

SAUDI ARABIA

OVERVIEW

The Saudi Osteoporosis Society is a scientific society concerned with osteoporosis and other metabolic bone diseases. Its mission is to improve patient care in the field of osteoporosis through evidence-based learning, expert analysis and case study-based management.

The Society aims to achieve the following objectives:

- The progression and development of the scientific thinking in the specialties of the Society (osteoporosis and related diseases).
- Giving the opportunity for the members in the Society to contribute to the scientific development of its fields.
- Enhancing exchange of scientific thinking in its field amongst different institutions and disciplines in the Kingdom and abroad.
- To help establish guidelines for the diagnosis and management of the common disorders related to the specialties of the society.
- Participation in Public Health Education in problems and diseases related to osteoporosis and related diseases.
- Issuing booklets, letters, etc. for public health education.
- Initiating, promoting and supporting programmes related to the specialties of the society; any of these programmes can be run as a separate unit, under the supervision of the Society.
- Cooperating with other societies and institutions in the Kingdom and abroad with similar activities.

KEY FINDINGS

The present population in Saudi Arabia is estimated to be 25.7 million, of this 10% (2.5 million) is 50 years of age or over and 2% (450 000) is 70 or over. By 2050, it is estimated that 31% (12.3 million) of the population will be 50 or over and 8% (3.2 million) will be 70 or over while the total population will increase to 40 million (fig 1).

FIGURE 1 Population projection for Saudi Arabia until 2050



REF US Census Bureau

TABLE 1 Prevalence of osteopenia and osteoporosis in Saudis (≥ 50 years), using US/European and Saudi reference data²

SITE		FEMALES		MALES	
		US/European reference	Saudi reference	US/European reference	Saudi reference
SPINE (L2-L4)	OSTEOPENIA	39.1%	42.2%	32.8%	19.1%
	OSTEOPOROSIS	47.7%	30.5%	38.3%	49.6%
FEMUR (TOTAL)	OSTEOPENIA	57.0%	58.6%	32.3%	56.7%
	OSTEOPOROSIS	7.8%	4.7%	6.3%	1.2%
EITHER (SPINE OR FEMUR)	OSTEOPENIA	41.4%	43.4%	46.5%	54.1%
	OSTEOPOROSIS	44.5%	28.2%	33.2%	37.8%

EPIDEMIOLOGY

In a study of 483 postmenopausal Saudi women aged 52 to 62 years, El-Desouki found the prevalence of osteopenia and osteoporosis to be 34% and 24%, respectively¹ (table 1).

Greer et al estimated the prevalence of osteoporosis for Saudi Arabian women aged 50-70 years to be approximately 23%³.

Hip fracture

The number of osteoporotic hip fractures was estimated to be 8768 cases in 2004⁴.

TABLE 2 Incidence of hip fractures per 100,000 population⁵

AGE (YEARS)	WOMEN	MEN
40-49	4.5	7
50-59	14.6	22
60-69	79	36
>70	394	251

The average number of days in hospital was 17.67 ± 13.63 (5-72 days).

Dalal Bubshait analyzed the economic implications of osteoporosis-related femoral fractures in Saudi Arabian society⁴. The annual cost of management of these fractures in the Eastern province of Saudi Arabia is USD 12.78 million (2004). By extrapolation to the whole Kingdom, the annual cost of managing femoral fractures would be USD 1.14 billion, a 27% increase in 5 years (1999, estimate was USD 0.47 billion).

TABLE 3 Vertebral fractures in 159 postmenopausal women according to age

AGE (YEARS)	TOTAL	WITH SINGLE FRACTURE	WITH MULTIPLE FRACTURES
< 51	2	2	0
51-60	24	22	2
61-70	70	70	0
71-80	49	20	29
> 80	14	4	10

Vertebral fracture, other fragility fractures

M Sadat-Ali et al. reviewed 785 chest radiographs from Saudi women over the age of 50 years at King Fahd Hospital of the University⁶. They observed that 20.3 % (159) of patients had at least 1 vertebral fracture and that only 13.2% of women with vertebral fractures were on antiresorptive therapy for osteoporosis.

DIAGNOSIS

No information available.

REIMBURSEMENT POLICY

No information available.

CALCIUM AND VITAMIN D

The problem of osteoporosis in Saudi Arabia has been overlooked until now. In 1990, Saleh Sedrani et al. observed that 22% of the studied Saudi children and 20% of Saudi adults had low concentrations of 25-OHD (5-10ng/ml), while the frequency of vitamin D deficiency (25-OHD level ≤ 5ng/ml) was 3.4% in total children and 5.5% in total adults⁷.

PREVENTION, EDUCATION, LEVEL OF AWARENESS

A large number of middle aged and elderly Saudi women are unaware of osteoporosis risk factors. Al-Shahrani et al. conducted a study among 368 Saudi women who attended the well-person clinic in a primary health care centre in Dirab area, Riyadh, Saudi Arabia between January and July 2006, using a validated questionnaire⁸. Seventy-six percent of women were postmenopausal and 62% had heard of osteoporosis. The identification of risk factors by participants ranged from poor to fair. Sixty percent of women identified low calcium intake, 39% lack of exercise and 22% a family history of osteoporosis as risk factors of osteoporosis. Only 48% of participants correctly identified calcium-rich foods.

Previous activities to raise prevention, education and level of awareness include:

- Recommendations and Guidelines on Diagnosis and Management of Osteoporosis (King Faisal Specialist Hospital and Research Center) were published 2004 and updated 2011.

- In April 2011 the Saudi Osteoporosis Society published its first bulletin on osteoporosis designed to provide education and updates to doctors and interested health care providers.
- An 'Osteo-Club' in the format of presentations and discussions was held in Riyadh every month in 2010.
- Workshops entitled 'Bone Builders' and 'Osteo-Strong' were designed to reach different parts of the Kingdom.

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