

INTERNATIONAL DAY OF OLDER PERSONS – UNITED NATIONS – NY

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AGEING POPULATION AND OSTEOPOROSIS

The Challenge of Bone Health

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Population aging is a well-known and continually evolving global phenomenon, with significant negative social and economic impacts—including an increase in diseases associated with longer average lifespans.

The demographic trend entails a progressive growth of healthcare needs.

Without proper adjustments to healthcare funding relative to GDP (Gross Domestic Product), there is a risk of compromising citizens' well-being and the sustainability of the healthcare systems.

This conference aims to explore strategies to address the complex issues associated with population aging and to ensure a sustainable future for our societies.

Italy is among the countries with the highest percentage of elderly people in the world, second only to Japan.

Currently, 24.7% of the Italian population is over 65 years old, and 7.7% are over 80. This is mainly due to the low birth rate (1.1%) and increased life expectancy (men: 81.4 years – women: 85.5 years; ISTAT 2024).

According to analyses by ISTAT, Italy's population is expected to age significantly: the share of people over 65 is projected to reach 34% by 2050, with over 10% over 80 years old.

Japan has the highest percentage of elderly people in the world, with over 29.1% of its population aged 65 or older.

Saudi Arabia has a low percentage of about 3.2% of the total population.

Portugal, with its 23,4%, is in the European average

Other European countries with notable elderly populations include:

- Germany: 21.2%
- France: 19.1%
- Spain: 18.8%

As age advances, bone health, in particular osteoporosis, becomes a crucial aspect of general well-being—especially for ensuring the functional autonomy of elderly people, who are increasingly vulnerable due to social isolation, economic fragility, and difficulty accessing services.

Osteoporosis is a condition with high social and economic impact, causing severe disability. It carries both high direct and indirect costs, which have long been undervalued in both medical and political spheres.

It affects millions of people worldwide, especially:

- postmenopausal women (due to estrogen deficiency),
- men after age 65 (due to aging).

Osteoporosis increases with age and is characterized by progressive weakening of bone mass, due to deterioration in microstructure—especially of spongy (trabecular) bone—reduction in trabecular number and thickness after menopause, and thinning of the cortical bone after age 65, caused by an imbalance between osteoblasts (cells that build bone) and osteoclasts (cells that break down bone).

According to the International Osteoporosis Foundation (IOF), about 200 million people around the globe suffer from osteoporosis.

Italy's population is 59 million in 2025: it is estimated that over 4.36 million Italians suffer from osteoporosis. That's about 6.3% of the total population: 23% women and 7% men, with women accounting for nearly 80% of cases.

Osteoporosis is a serious public health problem, causing pain, disability, and loss of autonomy.

The “silent killer” causes fractures when the pathological process is already advanced; hence early recognition is crucial.

The most common fractures occur in the hip (femur) and the vertebral column.

Hip fractures may occur spontaneously or due to a fall resulting from muscle weakness, vision defects, instability.

They almost always require surgical treatment—either osteosynthesis or prosthesis. These are high-level surgeries, very expensive, with long rehabilitation periods and low rates of full functional recovery, often needing family and social care.

In Italy, hip (femoral neck) fractures are estimated at about 100,000 per year. They are the most serious in terms of morbidity and mortality. 25% of people die in the

year following a hip fracture. Only a small percentage return to their original level of function.

Vertebral fractures primarily affect women, due to trabecular fragility beginning around age 50 associated with menopause, and men around age 65. The number diagnosed in Italy is about 100,000 annually. Surgical interventions (e.g. vertebral cementing) or prolonged care are required, with sharply increasing costs.

Considering that Italy's National Health Service is funded at €136.5 billion per year (about 6.5% of GDP), the total cost of osteoporosis alone is estimated at €9.5 billion annually (source: Istituto Superiore di Sanità), about 7% of the total budget. This includes both direct costs (hospitalization, treatments) and indirect costs (disability, loss of productivity).

Prevention is a fundamental, non-negotiable challenge, which requires information, knowledge, and awareness.

Early diagnosis via bone mineral density tests (BMD) with DXA informs us about our skeletal health and bone loss.

Many factors influence the development of osteoporosis. Non-modifiable risk factors include:

- Age
- Sex
- Family history of osteoporosis
- Menopause / hysterectomy
- Some medications (e.g., glucocorticoids)
- rheumatoid arthritis; nutritional or gastrointestinal disorders;

immobility; tumors.

Modifiable risk factors are of great interest—they can alter the incidence of the disease and contribute to greater well-being in the elderly population.

You should avoid alcohol and smoking

Among lifestyle factors, diet and physical activity are at the top.

1. Nutrition: a balanced diet rich in calcium and vitamin D can support bone health.

Eating disorders like anorexia and bulimia, with major weight loss, are dangerous for bone health.

2. Physical exercise: regular physical activity helps maintain muscle trophism, stimulate bone density, combat sarcopenia, and thus reduce fall risk.

Pharmacological therapy (secondary prevention) become important when osteoporosis is already established and primary prevention (identifying risk factors, correcting lifestyles) has not been applied early or has had insufficient effect.

The policy of the AILA Foundation for fighting osteoporosis focuses on communication, fundamental for improving awareness.

In particular by translating scientific data into accessible information for all, and involving policymakers from various sectors to adopt adequate measures to contain the phenomenon.

The AILA Award – Progetto Donna was created: across its 24 Italian editions and some international ones, it has honored numerous figures from different fields (medical, scientific, artistic, cultural) to involve various sectors of society in a broad reflection on women's health and osteoporosis, bringing the initiative into major political forums such as the Chamber of Deputies, the Senate, the Capitoline Hill in Rome.

This year, the 24th edition was held in one of the most evocative locations in the world: the Archaeological Park of the Colosseum – Temple of Venus.

The world's population is aging more and more, with a high public health impact, making adequate preventive measures necessary to reduce the growing negative economic burden.

Public health initiatives should focus on improving awareness, screening, and access to effective treatments to counter the growing impact of longevity-related diseases.

International Day of Older Persons 2025 represents an opportunity to inform, debate, and promote healthy aging and general health through a new cultural vision—particularly of the role of women—to transform longevity into an achievement, not a burden.