

The right of the older people to optimal nutrition

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in context of the world of HIV/AIDS:

- South Africa has one of the most rapidly aging populations in Africa and despite the impact of the AIDS epidemic it is projected that one person out of ten in the South African population will be older than 60 years by 2025 (Joubert and Bradshaw, 2006).



TRADITIONAL ROLE OF THE ELDERLY

In our tradition the elderly make a substantial contribution in communities by assist in the caring for the youngsters freeing younger people for other productive activities



CHANGING ROLE OF THE ELDERLY

The changing role of the elderly in the world of HIV/AIDS has been described in several papers. Wilson and Adamchak (2000) referred to the AIDS epidemic in Sub-Saharan African countries as the “grandmother’s curse”.



MAINTAIN HEALTHY ELDERLY

- Now more than ever the importance of the older person to maintain healthy and therefore actively functional in society, is not debateable.
- Prevention is better than cure.
- Nutrition and physical activity play a dominant role in the maintenance of health




RURAL and URBAN COMMUNITIES




Men n=134 **Women n=198**

	Rural n=59		Urban n=75		Rural n=75		Urban121	
	HIV +	HIV -	HIV +	HIV -	HIV +	HIV -	HIV +	HIV -
Number	4	55	4	71	4	71	4	117*
Age (mean)	65.3	66.5	61.0	64.0	62.5	65.0	62.5	67.0
Range	3 years	27 years	13 years	34 years	6 years	27 years	17 years	33 years

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Level of Education (n and % of Total)

	MEN Rural n=59		MEN Urban n=75		WOMEN Rural n=75		WOMEN Urban121	
	HIV + n=4	HIV - n=55	HIV + n=4	HIV - n=71	HIV + n=4	HIV - n=71	HIV + n=4	HIV - n=117
none	2(33.3%)	32(28.8%)	1(16.7%)	26(23.4%)	2(28.6%)	33(21.2%)	1(14.3%)	27(17.3%)
primary	1(16.7%)	8(7.2%)	2(33.3%)	29(26.1%)	1(14.3%)	17(10.9%)	2(28.6%)	64(41.0%)
secondary	0	5(4.5%)	0	6(5.4%)	1(14.3%)	3(1.9%)	0	6(3.8%)
trade	0	0	0	0	0	0	0	1(0.6%)
higher	0	1(0.9%)	0	0	0	0	0	1(0.6%)

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Source of income

	MEN Rural n=59		MEN Urban n=75		WOMEN Rural n=75		WOMEN Urban121	
	HIV + n=4	HIV - n=55	HIV + n=4	HIV - n=71	HIV + n=4	HIV - n=71	HIV + n=4	HIV - n=117
Children/family	0	0	0	4	0	0	0	6
Employed	0	0	1	4	0	0	1	6
Child grants	0	8	0	8	2	4	0	7
Pension	0	8	1	14	2	5	1	8
No income	3	16	2	10	0	9	0	6
Not answered	0	1	0	1	0	0	1	6
Self employed	0	0	0	2	0	0	1	0
Spouse	1	2	0	8	0	0	0	0

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Medication and supplement use

	MEN Rural n=59		MEN Urban n=75		WOMEN Rural n=75		WOMEN Urban 121	
	HIV + n=4	HIV - n=55	HIV + n=4	HIV - n=71	HIV + n=4	HIV - n=71	HIV + n=4	HIV - n=117
Tuberculosis	0	4	1	1	0	0	0	0
Hypertension	1	9	1	15	1	22	1	45
Pain (Brufen)	4	36	1	22	4	55	1	51
Diabetes mellitus	0	0	0	0	0	1	0	10
Vitamin B complex	1	4	0	1	0	3	0	1

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RESULTS: MEASUREMENTS


Variables	MEN		WOMEN	
	RURAL HIV - n=55	URBAN HIV - n=71	RURAL HIV - n=71	URBAN HIV - n=117
Systolic Blood Pressure (mmHg)	144 (136-153)	148 (142-155)	147 (140-153)	153 (148-158)
Diastolic Blood Pressure (mmHg)	89 (84-93)	90 (87-94)	93 (89-96)	93 (90-95)
BMI (kg/m ²)	22.1 (20.6-23.6)	21.7 (20.8-22.7)	25.1 ^a (23.5-26.7)	30.6 ^a (29.4-31.9)
Waist circumference (cm)	80.1 (76.5-83.7)	79.3 (76.6-81.9)	79.6 ^b (76.4-82.9)	88.6 ^b (86.4-90.9)
Height (cm)	1.66 (1.64-1.68)	1.67 (1.65-1.68)	1.60 (1.53-1.57)	1.50 (1.53-1.56)
Mid upper right arm circumference (cm)	26.7 (25.5-27.9)	25.7 (24.9-26.6)	28.62 (27.3-29.9)	31.42 (30.3-32.5)

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MACRONUTRIENT INTAKE OF THE ELDERLY

nutrient intake per day with RDA per day	Men n=134		Women n=196	
	Rural n=59	Urban n=75	Rural n=75	Urban n=121
Energy intake (kJ)	7442 (6618-8267)	9656 (8766-10546)	5878.8 (5282-6496)	8789.3 (8199-9379)
Total fat intake (g)	35.4 (30.9-39.9)	62.4 (56.3-68.5)	30.9 (27.5-34.3)	67.1 (61.5-72.6)
% Energy from fat RDA=<8%	17.9 (16.3-19.4)	24.3 (23.1-25.6)	19.9 (18.2-21.7)	27.9 (26.7-29.1)
Total Protein intake (g) RDA=0.9-1.1g/kg	48.2 (42.9-53.4)	72.1 (65.6-78.6)	39.2 (35.3-43)	66.5 (61.7-71.2)
Moisture (ml) RDA=30ml/kg (1500 ml at least)	2015.9 ^c (1596-1235)	1903.2 ^c (1682-2124)	1555.4 ^c (1242-1869)	1556.4 ^c (1404-1709)
Alcohol (g)	17.9 ^a (8.9-26.9)	13.8 ^a (9.6-18.1)	9.91 (3.3-16.5)	6.11 (2.9-9.2)

RDA (recommended daily allowance) = Tufts University & WHO 2002

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MICRONUTRIENT INTAKE OF THE ELDERLY

Mineral intake per day with RDA per day	Men n=134		Women n=196	
	Rural n=59	Urban n=75	Rural n=75	Urban n=121
Calcium (mg) RDA=800-1200mg	283.6 (223.1-344.1)	419.8 (368.0-471.6)	202.9 (171.6-234.3)	430.1 (383.8-476.3)
Iron (mg) RDA=10mg	13.4 (11.9-14.8)	17.1 (15.3-19.0)	10.8 (9.7-11.9)	14.2 (13.2-15.3)
Magnesium (mg) RDA=225-280mg	364.4 [#] (297.1-431.6)	421.0 [#] (374.3-467.6)	273.3 (223.5-323.2)	331.0 (304.9-357.1)
*Zinc (mg) RDA=Men: High 4.2mg, Moderate 7.0mg, Low 14.0mg; Women: High 3.0mg, Moderate 4.9mg, Low 9.6mg	9.5 (8.4-10.5)	13.5 (12.1-14.9)	7.5 (6.7-8.3)	11.4 (10.5-12.2)
Selenium (mg) RDA=50-70mg	18.1 (14.4-21.8)	28.6 (25.1-32.1)	16.6 (12.9-20.3)	30.3 (27.2-33.5)
Copper (mg) RDA=1.3-1.5mg	1.2 (1.1-1.3)	1.5 (1.4-1.7)	0.96 (0.88-1.1)	1.4 (1.3-1.5)

MICRONUTRIENTS: VITAMIN INTAKES

Vitamin intake per day with RDA per day	Men n=134		Women n=196	
	Rural n=59	Urban n=75	Rural n=75	Urban n=121
Vit. A (mg retinol) RDA=600-700mg	276.6 (454.5-698.7)	1090.0 (913.1-1266.9)	522.9 (437.2-608.7)	1109.5 (974.6-1244.3)
Riboflavin (mg) RDA=Men: 1.3mg; Women 1.1mg	1.1 (0.9-1.3)	1.6 (1.5-1.8)	0.8 (0.7-0.97)	1.6 (1.4-1.8)
Folate (mg) RDA=400mg	374.2 (327.1-421.3)	490.1 (428.4-551.9)	296.9 (266.6-328.2)	381.1 (438.8-413.4)
Vit. B12 (mg) RDA=2.5mg	2.5 (1.7-3.4)	6.0 (4.8-7.2)	1.8 (1.4-2.2)	5.8 (4.8-6.8)
Vit. C (mg) RDA=60-100mg	14.5 (11.2-17.6)	37.5 (27.7-47.4)	14.2 (10.2-18.2)	49.8 (39.8-59.8)
Vit. D (mg)	2.2 (1.7-2.6)	2.9 (2.4-3.4)	1.9 (1.4-2.3)	3.1 (2.7-3.5)
Vit. E (IU) RDA=100-400IU	8.9 (7.3-10.5)	12.2 (10.9-13.5)	8.4 (7.2-9.5)	13.3 (12.1-14.4)
Vit. K (mg) RDA=60-90mg	31.7 (22.5-41.0)	66.2 (55.4-76.9)	30.5 (23.0-37.9)	82.6 (74.1-91.9)

The effect that caring for orphans has on the health and nutrition profile of these elderly (adjusted for urbanisation)

Variables*	Men n=134		Women n=196	
	Caring n=43	Not caring n=91	Caring n=92	Not caring n=104
% Energy from total fat RDA=<8%	23.3	20.7		
Energy intake (kJ)			6963.9 (6179.9-7747.9)	8084.0 (7479.5-8688.4)
Total Protein (g)			51.1 (44.7-57.4)	59.0 (54.2-63.8)
Vit. A (mg Retinol)			679.8 (532.9-826.7)	1020.1 (890.8-1149.3)
Riboflavin (mg)			1.1 (0.9-1.3)	1.4 (1.2-1.6)
Vit. B ₁₂ (mg)			3.4 (2.3-4.5)	4.8 (3.9-5.8)
Vit. E (IU)			10.2 (8.7-11.7)	12.2 (11.0-13.3)

Only variables that differ statistically at p<0.05 are shown in table

ALL NOT ONLY NEGATIVE.....

Variables*	Men n=134		Women n=198	
	Caring n=43	Not caring n=91	Caring n=92	Not caring n=104
Total fat intake (g)			47.7 (40.8-54.6)	56.8 (50.9-62.6)
Total sugar (g)			40.6 (33.9-47.4)	51.6 (45.6-57.7)
Added sugar (g)			30.6 (25.0-36.1)	39.4 (34.7-44.1)
BMI (kg/m ²)			26.9 (25.4-28.5)	29.7 (28.3-31.1)
Hip Circumference (cm)			100.9 (97.3-104.6)	106.8 (103.8-109.8)
Systolic BP mmHg	139.5 (130.6-148.3)	150.0 (144.2-156.8)		

Only variables that differ statistically at p<0.05 are shown in table

CONCLUSION

- **ELDERLY IN URBAN AREAS**
 - better micronutrient status
 - Higher fat intakes
 - Higher energy intakes - changes from a prudent to a westernised diet
 - Higher incidence of NCD
- **Caring and providing for orphans**
 - Already compromised diets become more compromised
 - Stay longer - physical active
 - Later retirement especially the women

RECOMMENDATIONS

- **MUCH BETTER CARE FOR OUR ELDERLY**
 - Sustainable food security practises
 - Support to get to health services easier
 - Child support access
 - Better advice to good and healthy nutrition practises - remember they are again raising the next generation and knowledge changed a lot since they raised their own children