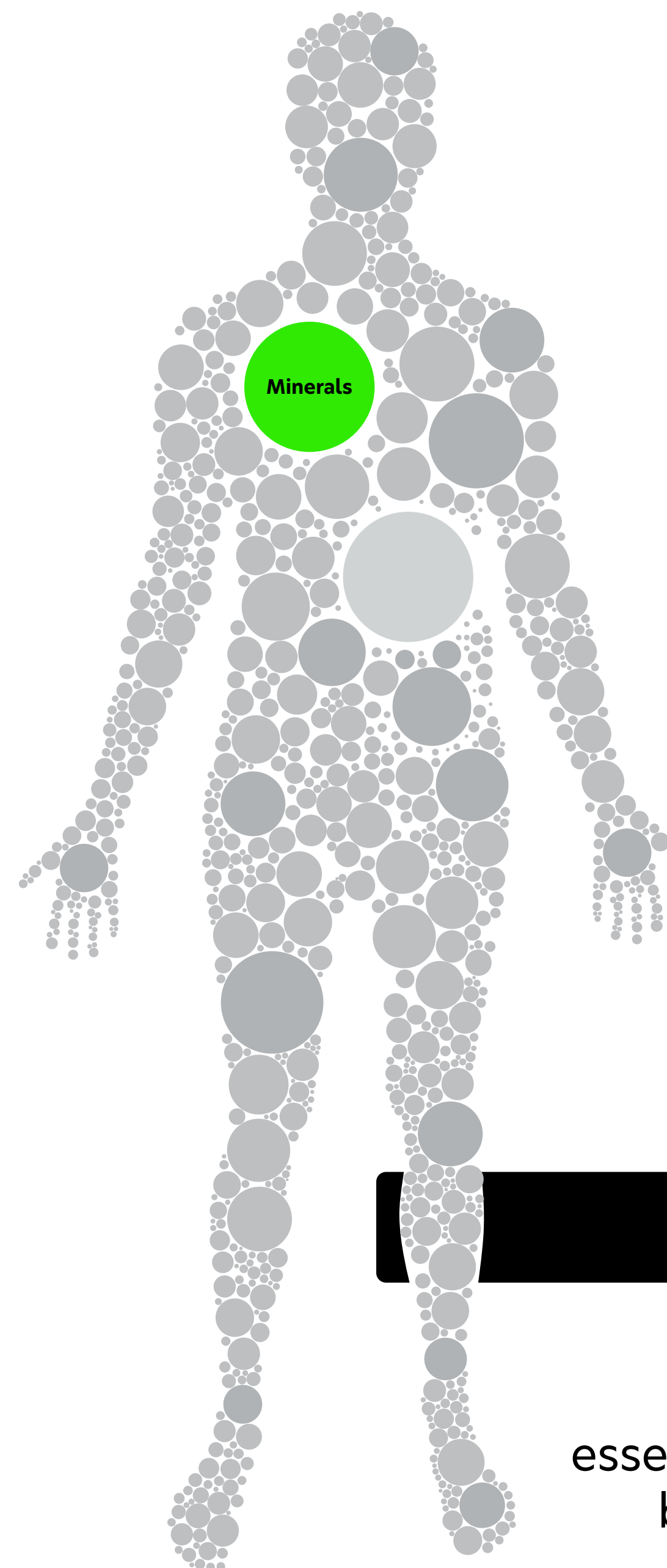
Nutrients can be classified as macronutrients and micronutrients

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Macronutrients

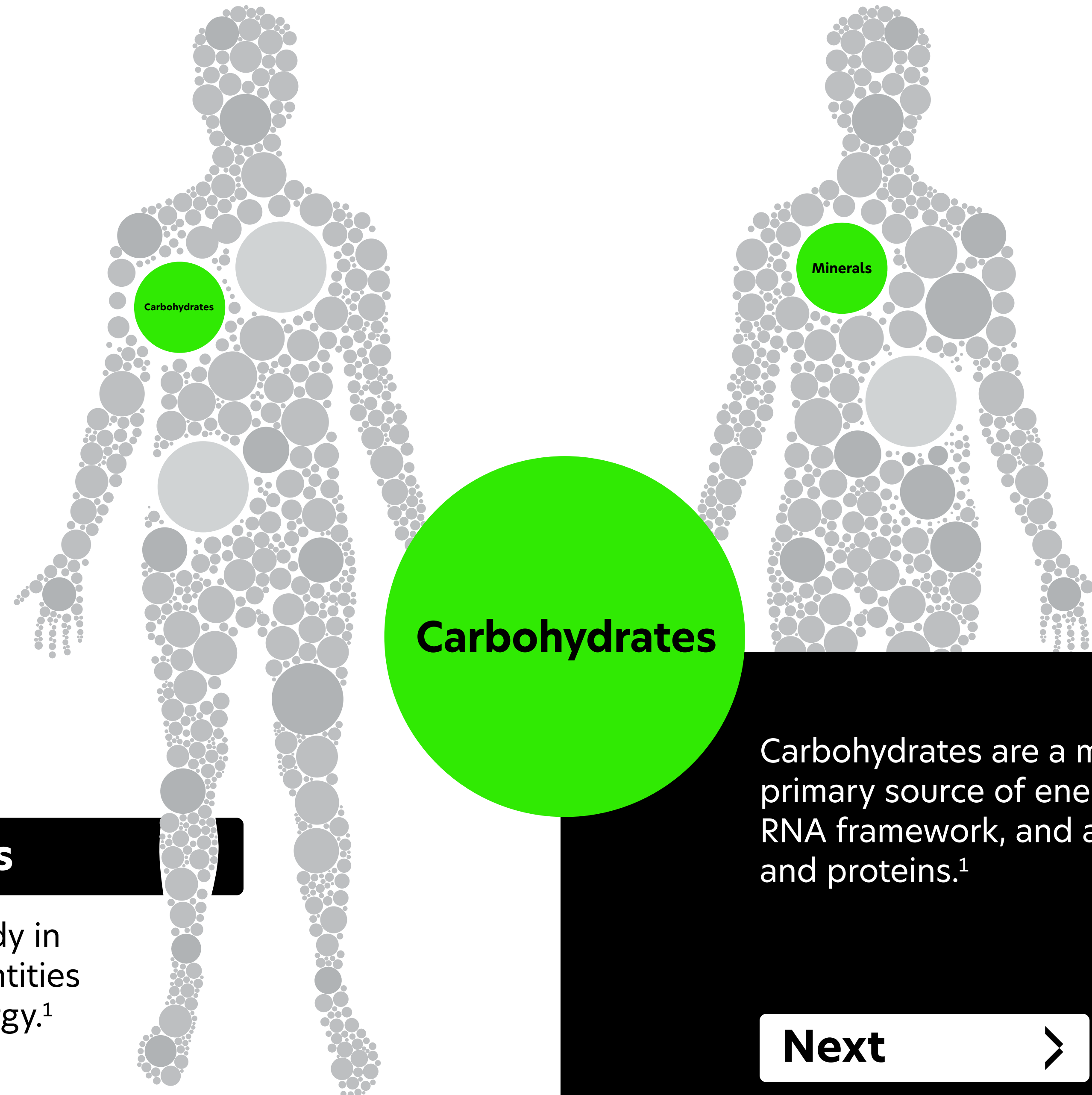
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Macronutrients

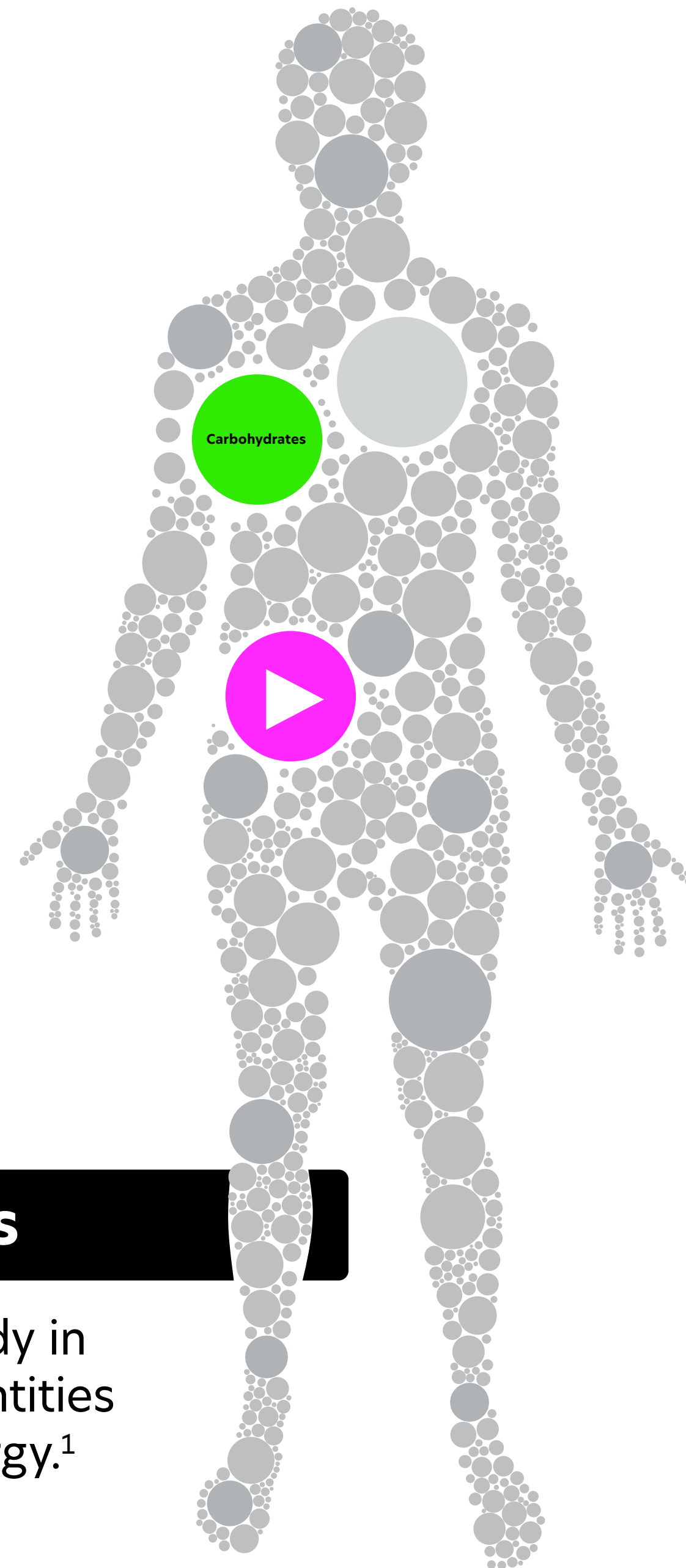
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Carbohydrates are a macronutrient. They are a primary source of energy, part of the DNA and RNA framework, and are linked to many fats and proteins.¹

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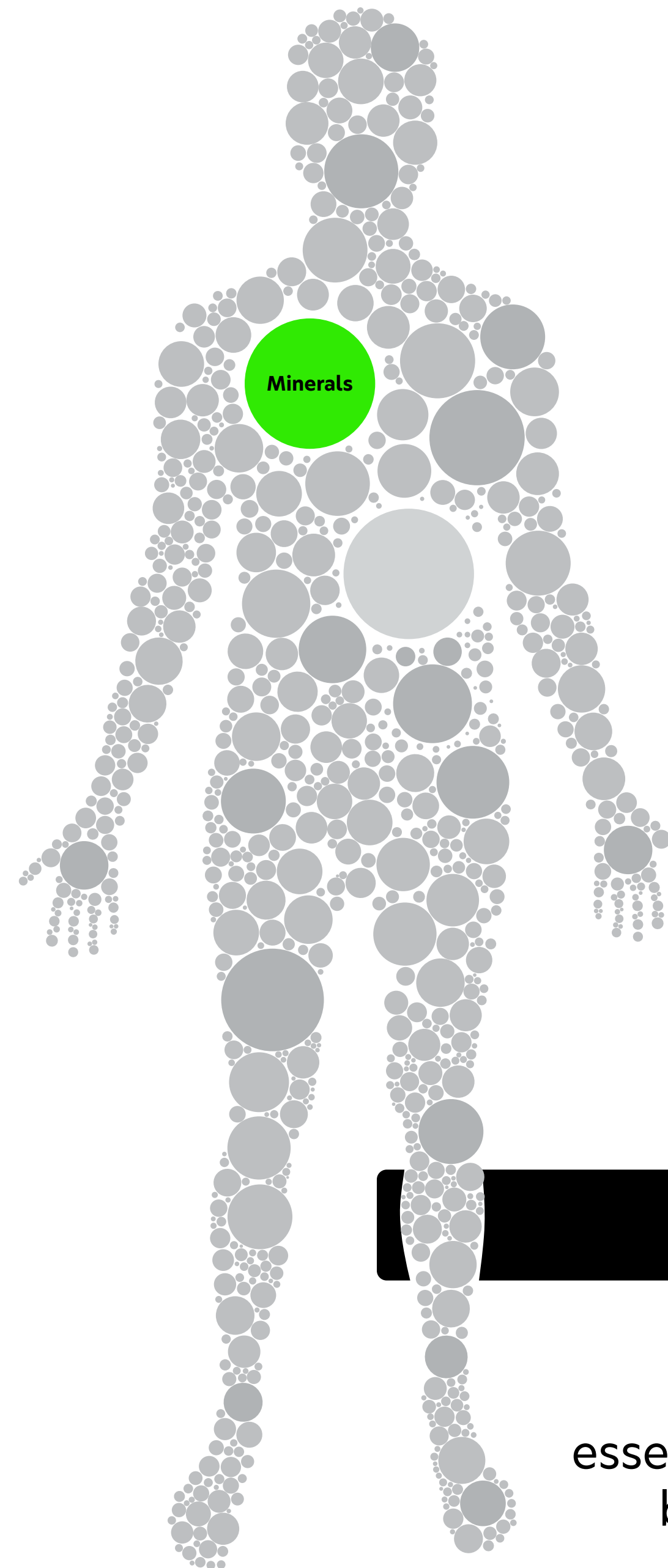
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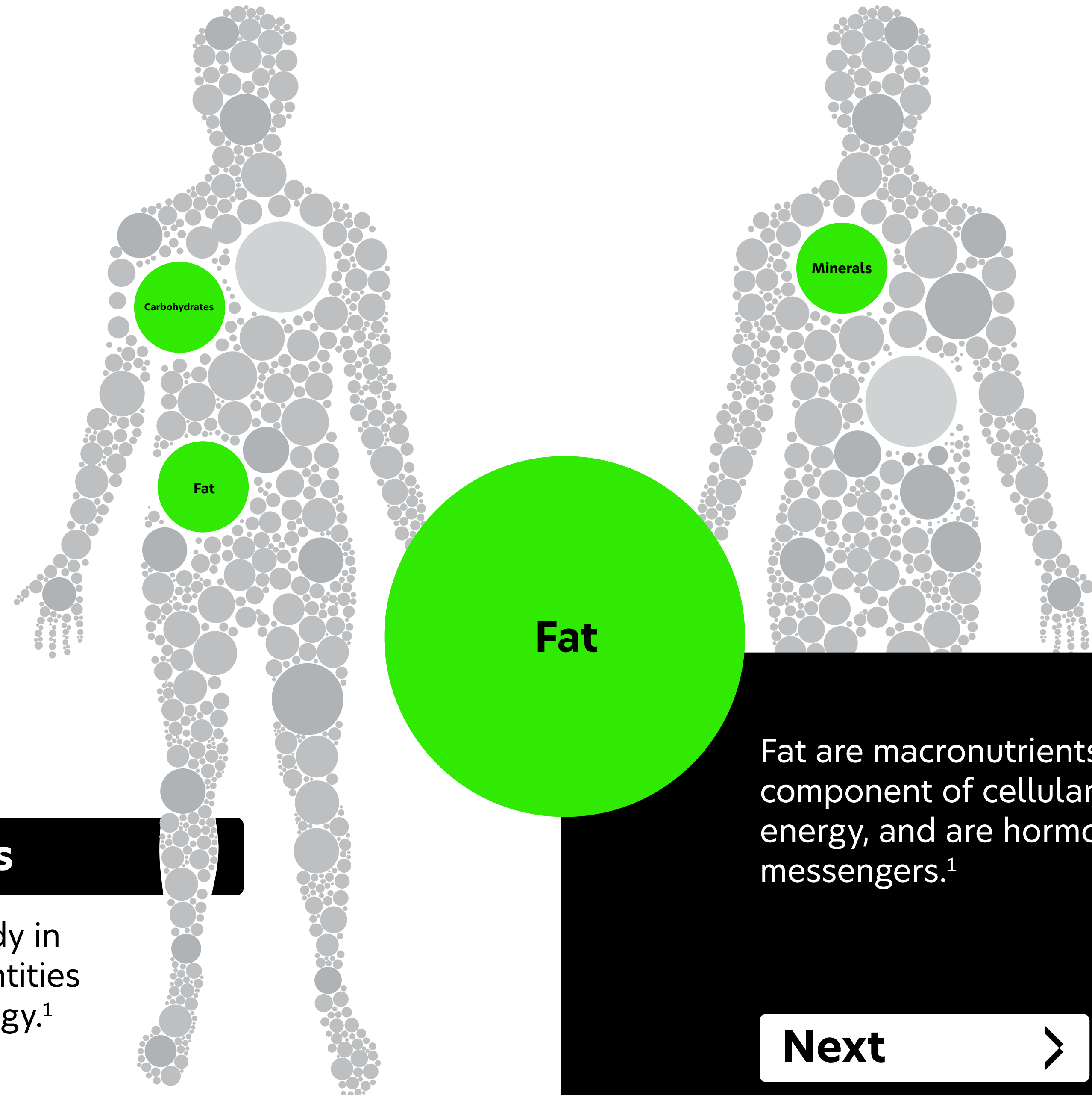
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Nutrients can be classified as macronutrients and micronutrients



Macronutrients

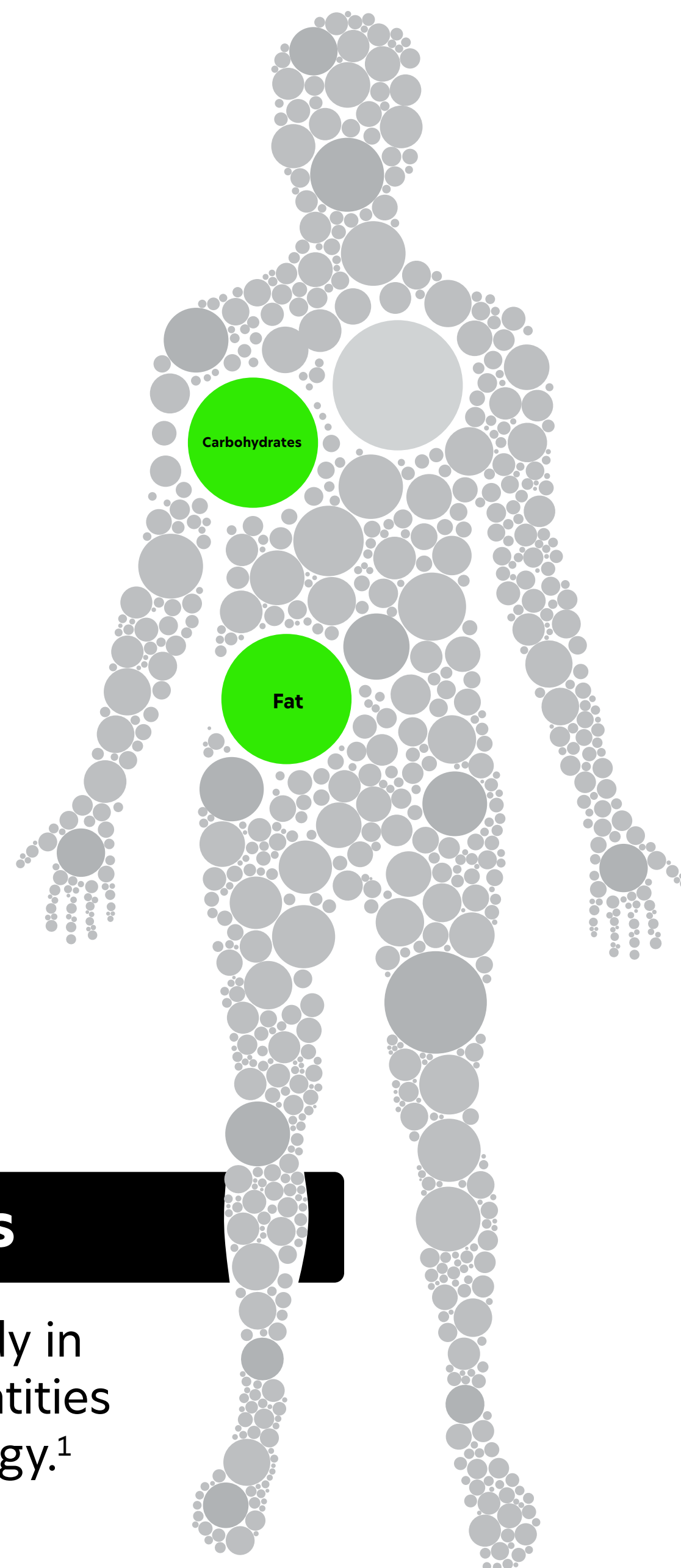
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Fat are macronutrients. They are structural component of cellular membranes, source of energy, and are hormones and intracellular messengers.¹

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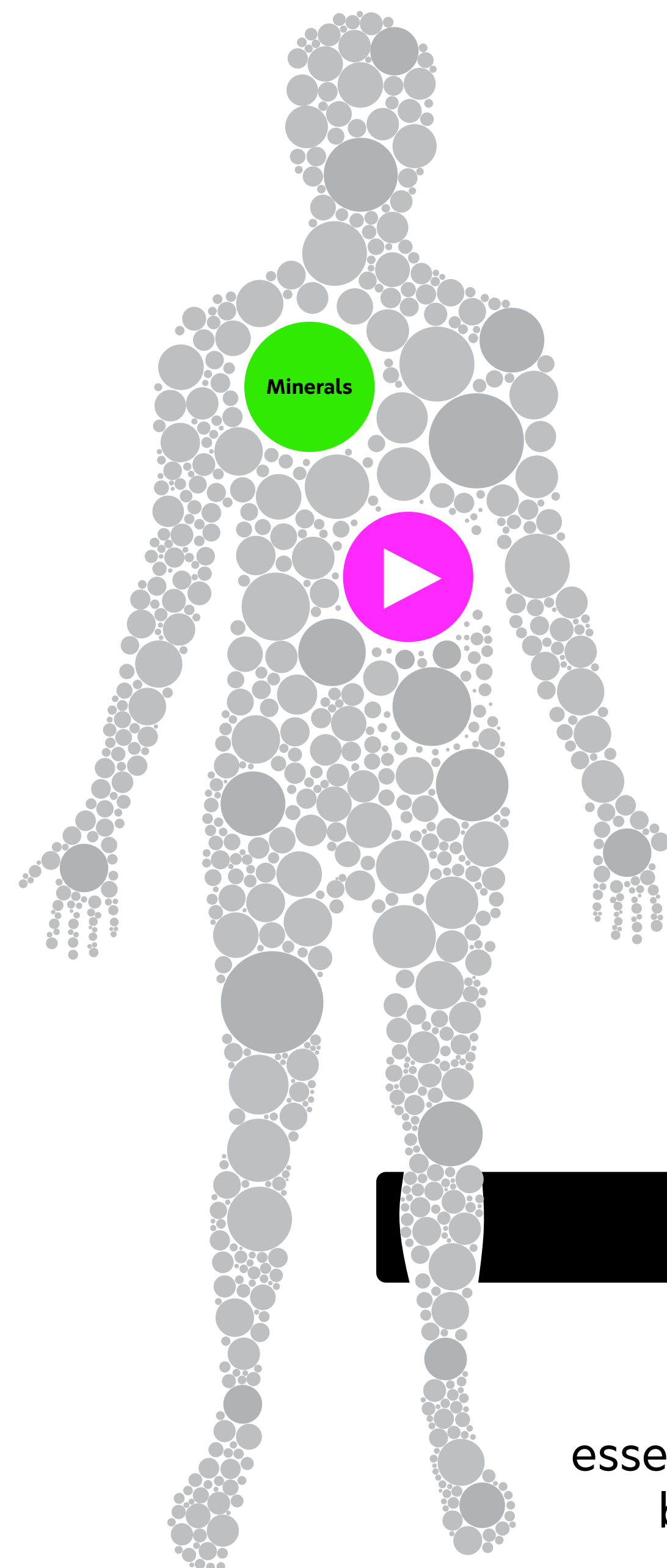
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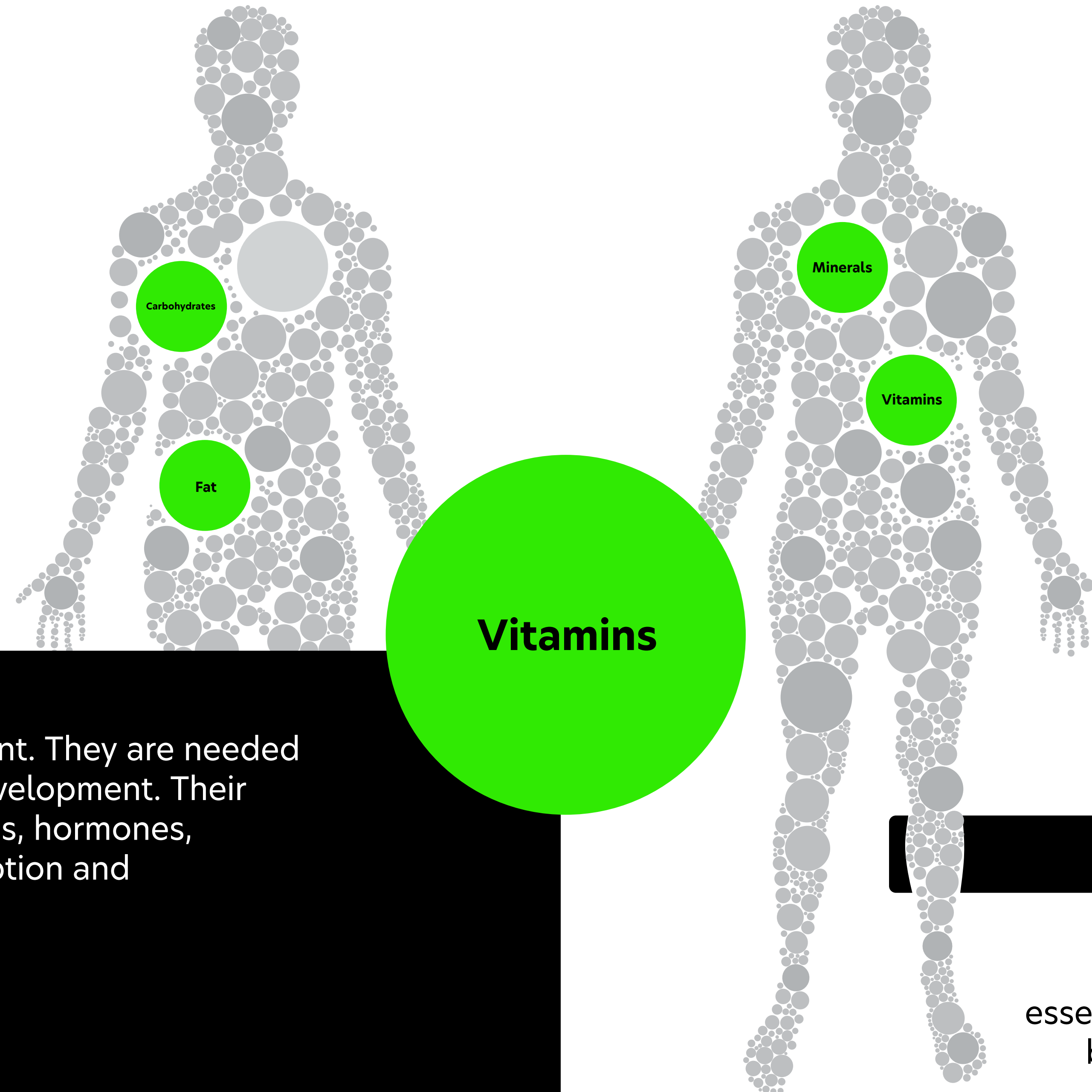
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Micronutrients

Required by the body in small amounts for essential physiological and biochemical reactions.¹

Nutrients can be classified as macronutrients and micronutrients



Vitamins are a micronutrient. They are needed for normal growth and development. Their roles include as coenzymes, hormones, antioxidants and in absorption and transportation.¹

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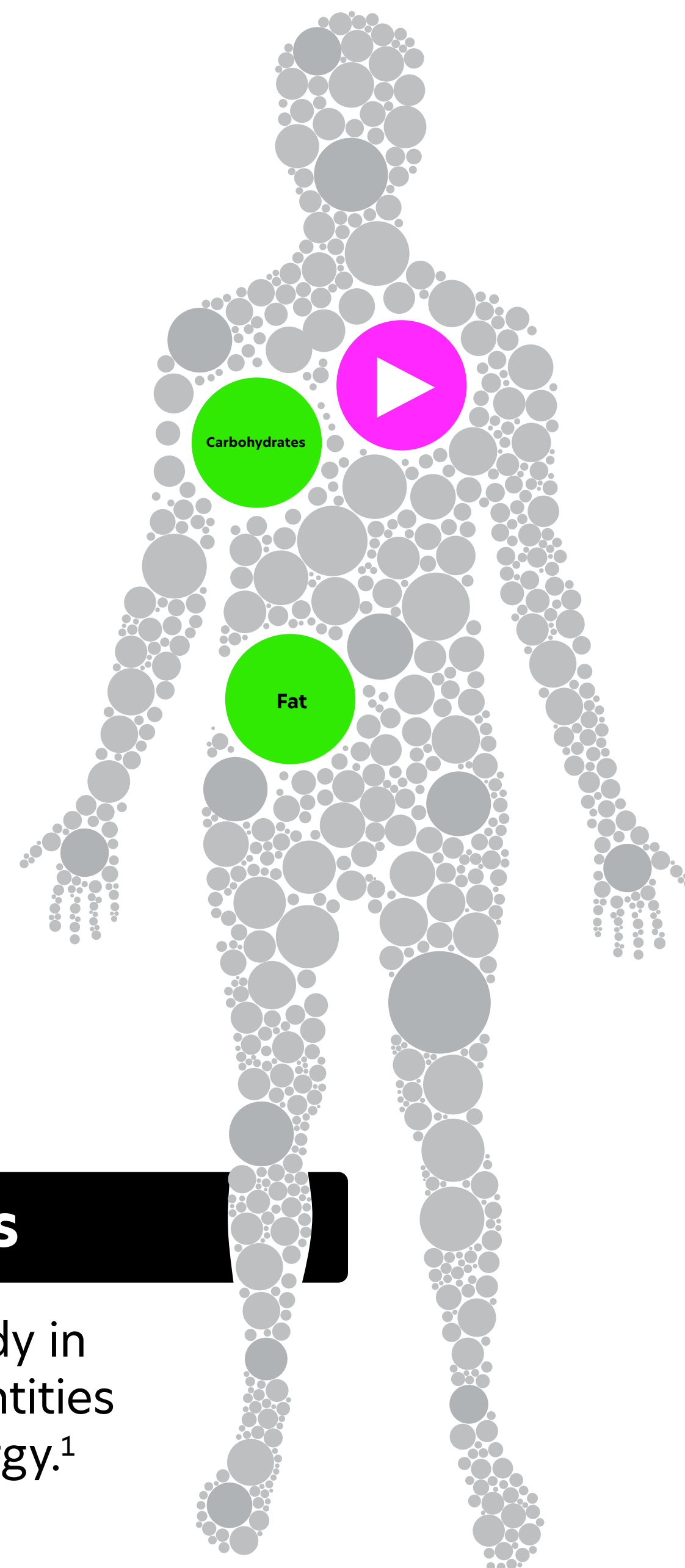


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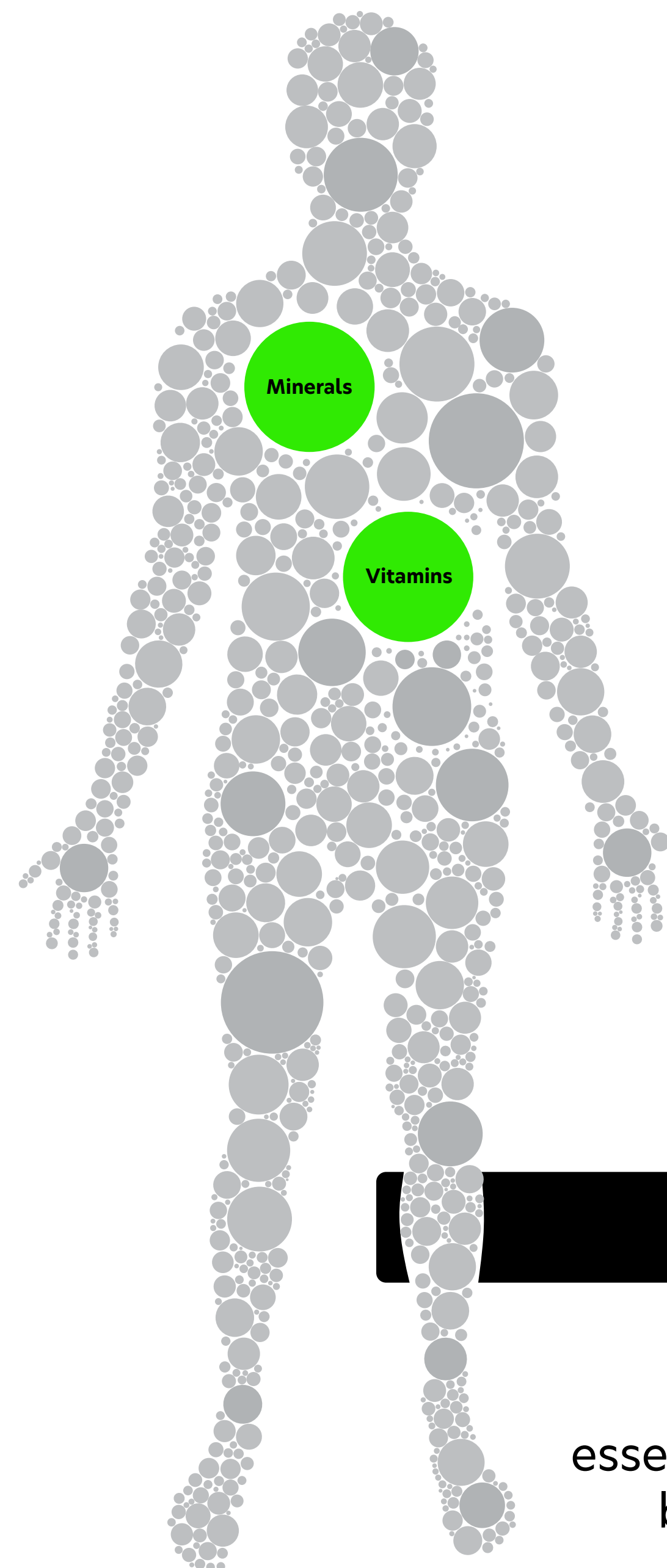
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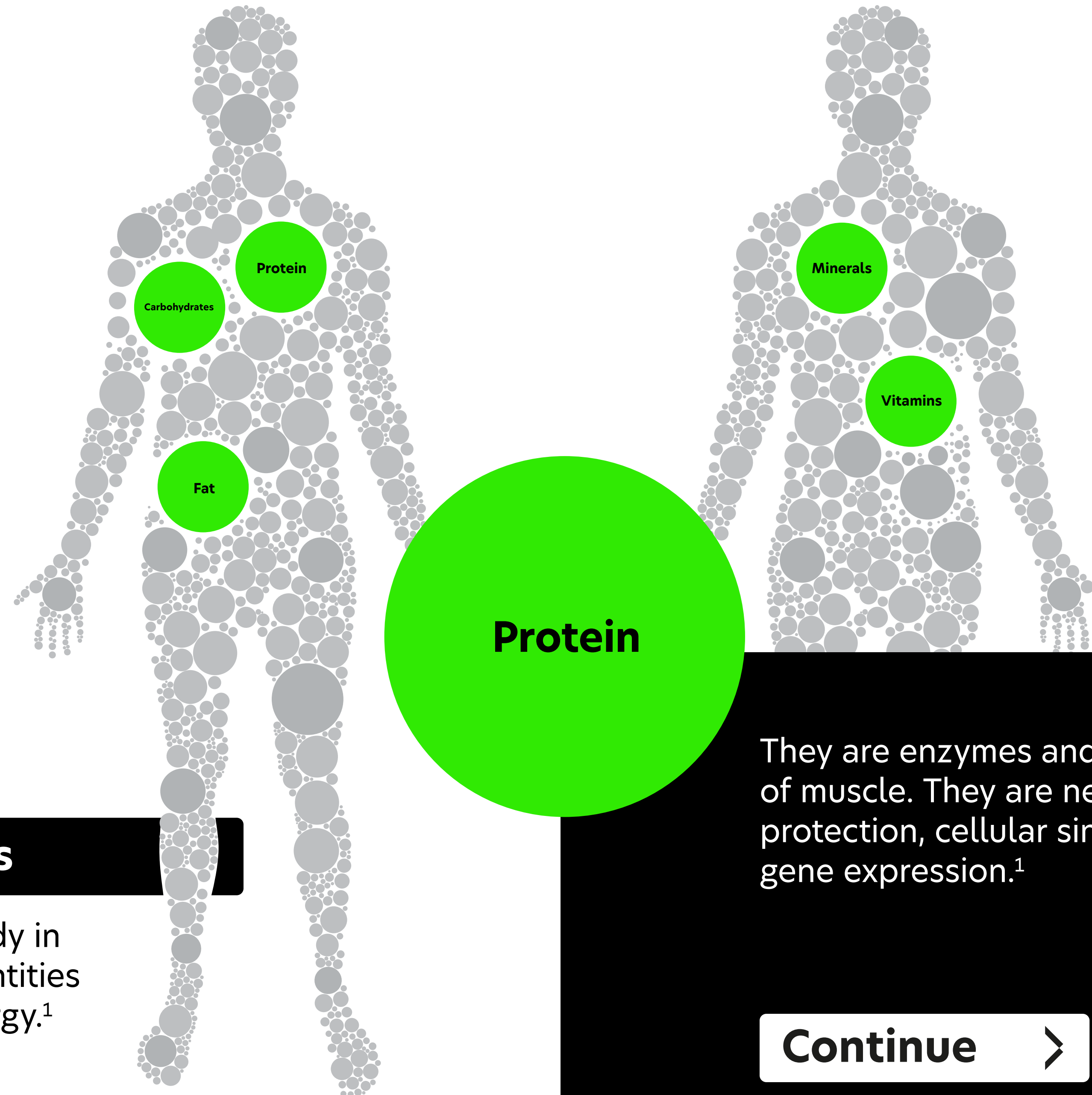
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Nutrients can be classified as macronutrients and micronutrients



Macronutrients

Required by the body in relatively large quantities for growth and energy.¹

Protein

They are enzymes and a major component of muscle. They are needed for immune protection, cellular signaling, and control of gene expression.¹

Continue >

— Dietary gaps are common

Dietary guidelines encourage people to meet their nutritional needs primarily from food.⁶ Despite these guidelines, many individuals choose foods that differ from recommendations. This can lead to shortfalls in vitamin and mineral intake, resulting in micronutrient deficiency or micronutrient inadequacies:⁶

Micronutrient deficiency:

Low micronutrient intake resulting in deficiency disease and overt symptoms.^{1,5}

- ▶ Common in developing countries
- ▶ Examples: iron deficiency anemia, vitamin A deficiency, iodine deficiency

Micronutrient inadequacies:

Micronutrient intake below the intake level required for full biological function and good/optimal health, but not low enough to cause overt symptoms.^{2,7,8}

- ▶ Common in developed countries including U.S
- ▶ Common “shortfall nutrients” include vitamins A, C, D, and E; calcium, magnesium, potassium, iron, and choline

Did you know?

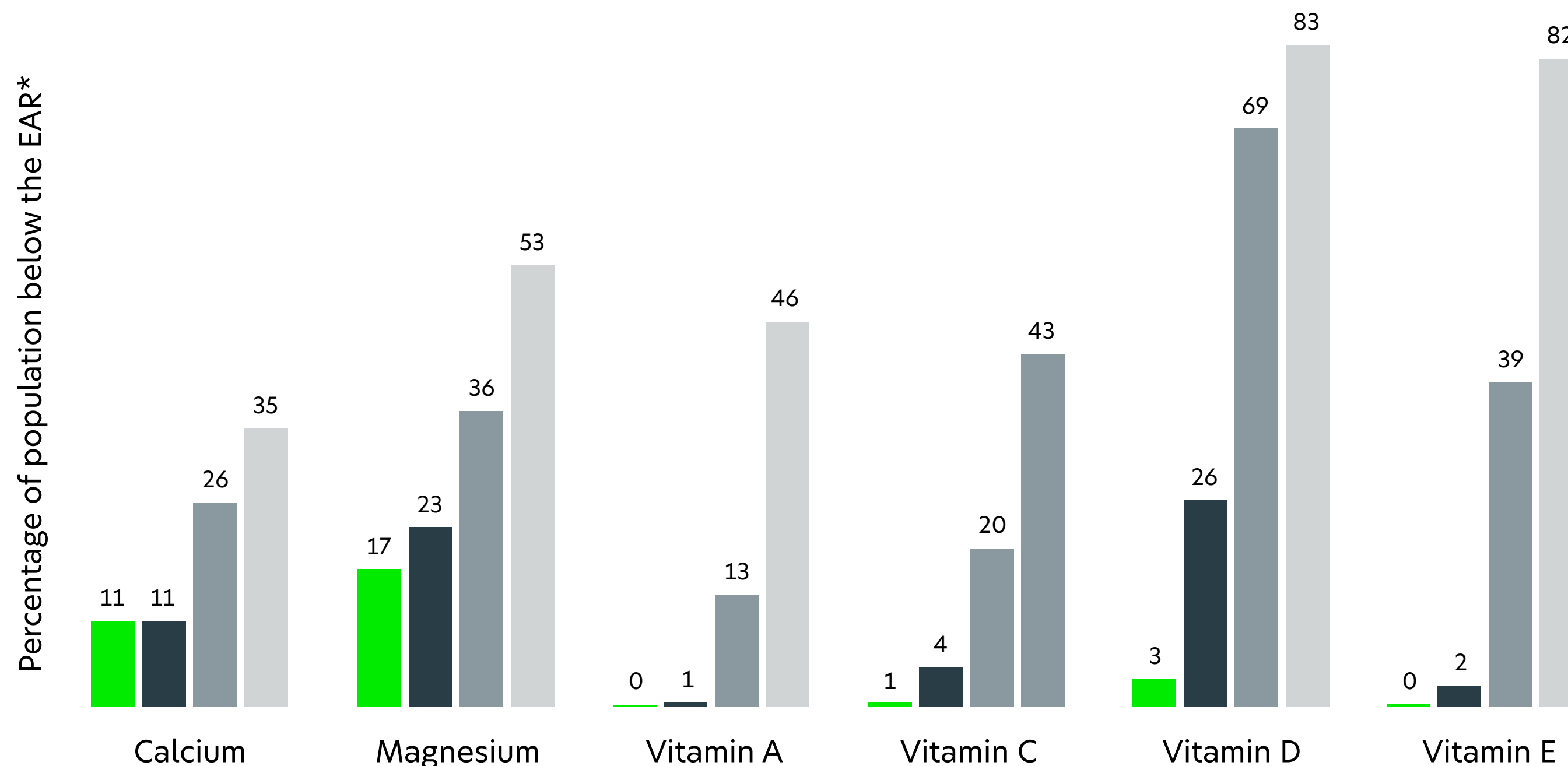
90% of Americans do not receive adequate nutrients on a daily basis.³

Continue >

Even in developed countries, inadequate micronutrient intake is common

Percentage of U.S. adults (19+ years of age) with inadequate intakes of micronutrients based on frequency of using an multivitamin supplement³

■ ≥ 21 d/mo
 ■ 11-20 d/mo
 ■ 1-10 d/mo
 ■ No MVMS



Adults who supplemented their diet with a multivitamin had a significantly lower incidence of inadequate micronutrient intake.⁹

Continue >

⁹Estimated Average Requirement (EAR) represents the average daily nutrient intake level estimated to meet the requirement of half the healthy individuals in a particular life stage and gender group.

As people age, their micronutrient needs change, putting them at risks of deficiencies



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As people age, their micronutrient needs change, putting them at risks of deficiencies

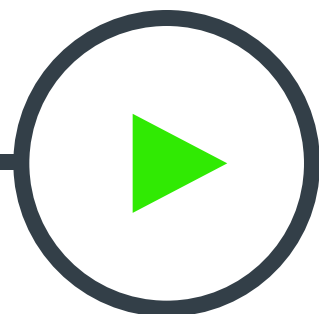
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Children's micronutrient needs:
Calcium, vitamin D, iron, zinc, iodine, choline, folate, vitamin A, vitamin B12

Children^{10,12}



Children

Adults: Women

Adults: Men

Elderly

As people age, their micronutrient needs change, putting them at risks of deficiencies

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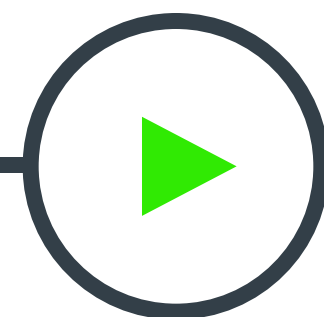


Women's micronutrient needs:

Women of childbearing age¹⁰
folate, vitamin D, vitamin E, iron

Pregnant and lactating women¹⁰
vitamin B6, folate, vitamin D

Women



Children

Adults: Women

Adults: Men

Elderly

As people age, their micronutrient needs change, putting them at risks of deficiencies

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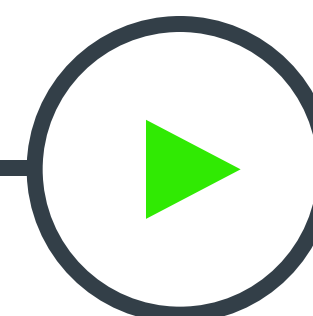


Men's micronutrient needs:

Men ages 14 - 18¹¹
vitamin E

Men ages 19 - 50¹¹
vitamin C

Men



Children

Adults: Women

Adults: Men

Elderly

As people age, their micronutrient needs change, putting them at risks of deficiencies

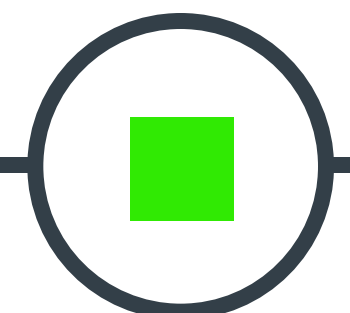


Micronutrient needs of the elderly:

folate, vitamin B6, vitamin B12, vitamin C, vitamin D, calcium, iron, zinc

Elderly¹⁰

Continue >



Children

Adults: Women

Adults: Men

Elderly

Micronutrient deficiencies can have significant health consequences

The impact of micronutrient deficiency^{1, 12, 13}

Micronutrient	Effect of micronutrient deficiency
Vitamin A	<ul style="list-style-type: none"> • Night blindness • Decreased immune function
Vitamin B6	<ul style="list-style-type: none"> • Dermatitis • Depression and confusion
Vitamin C	<ul style="list-style-type: none"> • Impaired immunity and higher susceptibility ability to infections • Scurvy: weakened connective tissues, arthralgia, inflammation of the gums
Vitamin D	<ul style="list-style-type: none"> • Rickets • Increased fracture risk
Iron	<ul style="list-style-type: none"> • Anemia • Impaired cognitive function
Folate	<ul style="list-style-type: none"> • Macrocytic anemia: weakness, fatigue, difficulty concentrating • Neural tube defetcs in infants
Zinc	<ul style="list-style-type: none"> • Impaired immunity and resistance to infection • Stunting



[Learn more >](#)

Direction:

Click to learn more about the effect of inadequate intake of vitamins

Micronutrient deficiencies can have significant health consequences

The impact of micronutrient deficiency^{1, 12, 13}

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Effects of inadequate intake of vitamins

Even without a deficiency, having inadequate intake of vitamins and minerals can have serious health consequences:^{13,14, 15}

- ▶ **Inadequate calcium intake** can lead to osteoporosis.
- ▶ **Inadequate vitamin D** intake can impact skeletal health.
- ▶ **Inadequate fibre** intake can lead to constipation.

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Bridging the nutritional gap

A **daily complete multivitamin supplement** can help fill nutritional gaps by providing many essential vitamins and minerals.¹⁰

Multivitamin supplements can act as a partner to good eating habits. When taken appropriately, multivitamins can **support better health and wellness year-round.**¹⁰

Continue >

Did you know?

The American Academy of Pediatrics, the American Geriatrics Society, the American Academy of Family Physicians, and the World Health Organization all recommend the use of supplements to help meet adequate nutrient goals.^{8,13,14,16}



**Dietary
supplements are
one component
of the health and
wellness journey**



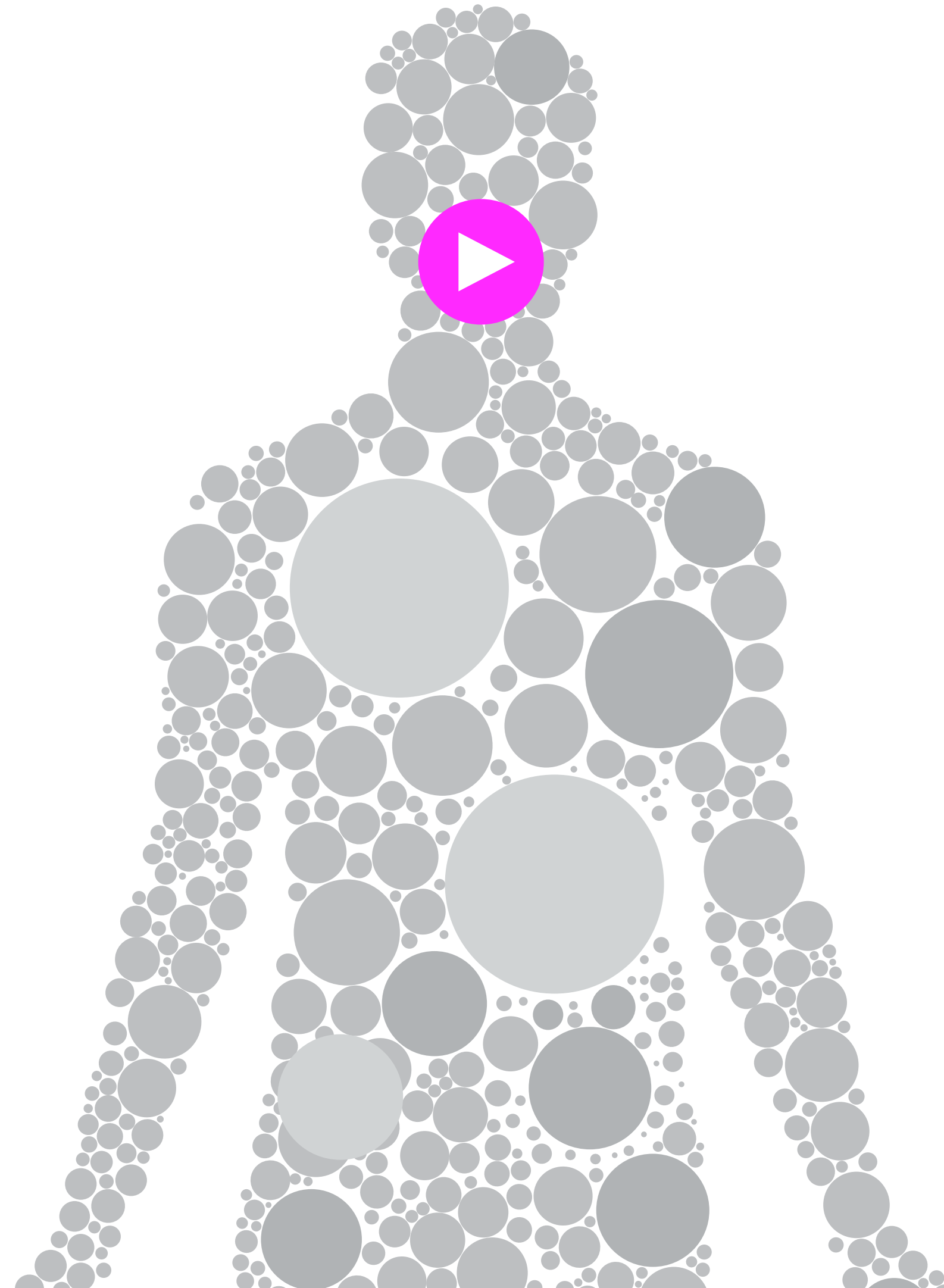
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Dietary supplements are one component of the health and wellness journey

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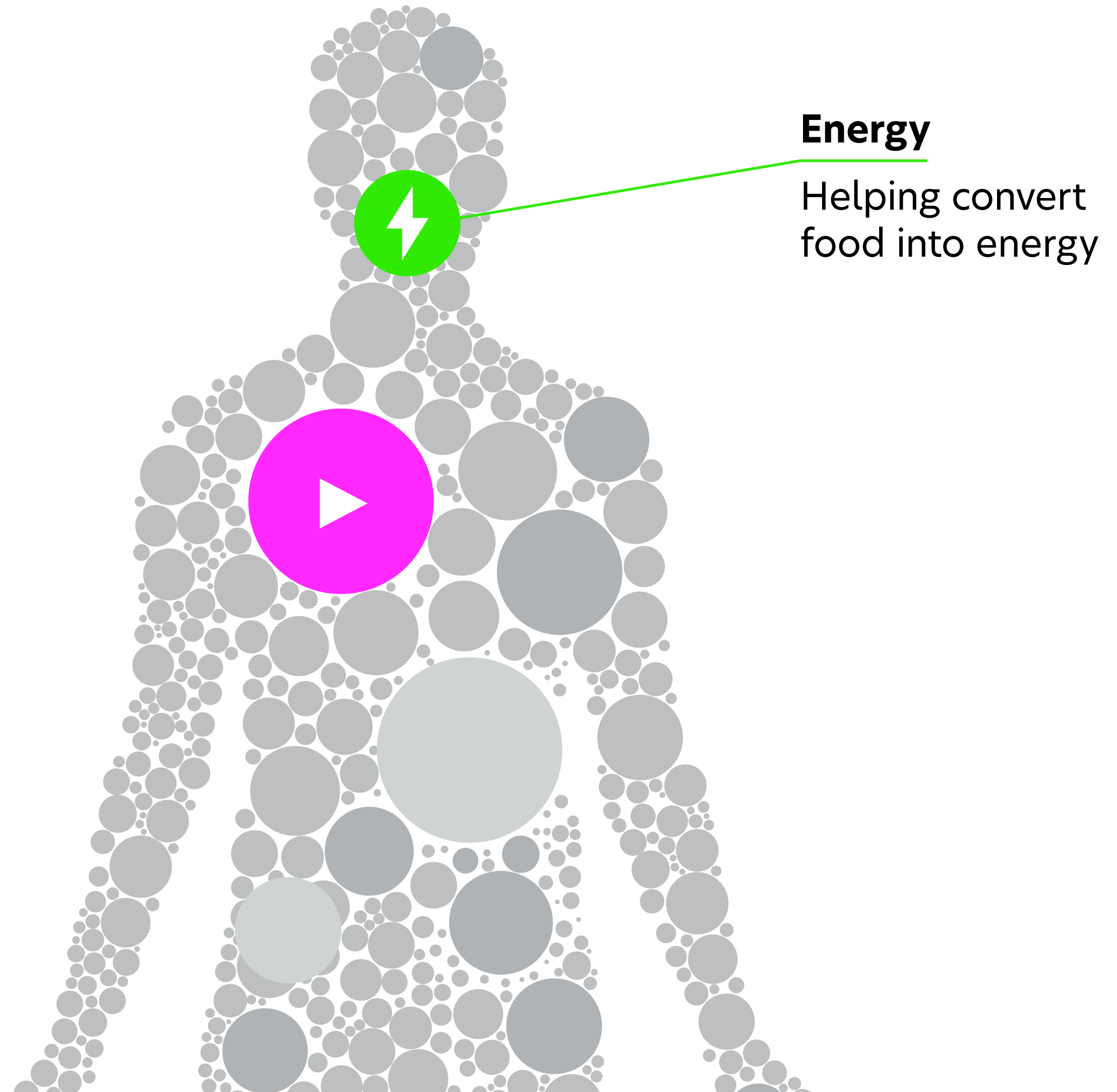
The vitamins and minerals in dietary supplements can play a critical role in:^{11, 17}



Dietary supplements are one component of the health and wellness journey

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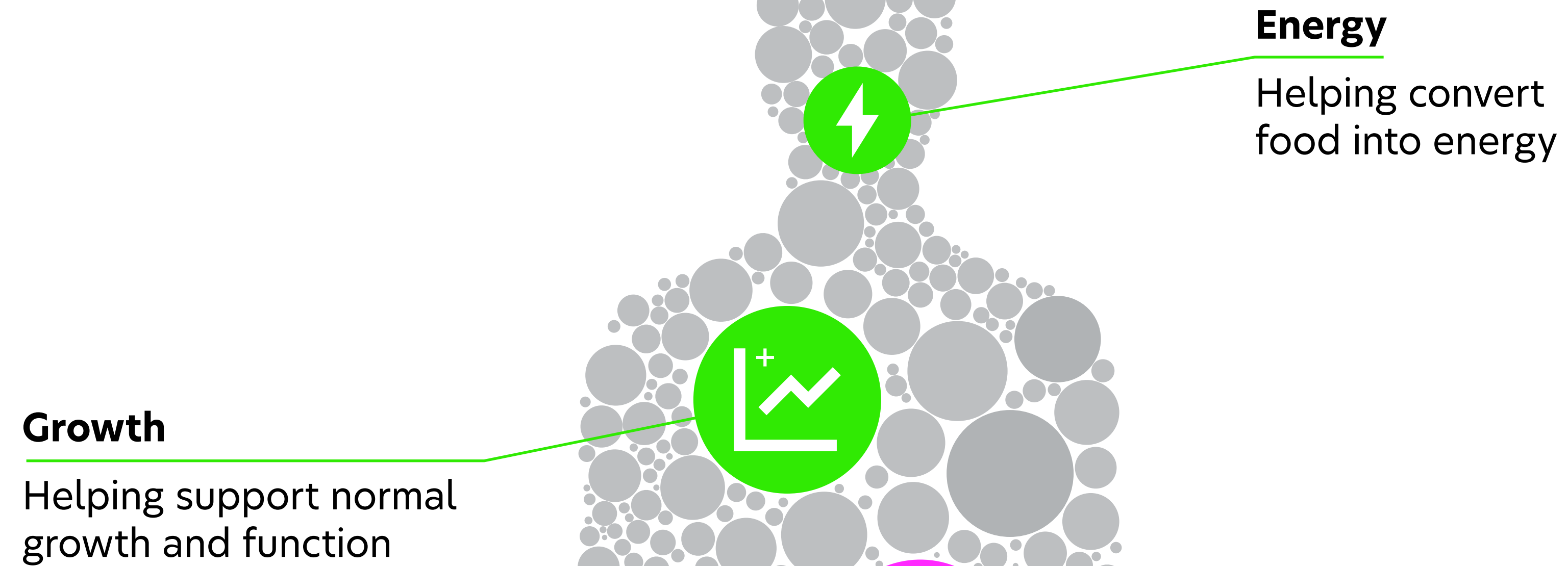
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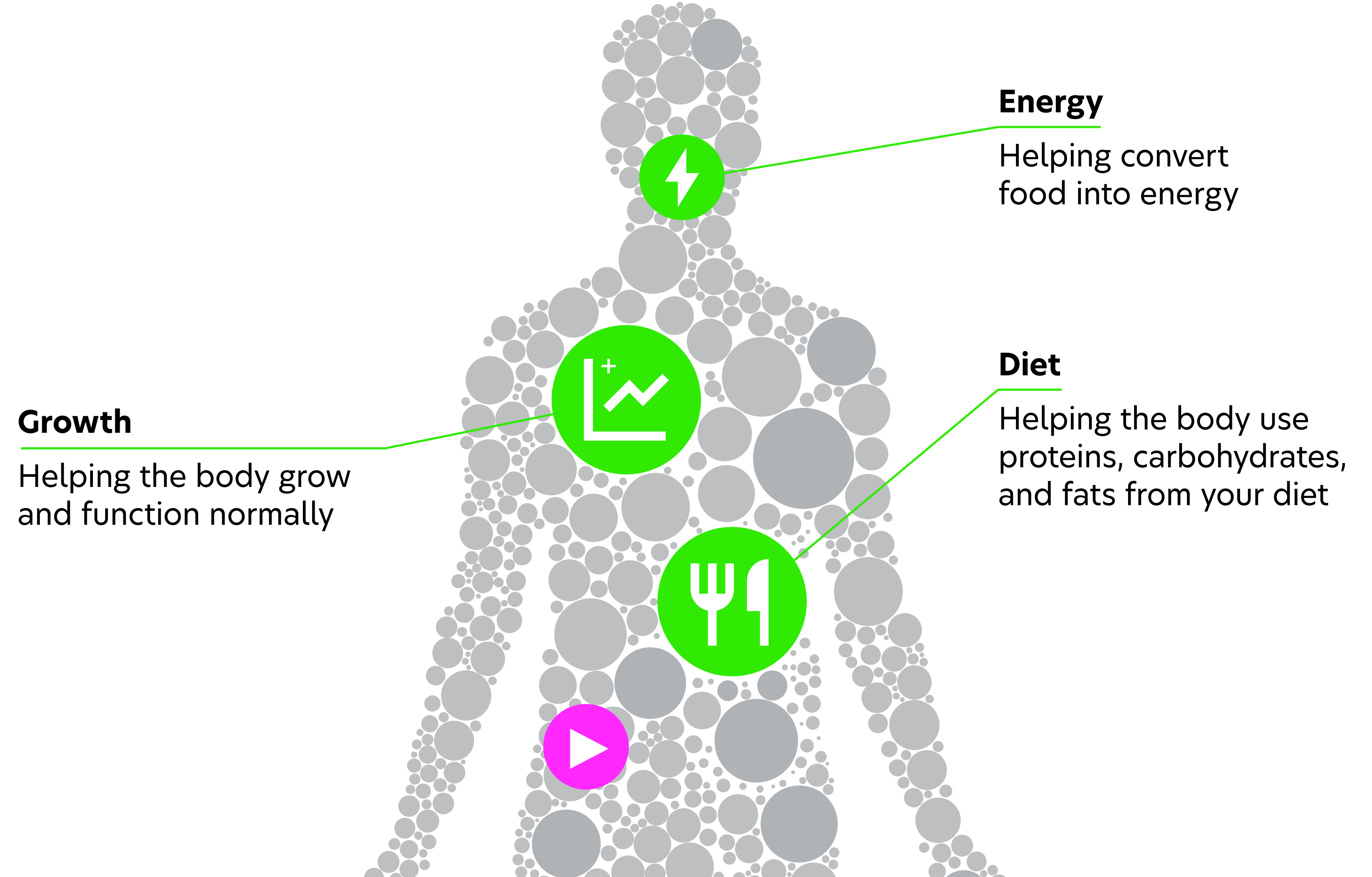
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Dietary supplements are one component of the health and wellness journey

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Dietary supplements are one component of the health and wellness journey

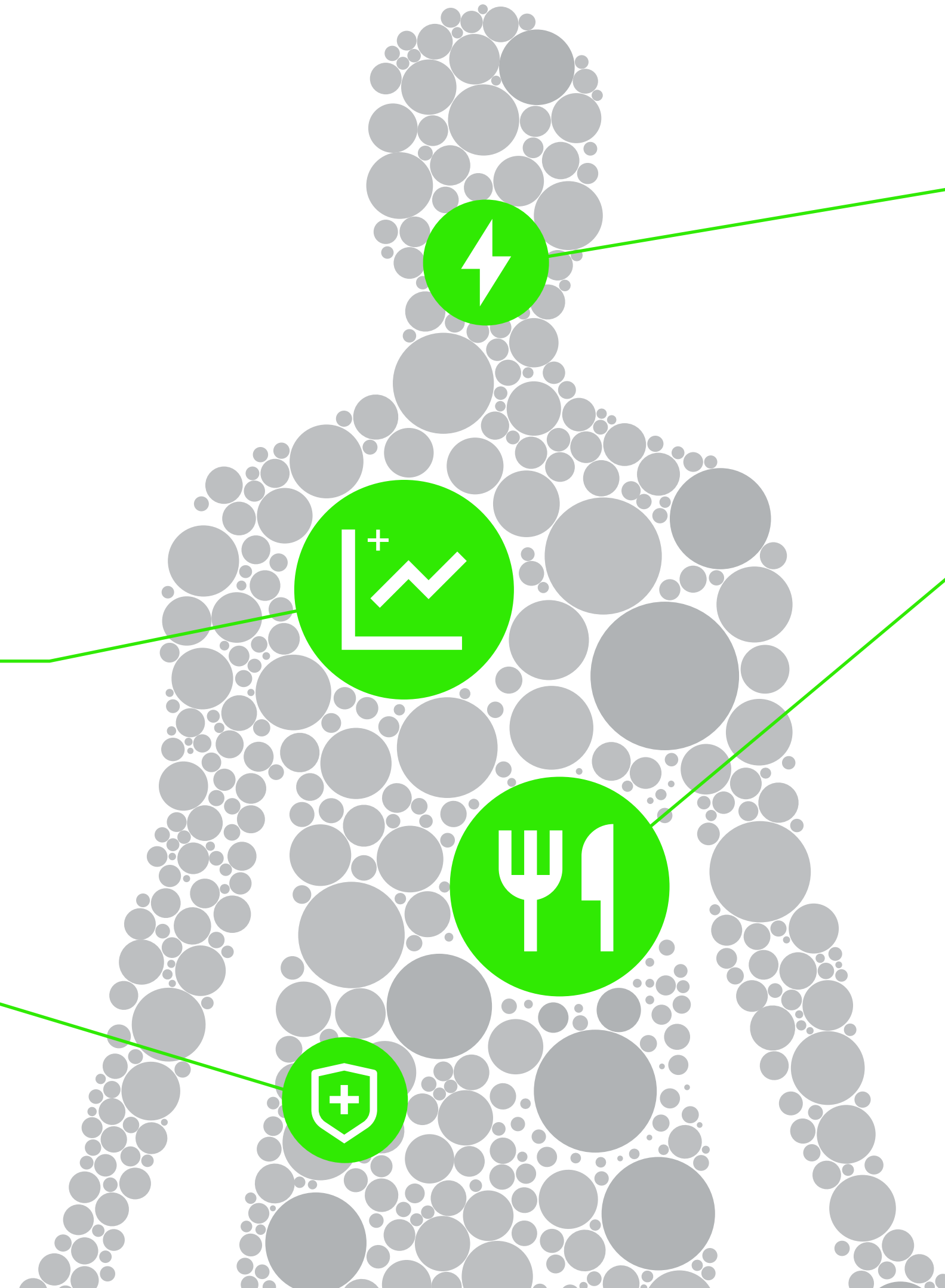
The vitamins and minerals in dietary supplements can play a critical role in:^{11, 17}

Growth
Helping the body grow and function normally

Immune Health
Supporting the immune system

Energy
Helping convert food into energy

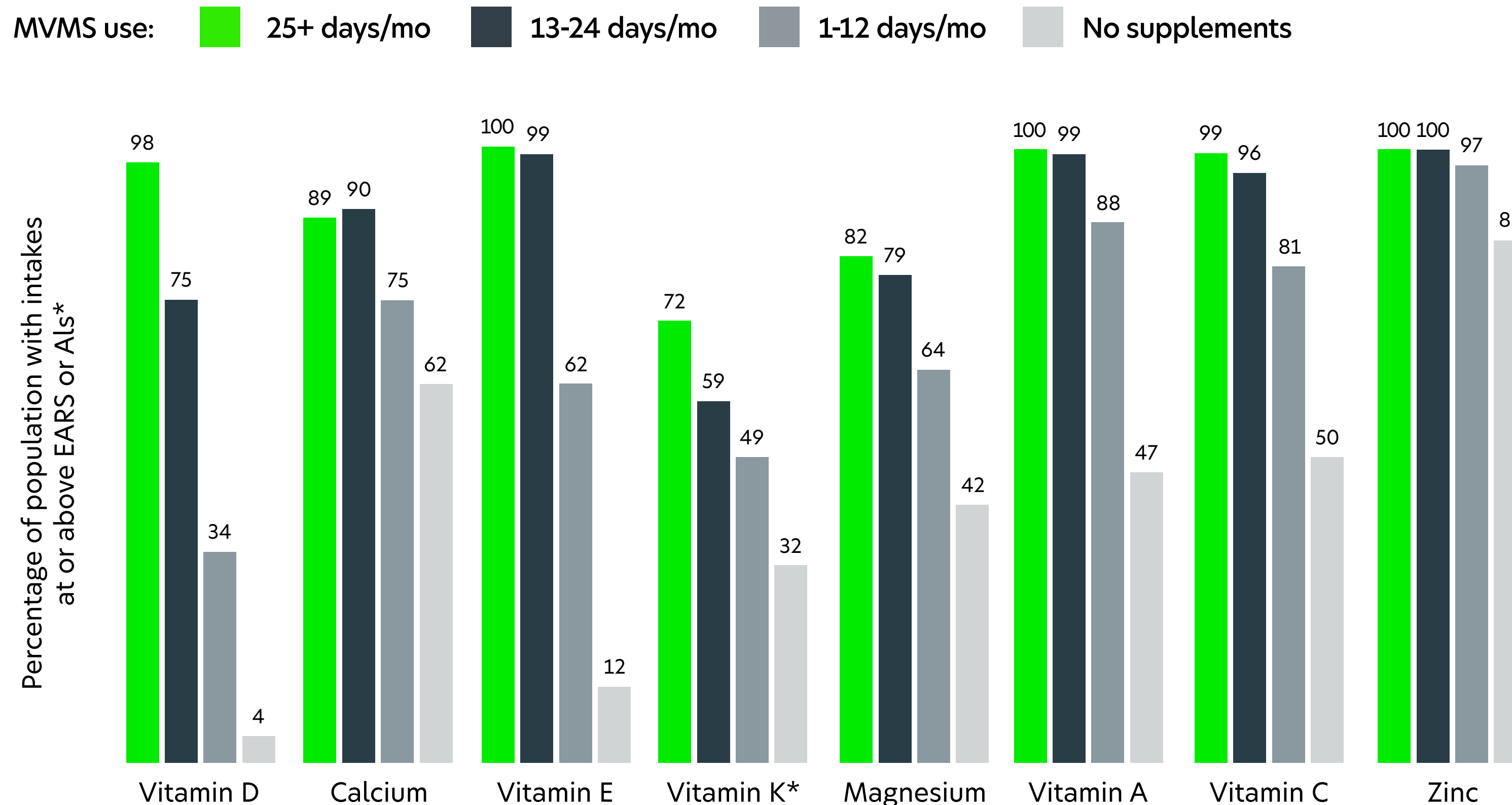
Diet
Helping the body use proteins, carbohydrates, and fats from your diet



Continue >

Daily multivitamins effectively close most dietary micronutrient gaps

Percent of US Adults (19 years or older) with intake of micronutrients at or above EARs or AIs based on frequency of using a multivitamin/ mineral dietary supplement (NHANES 2009-2012)³



Adults who used a multivitamin regularly for 25+ days /month had a significantly higher micronutrient intake than adults who used a multivitamin short-term or did not take any supplements.³

Continue >

³ * AI: adequate intake; EAR: estimated average requirement; MVMS: multivitamin/mineral supplement.

Your role in nutrition

Pharmacists, Registered Dietitians and Physicians are sources of nutritional advice for children and adults. As such you are ideally placed to educate patients about nutrition and appropriate dietary supplements.

With the broad range of supplements available, patients may wonder:

- ▶ Which product can help to replace the nutrients missing from my diet?
- ▶ Which product is right for me?
- ▶ Which form (i.e. tablets, gummies, etc.) am I most likely to continue using regularly?
- ▶ How long do I need to take a supplement?

Providing patients with detailed and accurate information about the efficacy and safety of a product will help inform patients, resulting in safer self-care decisions.

Continue >



Differentiating passive and proactive consumers

Identifying passive vs. proactive consumers can help you optimize your treatment strategy. These two types of consumers have different needs and will require a different approach. By customizing your health recommendation, you can improve the likelihood of treatment adherence.

[Continue >](#)

Direction:

Click the learn more button to see which one is passive consumer and proactive consumer.

[Learn more >](#)



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[Learn more >](#)



Differentiating passive and proactive consumers

Identifying passive vs. proactive consumers can help you optimize your treatment strategy. These two types of consumers have different needs and will require a different approach. By customizing your health recommendation, you can improve the likelihood of treatment adherence.

Continue >

Direction:

Click the learn more button to see which one is passive consumer and proactive consumer.



Passive Consumers

- ▶ Don't follow health trends and don't necessarily prioritize wellness
- ▶ Reactive and lack confidence
- ▶ Price sensitive
- ▶ Rely on their health care professionals' advice
- ▶ Looking to make a credible selection in a quick and simple manner

Looking to make a credible selection in a quick and simple manner

- ▶ Keep price in mind
- ▶ Provide a quick and efficient recommendation

Back >

Differentiating passive and proactive consumers

Identifying passive vs. proactive consumers can help you optimize your treatment strategy. These two types of consumers have different needs and will require a different approach. By customizing your health recommendation, you can improve the likelihood of treatment adherence.

Continue >

Direction:

Click the learn more button to see which one is passive consumer and proactive consumer.

Proactive Consumers

- ▶ Healthy habit and results focused
- ▶ Early adopters and seek optimization
- ▶ Willing to pay more
- ▶ May look for additional information before committing to a product
- ▶ Seek a demonstration of the benefits in the effort to transform into a better version of themselves

When interacting with Proactive consumers:

- ▶ Explain rationale/ clinical evidence for your recommendation
- ▶ Educate the patient on the benefits of the product you are recommending

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Determining the right option starts with a conversation

To resolve your patients' nutrition concerns, you'll have to ask patients about their symptoms and health. Consider the questions listed below to help get the conversation started to help you get started. For patients who are asking a general question about their overall health, consider asking them about their dietary concerns. If they are specifically looking for a supplement, ask them why that is.

Questions to ask patients¹⁸

- Can you tell me about your primary dietary concerns? >
- Can you tell me why you are looking for a supplement? >
- Can you tell me about your overall health? >
- Can you tell me about your general lifestyle? >

Continue >



Direction:
click the buttons to learn more about the subsequent questions and rationale.

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Questions to ask patients¹⁸

Can you tell me about your primary dietary concerns? >

Can you tell me why you are looking for a supplement? >

Can you tell me about your overall health? >

Can you tell me about your general lifestyle? >

Continue >

Can you tell me about your primary dietary concerns?

Subsequent question(s):

How would you describe your current diet (i.e. carb-heavy, fat-heavy, diverse)?

Rationale:

The most common cause of micronutrient inadequacies is poor diet quality. People who follow special diets (i.e. vegan) may also have specific nutrient deficiencies.

Back >

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Can you tell me about your primary dietary concerns? >

Can you tell me why you are looking for a supplement? >

Can you tell me about your overall health? >

Can you tell me about your general lifestyle? >

Continue >

Can you tell me why you are looking for a supplement?

Subsequent question(s):

- ▶ Do you have any special dietary needs (i.e. follow a vegan or gluten-free diet)?
- ▶ What do you eat in a typical day (food and quantity)?
- ▶ Have you noticed any unusual symptoms, such as increased fatigue?

Rationale:

These questions can help you assess a patient's diet and whether they have noticed any symptoms (i.e. increased fatigue) that may be due to a micronutrient deficiency.

Back >

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Continue >

Can you tell me about your overall health?

Subsequent question(s):

- ▶ Do you have any medical conditions?
- ▶ Do you take any medications?
- ▶ Do you have any allergies?

Rationale:

- ▶ Certain medical conditions (i.e. diabetes) maybe linked to micronutrient deficiency.
- ▶ Certain medications may impair absorption of key micronutrients.
- ▶ Collect this data to make sure you do not recommend a product that contains the patient's allergen.

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Continue >

Can you tell me about your general lifestyle?

Subsequent question(s):

- ▶ How much caffeine do you drink/week on average?
- ▶ How much alcohol do you drink/week on average?
- ▶ How much exercise do you get every week on average?

Rationale:

Alcohol and caffeine may impact nutritional absorption.

Increasing physical activity is a general recommendation you can make in patients who exercise less than 150 mins/ week on average.

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— Medications can affect nutritional status

As mentioned in **questions to ask patients**, certain medications may impair the absorption of key micronutrients. Please see some common ones to watch out for in the table below.

Medications that can lead to micronutrient inadequacy or deficiency^{16,19}

Medication	Micronutrient inadequacy or deficiency
Metformin	Vitamin B12
Diuretics	Magnesium, potassium, zinc
Tetracycline	Calcium, iron, magnesium, zinc
Proton-pump inhibitors	Vitamin B12, vitamin D, calcium, folate, iron, magnesium
Methotrexate	Folate
NSAIDs	Iron, folate, vitamin C, zinc
Chronic TMP/SMX	Folate
Valproic Acid	Folate



Continue >

Counselling patients on multivitamin supplements

It is crucial to select products that:¹⁰

- ▶ Have an established safety profile
- ▶ Have a strong clinical study background
- ▶ Have been expertly designed and rigorously tested Meet required manufacturing standards
- ▶ Are backed by significant nutritional science expertise

A food first approach

- ▶ When counselling patients, it is important to discuss that multivitamin supplements can act as a partner to good eating habits. They are not a substitute. When taken appropriately, multivitamins can support better health and wellness year-round.¹⁰
- ▶ Manage the patient's expectations by reiterating that even if they don't feel different when taking a multivitamin, it is still working to supplement their body with select micronutrients that support their general health.



Choosing the right form

Form plays a large role in compliance. For dietary supplements to have the greatest effect, patients have to adhere to taking them regularly, once a day.

Asking the patient if they have a preference in terms of form can help you identify the product they are most likely to continue using.

Common multivitamin forms include:

- ▶ Tablets and mini-tablets
- ▶ Capsules
- ▶ Gummies
- ▶ Chewables

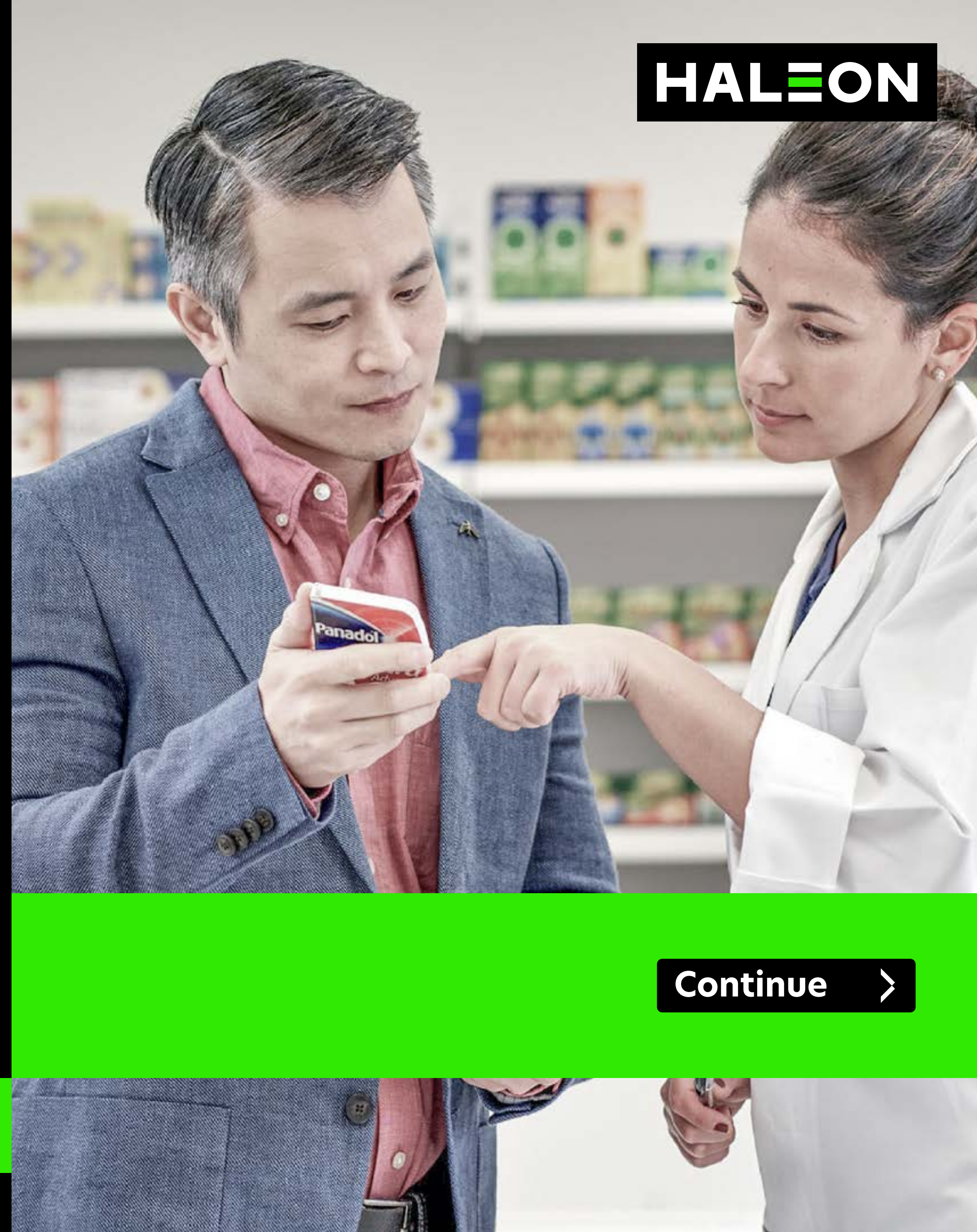
Practice Tip

Customers may have food allergies or ingredient sensitivities that limit their options for nutrition supplements including lactose, food dyes and peanut oil.²⁰ Other common ingredients that customers may be watchful of in products include soy, dairy, wheat, eggs, tree nuts, fish and shellfish.²¹



Conclusion

- ▶ Vitamins and minerals are essential to overall health and wellness.^{1,3}
- ▶ Both developing and developed countries have a high rate of vitamin and mineral deficiencies and inadequacies.^{5,6}
- ▶ Micronutrient deficiencies and inadequacies can have significant health consequences.¹
- ▶ In addition to a healthy diet, multivitamin supplements are a possible solution to meeting micronutrient needs and filling nutritional gaps.⁹
- ▶ Pharmacists play a vital role in helping identify micronutrient gaps, and recommending appropriate strategies to optimize the patient's overall health.



[Continue](#) >

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- a. 1%
 - b. 10%
 - c. 25%
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 - e. 90%
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The correct answer is:

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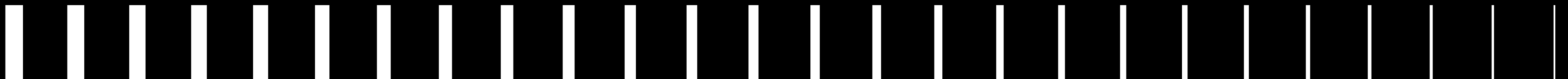


— Test your knowledge on nutrition

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Essential nutrients play a role in a variety of bodily functions including cell and tissue function, metabolism, growth and development, immune function, cognitive function, bone health and vision.^{5,6} These nutrients are broadly classified as macronutrients and micronutrients. Correctly identify which of the below statements is most correct:

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- a. Key macronutrients are fat, protein, vitamins and minerals
 - b. Key macronutrients are carbohydrates, fat and protein
 - c. Key micronutrients are carbohydrates, protein and vitamins
 - d. Key micronutrients are vitamins and minerals
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The correct answer is:

- e. Macronutrients are required by the body in relatively large quantities for growth and energy and include Carbohydrates, Fat and Protein.¹ Micronutrients include vitamins and minerals and are required by the body in small amounts for essential physiological and biochemical reactions.¹



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Micronutrient deficiencies can have significant health consequences. Dietary supplements can help resolve micronutrient deficiencies. Which of the below statements is false?

- a. Deficiencies in vitamin A, vitamin C and Zinc can impair immune function
 - b. Dietary supplements help to replace food and support the body growing and function normally, use proteins, carbohydrates and fats from the diet, convert food into energy and support the immune system
 - c. Inadequate calcium and vitamin D intake can lead to osteoporosis and impact skeletal health
 - d. Without a sufficient intake of folate and iron, anemias can develop leading to weakness and fatigue
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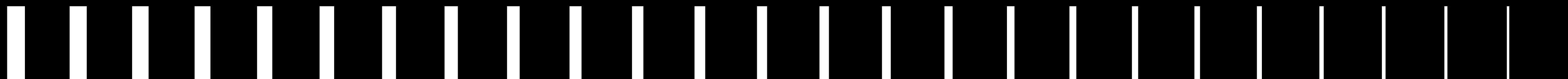
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- a. Passive consumers are typically willing to pay more for the right treatment
 - b. Proactive consumers tend to rely on the health care professional's advice alone
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The correct answer is:

d. Passive consumers do not follow health trends and do not necessarily prioritize wellness; they are reactive and lack confidence; they are price sensitive and rely on the health care professionals' advice and seek quick and simple advice. Proactive consumers are already committed to healthy habits and are results focused; they are willing to pay more for the right product; they often look for information to independently inform their opinions; if they consult a health professional, they will require rationale, possibly in the form of clinical evidence to support a recommendation made

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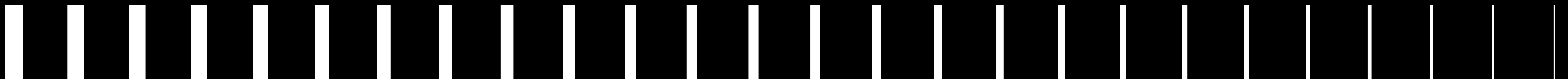
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There are several known drug-nutrient interactions that can trigger a health professional to be proactive about managing a potential micronutrient inadequacy or deficiency. Which of the below drug interaction statements is false?

- a. Methotrexate and Valproic acid may cause inadequacies/deficiencies in folate
- b. Iron inadequacies/deficiencies can be caused by regular use of NSAIDs and Proton-pump inhibitors
- c. Diuretics are known to cause inadequacies/deficiencies in Magnesium, potassium and zinc
- d. Metformin has been known to cause inadequacies/deficiencies in vitamin C and zinc
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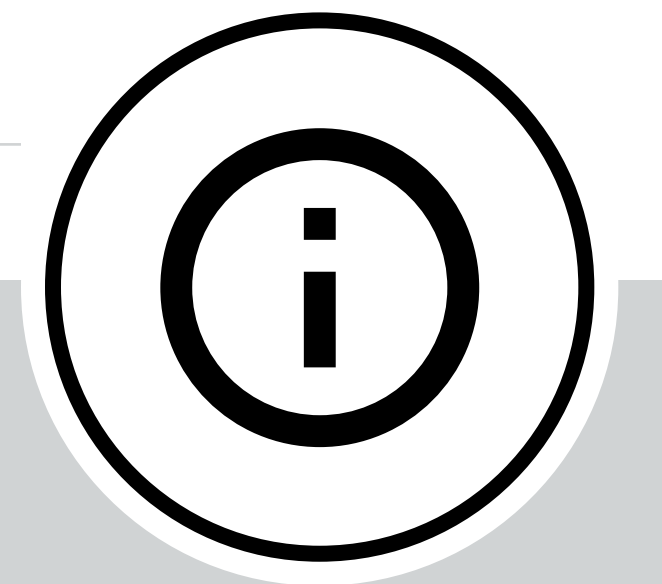
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