

NIGERIA

Last Updated: 2007-12-19

Level	Date	Location and sample descriptor	Sex	Age (years)	Sample size	Prevalence of xerophthalmia (%)							Serum / plasma retinol concentration (µmol/l)			Reference	Notes			
						Current XN	Previous XN	X1B	X2	X3A	X3B	XS	Prevalence (%)				Mean	SD	General	Line
													<0.35	<0.70	< 1.05					
L	2004 P	<i>Ilesa: PW: Total</i>	F	15.00-43.99	200								17.5	54.5		0.74	0.45	4764	*	
		<i>PW by age</i>	F	15.00-19.99	9											0.77	0.49			
		<i>PW by age</i>	F	20.00-24.99	47											0.75	0.49			
		<i>PW by age</i>	F	25.00-29.99	80											0.76	0.44			
		<i>PW by age</i>	F	30.00-34.99	43											0.60	0.32			
		<i>PW by age</i>	F	35.00-39.99	14											0.93	0.58			
		<i>PW by age</i>	F	40.00-43.99	7											0.88	0.57			
N	2003	National: Women: Total	F	15.00-49.99	3911		7.70											4743	*	1
		Women by area: Urban	F	15.00-49.99	1144		5.60													2
		Women by area: Rural	F	15.00-49.99	2766		8.50													3
		Women by region: North Central	F	15.00-49.99	575		5.60													4
		Women by region: North East	F	15.00-49.99	862		11.10													5
		Women by region: North West	F	15.00-49.99	1341		4.90													6
		Women by region: South East	F	15.00-49.99	222		5.30													7
		Women by region: South South	F	15.00-49.99	544		11.00													8
		Women by region: South West	F	15.00-49.99	367		9.30													9
N	2001	<i>National: Pre-SAC: Total</i>	B	0.00-4.99	3099								4.7	29.5		0.95		4581	*	10
		<i>National: Women: Total</i>	F	NS	3874									4.1	13.1					
		<i>National: PW: Total</i>	F	NS	825									1.7	19.2					
		<i>Pre-SAC by area: Urban</i>	B	0.00-4.99	662								2.3	24.5		0.97				11
		<i>Pre-SAC by area: Medium</i>	B	0.00-4.99	1152								7.5	32.6		0.92				12
		<i>Pre-SAC by area: Rural</i>	B	0.00-4.99	1285								3.4	26.8		0.97				13
		<i>Pre-SAC by agroecological zone: Dry savanna</i>	B	0.00-4.99	787								3.1	31.3		0.92				14
		<i>Pre-SAC by agroecological zone: Humid forest</i>	B	0.00-4.99	1383								7.1	29.9		0.93				15
		<i>Pre-SAC by agroecological zone: Moist savanna</i>	B	0.00-4.99	929								2.4	23.9		1.01				16
		<i>Pre-SAC by state: Akwa Ibom</i>	B	0.00-4.99	436								1.8	29.1						
		<i>Pre-SAC by state: Bayelsa</i>	B	0.00-4.99	179								0.6	23.0						
		<i>Pre-SAC by state: Borno</i>	B	0.00-4.99	280								4.3	36.4						
		<i>Pre-SAC by state: Edo</i>	B	0.00-4.99	251								32.8	60.4						
		<i>Pre-SAC by state: Imo</i>	B	0.00-4.99	254								0.4	10.6						
		<i>Pre-SAC by state: Kaduna</i>	B	0.00-4.99	212								2.4	30.2						
		<i>Pre-SAC by state: Kano</i>	B	0.00-4.99	398								1.8	22.5						
<i>Pre-SAC by state: Kebbi</i>	B	0.00-4.99	107								4.7	51.4								
<i>Pre-SAC by state: Kwara</i>	B	0.00-4.99	184								2.7	26.1								
<i>Pre-SAC by state: Nasarawa</i>	B	0.00-4.99	202								2.0	21.3								
<i>Pre-SAC by state: Osun</i>	B	0.00-4.99	259								1.5	23.9								

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						Current XN	Previous XN	X1B	X2	X3A	X3B	XS	Prevalence (%)				Mean	SD	General	Line
													<0.35	<0.70	< 1.05					
N	2001	<i>Pre-SAC by state: Taraba</i>	<i>B</i>	<i>0.00-4.99</i>	<i>330</i>								2.4	20.2				4581		
		<i>Women by area: Urban</i>	<i>F</i>	<i>NS</i>	<i>NS</i>										10.0					
		<i>Women by area: Medium</i>	<i>F</i>	<i>NS</i>	<i>NS</i>										30.7					
		<i>Women by area: Rural</i>	<i>F</i>	<i>NS</i>	<i>NS</i>										11.2					
		<i>Women by agroecological zone: Dry savanna</i>	<i>F</i>	<i>NS</i>	<i>NS</i>										19.6					
		<i>Women by agroecological zone: Humid forest</i>	<i>F</i>	<i>NS</i>	<i>NS</i>										8.8					
		<i>Women by agroecological zone: Moist savanna</i>	<i>F</i>	<i>NS</i>	<i>NS</i>										14.5					
		<i>Women by state: Akwa Ibom</i>	<i>F</i>	<i>NS</i>	<i>519</i>										1.2					
		<i>Women by state: Bayelsa</i>	<i>F</i>	<i>NS</i>	<i>233</i>										0.0					
		<i>Women by state: Borno</i>	<i>F</i>	<i>NS</i>	<i>384</i>										4.2					
		<i>Women by state: Edo</i>	<i>F</i>	<i>NS</i>	<i>258</i>										32.2					
		<i>Women by state: Imo</i>	<i>F</i>	<i>NS</i>	<i>365</i>										0.8					
		<i>Women by state: Kaduna</i>	<i>F</i>	<i>NS</i>	<i>335</i>										3.0					
		<i>Women by state: Kano</i>	<i>F</i>	<i>NS</i>	<i>501</i>										1.8					
		<i>Women by state: Kebbi</i>	<i>F</i>	<i>NS</i>	<i>201</i>										4.0					
		<i>Women by state: Kwara</i>	<i>F</i>	<i>NS</i>	<i>249</i>										0.0					
		<i>Women by state: Nasarawa</i>	<i>F</i>	<i>NS</i>	<i>204</i>										1.0					
		<i>Women by state: Osun</i>	<i>F</i>	<i>NS</i>	<i>293</i>										0.7					
		<i>Women by state: Taraba</i>	<i>F</i>	<i>NS</i>	<i>332</i>										5.7					
		<i>PW by area: Urban</i>	<i>F</i>	<i>NS</i>	<i>NS</i>										25.2					
		<i>PW by area: Medium</i>	<i>F</i>	<i>NS</i>	<i>NS</i>										17.3					
		<i>PW by area: Rural</i>	<i>F</i>	<i>NS</i>	<i>NS</i>										24.4					
		<i>PW by agroecological zone: Dry savanna</i>	<i>F</i>	<i>NS</i>	<i>NS</i>										34.4					
		<i>PW by agroecological zone: Humid forest</i>	<i>F</i>	<i>NS</i>	<i>NS</i>										21.6					
		<i>PW by agroecological zone: Moist savanna</i>	<i>F</i>	<i>NS</i>	<i>NS</i>										28.3					
		<i>PW by state: Akwa Ibom</i>	<i>F</i>	<i>NS</i>	<i>94</i>										5.3					
		<i>PW by state: Bayelsa</i>	<i>F</i>	<i>NS</i>	<i>41</i>										9.8					
		<i>PW by state: Borno</i>	<i>F</i>	<i>NS</i>	<i>92</i>										10.9					
		<i>PW by state: Edo</i>	<i>F</i>	<i>NS</i>	<i>38</i>										47.7					
		<i>PW by state: Imo</i>	<i>F</i>	<i>NS</i>	<i>99</i>										3.0					
		<i>PW by state: Kaduna</i>	<i>F</i>	<i>NS</i>	<i>65</i>										7.7					
		<i>PW by state: Kano</i>	<i>F</i>	<i>NS</i>	<i>102</i>										7.8					
		<i>PW by state: Kebbi</i>	<i>F</i>	<i>NS</i>	<i>55</i>										7.3					
		<i>PW by state: Kwara</i>	<i>F</i>	<i>NS</i>	<i>67</i>										4.5					
		<i>PW by state: Nasarawa</i>	<i>F</i>	<i>NS</i>	<i>44</i>										4.5					
		<i>PW by state: Osun</i>	<i>F</i>	<i>NS</i>	<i>62</i>										4.8					
		<i>PW by state: Taraba</i>	<i>F</i>	<i>NS</i>	<i>66</i>										10.6					

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						Current XN	Previous XN	X1B	X2	X3A	X3B	XS	Prevalence (%)				Mean	SD	General	Line
													<0.35	<0.70	< 1.05					
L	1997 P	<i>Osu and Ibadan communities: Pre-SAC</i>	B	0.25-4.74	53								0.0	11.3			1959	*		
L	1993	Community of Ijaye Orile: Pre-SAC	B	2.00-6.07	213	1.50											4186	*		
		<i>Community of Ijaye Orile: Pre-SAC: Total</i>	B	0.50-6.07	213								26.8	74.7	0.53	0.28				
		<i>Pre-SAC by sex</i>	F	0.50-6.07	104								23.0		0.53	0.29				
		<i>Pre-SAC by sex</i>	M	0.50-6.07	109								30.0		0.54	0.28				
N	1993	National: Pre-SAC: Total	B	0.50-5.99	2905			0.28	0.76								50	*		
		National: Pre-SAC: Total	B	2.00-5.99	1786	1.00														
		National: NPW	F	15.00-45.99	NS	1.90														
		National: PW	F	15.00-45.99	NS	2.40														
		National: LW	F	15.00-45.99	NS	1.80														
		<i>Pre-SAC by sex</i>	F	2.00-5.99	790	0.80														
		<i>Pre-SAC by sex</i>	M	2.00-5.99	991	1.00														
		<i>Pre-SAC by age</i>	B	2.00-2.99	563	1.00														
		<i>Pre-SAC by age</i>	B	3.00-3.99	505	1.40														
		<i>Pre-SAC by age</i>	B	4.00-4.99	385	0.50														
		<i>Pre-SAC by age</i>	B	5.00-5.99	333	0.60														
		<i>Pre-SAC by area: Urban</i>	B	2.00-5.99	674	0.70														
		<i>Pre-SAC by area: Periurban</i>	B	2.00-5.99	168	0.60														
		<i>Pre-SAC by area: Rural</i>	B	2.00-5.99	944	1.20														
		<i>Pre-SAC by health zone: North East</i>	B	2.00-5.99	410	1.50														
		<i>Pre-SAC by health zone: North West</i>	B	2.00-5.99	459	0.70														
		<i>Pre-SAC by health zone: South West</i>	B	2.00-5.99	459	1.70														
		<i>Pre-SAC by health zone: South East</i>	B	2.00-5.99	458	0.00														
		<i>National: Pre-SAC: Total</i>	B	0.50-5.99	1331								8.1	34.4	1.10	0.65			17	
		<i>Pre-SAC by sex</i>	F	0.50-5.99	510								8.3	35.3						
		<i>Pre-SAC by sex</i>	M	0.50-5.99	732								8.1	33.7						
		<i>Pre-SAC by age</i>	B	0.50-0.99	105								4.8	29.5						
		<i>Pre-SAC by age</i>	B	1.00-1.49	143								4.9	32.2						
		<i>Pre-SAC by age</i>	B	1.50-1.99	123								7.3	31.7						
		<i>Pre-SAC by age</i>	B	2.00-2.99	271								10.0	36.2						
		<i>Pre-SAC by age</i>	B	3.00-3.99	249								11.2	36.1						
		<i>Pre-SAC by age</i>	B	4.00-4.99	184								8.2	35.3						
		<i>Pre-SAC by age</i>	B	5.00-5.99	166								9.6	30.1						
		<i>Pre-SAC by area: Urban</i>	B	0.50-5.99	655								4.9	27.2						
		<i>Pre-SAC by area: Periurban</i>	B	0.50-5.99	93								8.6	41.9						
		<i>Pre-SAC by area: Rural</i>	B	0.50-5.99	583								11.7	41.3						

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						Current XN	Previous XN	X1B	X2	X3A	X3B	XS	Prevalence (%)				Mean	SD	General	Line
													<0.35	<0.70	< 1.05					
N	1993	Pre-SAC by health zone: North East	B	0.50-5.99	127								16.8	49.6			50			
		Pre-SAC by health zone: North West	B	0.50-5.99	184								10.7	48.2						
		Pre-SAC by health zone: South East	B	0.50-5.99	35								1.7	15.2						
		Pre-SAC by health zone: South West	B	0.50-5.99	112								4.3	24.2						
R	1992 -1993	4 zones: Pre-SAC: Total	B	0.00-5.99	739									9.2			41	*		
		4 zones: Women: Total	F	15.00-45.99	NS									7.3						
		Pre-SAC by zone A	B	0.00-5.99	158									5.8						
		Pre-SAC by zone B	B	0.00-5.99	261									1.5						
		Pre-SAC by zone C	B	0.00-5.99	158									16.5						
		Pre-SAC by zone D	B	0.00-5.99	162									12.0						
		Women by zone A	F	15.00-45.99	192									4.2						
		Women by zone B	F	15.00-45.99	284									1.8						
		Women by zone C	F	15.00-45.99	192									14.6						
		Women by zone D	F	15.00-45.99	285									8.8						
L	1987	Community of Obukpa: Pre-SAC: Total	B	3.00-5.07	162	3.70											1990	*		
		Community of Obukpa: Pre-SAC: Total	B	0.17-5.07	250								9.2	34.8	1.31	0.72				
		Pre-SAC by sex	F	0.17-5.07	133								6.8		1.31	0.70				
		Pre-SAC by sex	M	0.17-5.07	117								11.9		1.31	0.74				
S	1983 P	Cross River State: Newborns by sex	F	0.00	62											0.85	0.08	218	*	18
		Cross River State: Newborns by sex	M	0.00	50											0.93	0.22			19
		Cross River State: Women at delivery	F	NS	112											2.35	0.49			

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Reference No: 4764

General notes: *Sample comprised of 200 consecutive pregnant women who registered for the antenatal clinic at the Wesley Guild Hospital in Ilesa, Osun state.*

Reference No: 4743

General notes: *Two-stage cluster sampling. Sample includes women who gave birth in the 5 years preceding the survey. Previous XN is XN during previous pregnancy, for women with two or more live births in the five-years period, data refer to the most recent birth.*

Note 1 XN prevalence adjusted for daytime visual problems: 2.20%

Note 2 XN prevalence adjusted for daytime visual problems: 0.90%

Note 3 XN prevalence adjusted for daytime visual problems: 2.70%

Note 4 XN prevalence adjusted for daytime visual problems: 0.10%

Note 5 XN prevalence adjusted for daytime visual problems: 3.80%

Note 6 XN prevalence adjusted for daytime visual problems: 2.40%

Note 7 XN prevalence adjusted for daytime visual problems: 0.30%

Note 8 XN prevalence adjusted for daytime visual problems: 1.90%

Note 9 XN prevalence adjusted for daytime visual problems: 2.30%

Reference No: 4581

General notes: *Multi-stage PPS cluster sampling, stratified by agroecological zone and predominant food crops. Sample designed to be nationally representative. Sample comprised of 6480 households within 12 randomly selected states, representing a third of the states. Sample sizes for total, by area, and by location for pre-SAC obtained from reference No. 5628.*

Note 10 Median: 0.91 µmol/L

Note 11 Median: 0.93 µmol/L

Note 12 Median: 0.86 µmol/L

Note 13 Median: 0.93 µmol/L

Note 14 Median: 0.86 µmol/L

Note 15 Median: 0.90 µmol/L

Note 16 Median: 0.96 µmol/L

Reference No: 1959

General notes: *Sample comprised of pre-SAC from the communities of Osu and Ibodi, Atakumosa Local Government Area, Osun state. Every 5th household in the 2 communities with children under 5 years of age selected.*

Reference No: 4186

General notes: *Sample comprised of pre-SAC from the community of Ijaye Orile (randomly selected from all communities in Akinyele Local Government Area), Oyo state. No local term for night blindness. Survey carried out during the dry season. Serum retinol concentrations converted from µg/mL to µmol/L.*

Reference No: 50

General notes: *Two-stage cluster sampling stratified by health zones. Sample representative for each 4 health zones (South-east, South-west, North-west and North-east). Summary data reported in reference No. 2647. The methodology also reported in reference No. 202. Serum retinol concentrations converted from µg/mL to µmol/L.*

Note 17 Median: 0.99 µmol/L

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Reference No: 41

General notes: *Multi-stage cluster sampling. Sample selected from 10 states (UNICEF focal states) in 4 zones.*

Reference No: 1990

General notes: *Two-stage stratified cluster sampling. Survey conducted in the rural community of Obukpa in Nsukka Local Government Area of the Eastern region. Local term for night blindness used (isi-ocha). Serum retinol concentrations converted from $\mu\text{g/mL}$ to $\mu\text{mol/L}$.*

Reference No: 218

General notes: *Sample comprised of mothers and newborns from rural clinics, health centres and maternities in the Cross River state. Longitudinal study, only baseline data included in the database. Serum retinol concentrations converted from $\mu\text{g}/100\text{ mL}$ to $\mu\text{mol/L}$.*

Note 18 Cord blood.

Note 19 Cord blood.

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