

Insects Innovation in Gastronomy

COURSE SUPPORT



Module 4 Unit 5:

Insects in the geriatric kitchen

Disclaimer:

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Introduction: Why Insects Can Play a Critical Role in Elderly Nutrition?

The world's aging population is increasing rapidly, and by 2030, one in every six people will be over 60 years old. With age, the body's ability to digest, absorb, and utilize nutrients declines, leading to higher risks of malnutrition, muscle loss, bone fragility, and weakened immunity.

- **Nutrient Absorption Declines** – Lower ability to utilize iron, zinc, calcium, and magnesium.
- **Protein Intake Becomes Critical** – Essential for muscle maintenance and repair.
- **Digestibility Challenges Increase** – Foods need to be easier to chew, digest, and absorb.

A specialized geriatric kitchen must focus on **high-quality, digestible, and nutrient-dense** protein sources. Insect protein emerges as an ideal alternative, offering a high bioavailability of nutrients, ease of digestion, and sustainability benefits.

Key Insights & Takeaways:

➤ The Science of Insect Protein for Aging Populations

- **Complete Protein Source** – Contains all essential amino acids needed for muscle maintenance.
- **Rich in Micronutrients** – High levels of iron, zinc, calcium, magnesium, and omega-3s.
- **Easily Digestible** – Less strain on aging digestive systems compared to plant-based proteins.
- **Soft Texture & Versatile Form** – Can be consumed as a powder, flour, or in liquid form for easier digestion.

Nutrient Comparison: Insect Protein vs. Traditional Protein Sources

Nutrient	Egg (100g)	Chicken (100g)	Cricket Flour (100g)	Mealworm Flour (100g)
Protein	13g	27-33g	60-70g	50-60g
Iron (mg)	1.8mg	1.3mg	5-6mg	4mg
Zinc (mg)	1.1mg	2mg	8-10mg	6mg
Calcium (mg)	56mg	11mg	80mg	75mg
Digestibility	High	Medium	Very High	Very High

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Insect protein provides highly digestible, nutrient-dense alternatives ideal for older adults who struggle with chewing and digestion.

➤ **Challenges in Geriatric Nutrition & How Insect Protein Can Help**

- **Muscle & Bone Loss** – Risk of osteoporosis and sarcopenia increases after 60.
- **Decreased Appetite** – Older adults tend to eat less, reducing nutrient intake.
- **Chewing & Swallowing Difficulties** – Food must be soft, drinkable, or easy to chew.

Why Insect Protein Is Ideal for Geriatric Nutrition

Easy to Digest & Absorb – Requires less effort from the digestive system.

Soft Texture & Drinkable Options – Can be added to shakes, soups, and soft foods.

High in Essential Minerals – Supports bone strength, muscle function, and immunity.

➤ **Four Key Food Solutions for Geriatric Kitchens**

1) Drinkable Protein Alternatives

Protein Shakes & Fortified Soups

- Easiest to consume for individuals with chewing difficulties.
- Can be enriched with insect protein powder or flour for higher nutrition density.

Recipe Idea: High-Protein Geriatric Shake

- Ingredients: Milk or yogurt + cricket powder + banana + honey.
- Benefits: Soft, nutrient-dense, and supports muscle maintenance.

2) High-Protein Snacks: Crackers & Bars

Protein-Enriched Crackers & Bars

- Soft, chewable snack options for older adults.
- Made with insect flour, oats, and natural sweeteners.

Recipe Idea: Soft Geriatric Crackers

- Ingredients: Mealworm flour + flaxseed + olive oil + milk.
- Benefits: High protein, rich in omega-3s, easy to chew.

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3) Geriatric-Friendly High-Protein Bread

Fortified Bread with Insect Protein

- Can replace regular bread with a higher protein, soft alternative.
- Helps meet daily protein requirements with minimal effort.

Recipe Idea: Soft High-Protein Bread

- Ingredients: Cricket flour + wheat flour + yeast + honey.
- Benefits: Soft, nutrient-rich, and supports digestion.

4) Protein-Enriched Pasta & Noodles

Easy-to-Chew Protein Pasta

- Made with insect flour instead of wheat, providing high protein & fiber.
- Soft texture makes it easier to digest.

Recipe Idea: High-Protein Geriatric Pasta

- Ingredients: Insect flour + lentil flour + eggs + olive oil.
- Benefits: Soft, protein-rich, and fortified with essential micronutrients.

Conclusion

- Elderly nutrition is a growing concern as life expectancy increases.
- Insect protein offers a functional, sustainable, and easily digestible alternative.
- Consumer education is essential for integrating new-generation protein sources.

By embracing innovative protein sources, we enhance healthy aging, support muscle maintenance, and ensure sustainable food solutions.