

# **NATIONAL OSTEOPOROSIS FOUNDATION OF SOUTH AFRICA NOFSA**



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# Fast facts on osteoporosis

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- Common: 1 in 3 women; 1 in 5 men
- Silent - until it's late in the day
- Serious:
  - Mortality following hip fracture ranges from 20 – 38%
  - Hip #: 50% never regain ability to independent existence
- Costly:
  - UK - £ 2.3b/yr. (£6m/d)
  - USA - \$14b/yr.

# BURDEN OF DISEASE IN SOUTH AFRICA

- Accurate fracture data will soon be available
- Incidence in White, Asian, Mixed race ? Similar to developed countries
- Aging population - 16% (8 million) South Africans > 50 years.
- Extrapolated data: 1.6 million females and 0.8 million males > 50 may currently be suffering from osteoporosis
- Vertebral BMD and fractures appear to be the same in SA Black and White subjects – Afro-Americans much higher BMD than Whites. Hip BMD higher in Black population

## An enormous burden worldwide



**1/3**



**1/5**

**GLOBALLY  
OVER 50  
WILL SUFFER AN  
OSTEOPOROTIC  
FRACTURE**

**+8.9  
million  
FRACTURES  
ANNUALLY**

1 fracture  
**every 3 sec**

HIP FRACTURE INCREASE

**1990 → 2050**



**+310%**



**+240%**

## Disability and loss of independence



AGED 45+

OSTEOPOROSIS ACCOUNTS FOR  
**MORE DAYS  
IN HOSPITAL**  
THAN OTHER DISEASES LIKE

**BREAST CANCER  
MYOCARDIAL INFARCTION  
DIABETES & OTHERS**



**FRACTURE RISK** OF TOP 5 **27** **HIGHER**  
% THAN PROSTATE  
CANCER RISK

**Underdiagnosed and undertreated**

**ONLY 1/3 OF VERTEBRAL FRACTURES COME TO CLINICAL ATTENTION**

**~ 80% OF PEOPLE**

WHO HAVE HAD AT LEAST ONE  
OSTEOPOROTIC FRACTURE, ARE  
NEITHER IDENTIFIED NOR TREATED FOR  
OSTEOPOROSIS



**ONLY ~ 40% OF HIGH RISK CHRONIC ORAL GLUCOCORTICIDS USERS HAVE TESTING OR TREATMENT**



**PEOPLE WITH TYPE 1 DIABETES HAVE LOWER BONE MINERAL DENSITY AND A HIGHER RISK OF OSTEOPOROTIC FRACTURES**



**INCIDENCE OF FRACTURES IN COELIAC SUFFERERS IS HIGHER COMPARED TO NON-SUFFERERS, WITH INCREASES OF 90% AND ALMOST 80% FOR HIP AND WRIST FRACTURES**

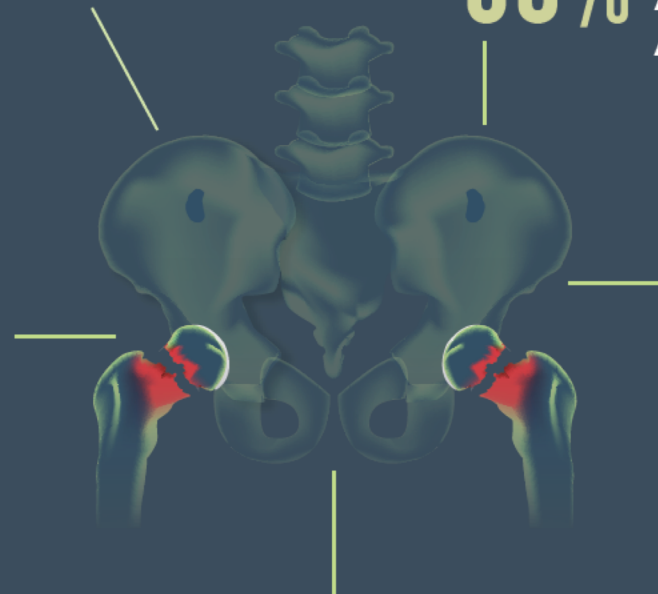
# Hip fracture

LOSS OF FUNCTION AND INDEPENDENCE AMONG SURVIVORS

**40%** **UNABLE** TO WALK  
INDEPENDENTLY

**60%** **REQUIRE**  
ASSISTANCE  
A YEAR LATER

**33%**  
**DEPENDENT**  
OR IN A NURSING  
HOME IN THE YEAR  
FOLLOWING  
A HIP FRACTURE



**Mortality**  
**UP TO 20-24%**  
IN THE **FIRST YEAR**  
AFTER A HIP FRACTURE

**50%** **OF PEOPLE WITH ONE**  
OSTEOPOROTIC FRACTURE WILL HAVE ANOTHER

**Table| 1.** Evidence-based clinical efficacy of medications

Medication	Fracture risk reduction in clinical trials			Route of administration/dosing regimen	Key reference
	Spine	Hip	Nonvertebral		
Antiresorptive medications					
Bisphosphonates					
Alendronate	X	X	X	Orally weekly	[14]
Risedronate	X	X	X	Orally weekly/monthly	[15,16]
Ibandronate	X			Orally daily/monthly; i.v. quarterly	[17]
Zoledronic acid	X	X	X	i.v. annually	[18]
Raloxifene <sup>a</sup>	X			Orally daily	[19]
Denosumab	X	X	X	Subcutaneously semi-annually	[20]
Anabolic agents					
Teriparatide	X		X	Subcutaneously daily	[21]

i.v., intravenous.

<sup>a</sup>Raloxifene has been shown to reduce the risk of invasive breast cancer [22].



**Table 1. Principal Conclusions About Drug Efficacy/Effectiveness and Adverse Events**

Variable	Outcome	Strength of Evidence	Magnitude of Effect
<b>Efficacy/Effectiveness</b>			
Alendronate Ibandronate Risedronate Zoledronic acid Denosumab Teriparatide Raloxifene	Vertebral Fractures in women with osteoporosis	Strong	Number needed to treat, 60–89 to prevent 1 fracture over 1–3 y of treatment
Alendronate Risedronate Zoledronic acid Denosumab Teriparatide	Nonvertebral fracture in women with osteoporosis	Strong	Number needed to treat, 50–60 to prevent 1 fracture over 1–3 y of treatment
Zoledronic acid	Vertebral Fractures in men with osteoporosis	Moderate	RR, 0.33 Number needed to treat, 30 (limited to 1 study in men of 24-mo duration)
<b>Adverse event</b>			
Bisphosphonates			0 persons
Denosumab			persons
Teriparatide			persons
Raloxifene			persons
Teriparatide			0 persons
Teriparatide			0 persons
Zoledronic acid			persons
Zoledronic acid			0 persons
Denosumab			118
Bisphosphonates			men
Bisphosphonates			

NNT for Aspirin in 2<sup>o</sup> prevention of CVD:  
 333 patients for 2 years to prevent 1 death  
 77 patients to prevent 1 non-fatal MI  
 200 patients to prevent 1 non-fatal stroke



# IOF Global Patient Charter

**Taking action for a world without fragility fractures**

Despite its severe impact, osteoporosis remains severely underdiagnosed and undertreated.

**This must stop!**





# NEEDS

Availability of Medication & Diagnostic tools (DXA)  
Fracture Liaison Service (FLS) (Capture the first fracture)

- Timely and accurate assessment of # risk, fall risk and diagnosis of osteoporosis
- Patient Care: Access to effective intervention options  
Regular drug treatment review
- Patient Voice: Involvement and choice in management plan
- Support: Care and support from society and HCP's to ensure independent living
- PMB/CDL



# CHALLENGES

- OP not health priority
- Myths
- SAHPRA
- Funding for epidemiologic studies not available



# EXPECTATIONS

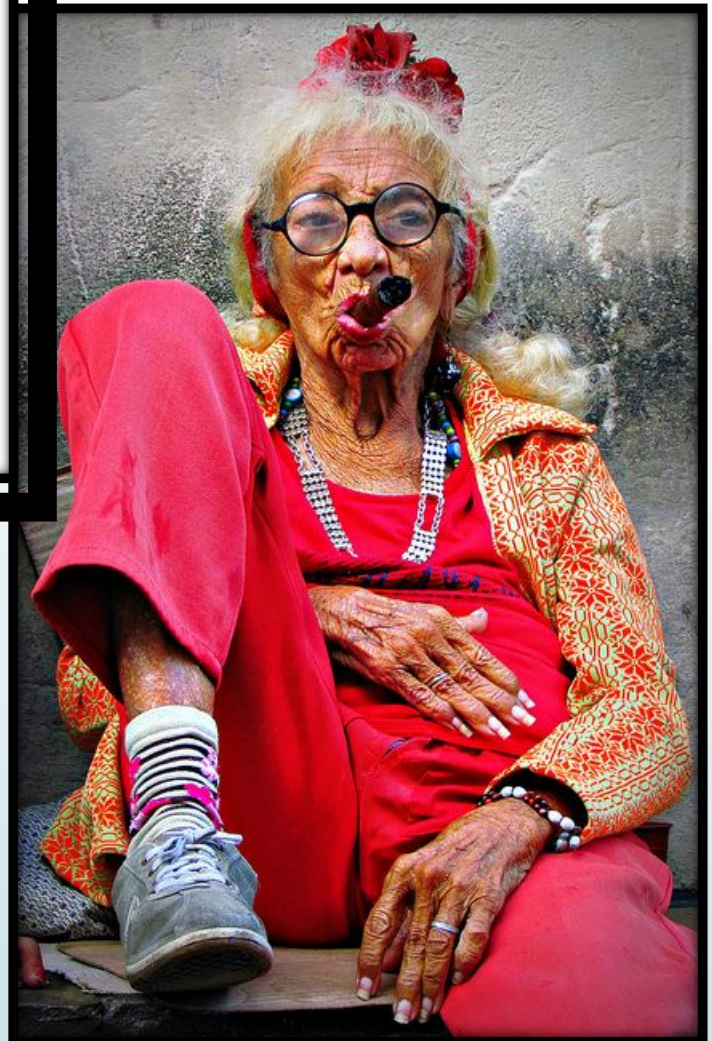
## **Policy Makers, Health Authorities And Government**

- ☐ Support Coordinated models of Care (FLS) to help reduce the global human and socio-economic burden of Fragility Fractures
- ☐ Actively involve Patient Societies and Key Opinion Leaders in the field in decision making





You can choose to  
live in the front row,  
or the third row...



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