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CENTER FOR DISEASE CONTROL

# NUTRITION SURVEILLANCE

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U.S. DEPARTMENT OF  
HEALTH, EDUCATION, AND WELFARE  
PUBLIC HEALTH SERVICE

## PREFACE

This report summarizes information, including selected indices of nutrition status, received from 11 participating states which comprise a group of contributors to a developing program of nutrition surveillance in the United States. We will consider adding other indices as their utility and availability become evident. To the extent possible, tabulations in subsequent issues will be presented in the same format unless experience indicates a change is appropriate.

The data presented in these tabulations come from a variety of sources including health department clinics, WIC screening, Head-start programs, and other health care situations. Because of the lack of uniformity of data sources, as well as methodology, direct comparisons among states should be made with caution.

Contributions to NUTRITION SURVEILLANCE are welcome. Please submit to:

Center for Disease Control  
Attention: Nutrition Division, BSE  
Atlanta, Georgia 30333

Center for Disease Control . . . . . William H. Foege, M.D.  
Director

## NUTRITION INDICES (October-December 1976)

Data presented in Tables 1-3 represent children examined during the fourth quarter of 1976. They reflect initial visits to the health system and do not represent either the results of nutrition intervention or the nutritional status of the general population.

Of the five states each submitting more than 3,000 new examinations, Arizona continues to have the lowest prevalence of low hematologic values, and the highest of low height-for-age, low weight-for-height, and high weight-for-height (Table 1).

Of the four most frequently represented ethnic groups, and with all ages combined, the same pattern - the least "anemia" and the most "stunting," "wasting" and overweight - is displayed, with two exceptions, in American Indians. The exceptions: for males, Spanish Americans have the same prevalence of low hematocrit values; for females, Blacks have a slightly higher prevalence of overweight (Table 2).

Of the various age groups, with all ethnic groups combined, this pattern is seen again, with one exception, among children less than 2 years of age. The exception: for females, 6-9 year olds have slightly more wasting (Table 3).

## CRITERIA FOR IDENTIFYING INDIVIDUALS WITH LOW OR HIGH VALUES

1. Low Hemoglobin and Low Hematocrit: Hemoglobin or hematocrit below the level specified in the following table for appropriate age and sex.

<u>Age</u>	<u>Hgb.</u>	<u>Hct.</u>
6-23 months	10 grams	31%
2-5 years	11 grams	34%
6-14 years	12 grams	37%
15 or more years (females)	12 grams	37%
15 or more years (males)	13 grams	40%

2. Low Height-for-Age: Height-for-age less than the 5th percentile of a person of the same sex and age in the reference population.
3. Low Weight-for-Age: Weight-for-age less than the 5th percentile of a person of the same sex and age in the reference population.
4. Low Weight-for-Height: Weight-for-height less than the 5th percentile of a person of the same sex and height in the reference population.
5. High Weight-for-Height: Weight-for-height greater than the 95th percentile of a person of the same sex and height in the reference population.

Reference Population: Smoothed distribution of percentiles of the following populations:

<u>Age</u>	<u>Reference Population Data</u>
Birth - 24 months	Fels Research Institute Growth Study
25 - 59 months	First Health and Nutrition Examination Survey (HANES)
60 - 143 months	National Health Examination Survey, Cycle II; and HANES
144 - 215 months	National Health Examination Survey, Cycle III; and HANES

Note: Growth percentiles represent heights and weights which have been standardized for sex and age, and sex and height (for weight-for-height). Therefore height and weight comparisons may be made between groups of individuals using percentiles without being concerned about the age and sex distributions of groups being compared. However, comparisons of height and weight among groups with persons of diverse ethnic origins should be made with care because of possible genetic differences in growth potential. Differences observed between groups may be due to differences in nutritional status of the individuals or in possible differences in the ethnic makeup of the groups.

Nutrition Indices by State, October-December 1976  
Persons Less than 18 Years of Age

State	Hemoglobin		Hematocrit		Height-For-Age		Weight-For-Age		Weight-For-Height		
	No. Exam.	% Low	No. Exam.	% Low	No. Exam.	% Low	No. Exam.	% Low	No. Exam.	% Low	% High
Arizona	1,249	7.2	1,671	12.3	3,423	16.8	3,292	10.2	2,369	7.0	13.3
California (Los Angeles County)	79	13.9	245	20.8	737	7.3	737	4.6	618	1.9	7.9
Florida	26	11.5	49	20.4	322	6.8	370	4.6	210	5.2	6.7
Kentucky	1,389	18.0	1,643	17.4	4,710	12.3	4,715	6.6	3,394	5.4	12.9
Louisiana	2,676	18.4	1,492	16.8	4,933	10.3	5,021	7.0	3,115	5.2	9.7
Montana	32	6.3	614	12.2	919	13.7	937	5.0	804	2.9	8.1
Nevada	45	2.2	210	24.8	323	8.4	325	4.6	311	9.3	8.0
Ohio	353	4.5	1,045	13.5	2,105	7.4	2,110	5.9	1,666	6.1	8.3
Oregon	286	15.4	720	12.2	1,318	9.1	1,318	5.7	967	2.7	10.3
Tennessee	99	4.0	5,201	18.3	7,008	11.3	7,064	5.8	5,275	4.2	13.2
Washington	230	8.7	2,586	9.7	4,110	12.6	4,110	5.7	3,603	2.9	12.5
Total	6,464	14.4	15,476	15.3	29,908	11.6	29,999	6.5	22,332	4.6	11.6

Table 2

Nutrition Indices by Sex and Ethnic Group, October-December 1976  
Persons Less than 18 Years of Age

Sex and Ethnic Group	<u>Hemoglobin</u>		<u>Hematocrit</u>		<u>Height-For-Age</u>		<u>Weight-For-Age</u>		<u>Weight-For-Height</u>		
	No. Exam.	% Low	No. Exam.	% Low	No. Exam.	% Low	No. Exam.	% Low	No. Exam.	% Low	% High
Male											
Black	1,173	19.7	1,519	20.5	3,617	11.7	3,690	7.0	2,548	4.4	10.8
White	1,510	12.8	5,041	14.8	8,985	11.6	9,003	6.2	7,088	4.3	11.5
Sp. American	371	9.7	499	12.6	988	14.3	962	7.0	793	4.0	10.8
Am. Indian	89	3.4	406	12.6	899	20.6	896	9.5	691	7.8	14.0
Oriental	6	0.0	28	0.0	51	29.4	51	9.8	43	4.7	4.7
Other	7	14.3	53	15.1	72	19.4	74	12.2	66	10.6	9.1
Unknown	36	11.1	285	11.9	562	9.1	557	4.1	539	2.2	10.4
Total	3,192	14.7	7,831	15.5	15,174	12.3	15,233	6.6	11,768	4.5	11.4
Female											
Black	1,231	19.9	1,524	19.4	3,600	9.9	3,647	6.7	2,310	6.4	10.5
White	1,532	11.8	4,848	14.1	8,623	10.9	8,647	6.3	6,295	4.6	11.4
Sp. American	372	7.8	497	15.9	984	11.8	961	7.0	706	3.5	14.3
Am. Indian	86	4.7	431	13.0	887	15.4	874	7.7	666	6.0	21.0
Oriental	7	28.6	23	4.3	46	19.6	46	13.0	37	5.4	8.1
Other	12	0.0	42	16.7	68	11.8	68	7.4	53	3.8	11.3
Unknown	29	13.8	262	8.4	526	7.0	523	1.7	497	1.2	9.3
Total	3,269	14.2	7,627	15.0	14,734	10.9	14,766	6.4	10,564	4.8	11.9

Table 3

Nutrition Indices by Sex and Age, October-December 1976  
Persons Less than 18 Years of Age

Sex and Age Group	<u>Hemoglobin</u>		<u>Hematocrit</u>		<u>Height-For-Age</u>		<u>Weight-For-Age</u>		<u>Weight-For-Height</u>			
	No. Exam.	% Low	No. Exam.	% Low	No. Exam.	% Low	No. Exam.	% Low	No. Exam.	% Low	% High	
Male												
<1	395	11.4	1,008	9.5	5,368	14.7	5,395	6.4	3,613	6.2	11.8	
1	501	12.6	1,360	8.9	1,793	16.0	1,815	9.1	1,770	5.9	16.9	
2-5	1,301	13.8	3,363	17.0	4,737	10.7	4,739	5.5	4,693	2.8	10.2	
6-9	402	23.6	884	28.8	1,426	6.6	1,432	5.1	1,397	3.9	7.7	
10-12	259	15.4	485	17.5	769	10.4	771	9.5	295	4.4	7.8	
13-17	334	14.1	731	11.6	1,081	10.9	1,081	8.3	-	-	-	
Total	3,192	14.7	7,831	15.5	15,174	12.3	15,233	6.6	11,768	4.5	11.4	
Female												
<1	417	7.7	990	8.4	5,083	12.1	5,089	6.4	3,219	6.1	12.1	
1	503	10.1	1,202	9.7	1,645	14.3	1,655	7.1	1,611	4.8	16.1	
2-5	1,270	12.3	3,240	16.1	4,587	11.0	4,591	6.4	4,541	3.7	11.8	
6-9	365	22.2	878	27.0	1,359	5.2	1,364	4.8	1,185	6.2	6.3	
10-12	262	21.8	490	13.9	802	9.0	802	7.1	8	0.0	0.0	
13-17	452	19.5	827	14.3	1,258	8.1	1,265	6.6	-	-	-	
Total	3,269	14.2	7,627	15.0	14,734	10.9	14,766	6.4	10,564	4.8	11.9	

## NUTRITION INDICES (January-December 1976)

Data presented in Tables 4, 5a & b, and 6a & b, summarize the results of all children examined on initial visits during calendar year 1976. Their numbers are higher than the combined numbers presented earlier by individual quarters, because additional data have been reported subsequent to publication of prior bulletins.

Table 4 makes evident the wide range in values of various nutrition indices among states, and for the two hematologic indices, within certain states. To what extent these variations are due to methodologic, rather than biologic differences is unknown.



Nutrition Indices by State, January-December 1976  
Persons Less than 18 Years of Age

State	Date	Hemoglobin		Hematocrit		Height For Age		Weight For Age		Weight For Height			
		No. Exam.	% Low	No. Exam.	% Low	No. Exam.	% Low	No. Exam.	% Low	No. Exam.	% Low	% High	
Arizona	1976	1st	4,053	10.1	5,360	14.9	9,708	15.8	9,636	8.5	7,529	5.3	15.3
		2nd	2,593	8.7	3,309	12.6	6,699	15.9	6,550	10.0	4,771	7.1	12.0
	Total	6,646	9.5	8,669	14.0	16,407	15.8	16,186	9.1	12,300	6.0	14.0	
California	1976	1st	847	8.4	761	29.0	1,792	8.6	1,775	5.0	1,691	1.5	9.0
		2nd	182	13.7	453	28.7	1,074	7.9	1,073	4.4	901	2.1	8.5
	Total	1,029	9.3	1,214	28.9	2,866	8.4	2,848	4.8	2,592	1.7	8.9	
Florida	1976	1st	29	0.0	41	9.8	111	6.3	149	9.4	78	3.8	10.3
		2nd	51	11.8	161	21.1	657	7.5	781	6.5	455	5.1	8.1
	Total	80	7.5	202	18.8	768	7.3	930	7.0	533	4.9	8.4	
Kentucky	1976	1st	1,856	12.9	2,404	14.3	6,351	12.6	6,376	6.6	4,248	4.7	12.3
		2nd	2,300	15.3	3,592	17.4	8,694	11.7	8,709	6.8	6,222	5.8	11.7
	Total	4,156	14.2	5,996	16.1	15,045	12.1	15,085	6.7	10,470	5.3	12.0	
Louisiana	1976	1st	7,322	16.0	11,920	31.0	21,489	11.7	21,669	7.6	11,614	4.3	8.7
		2nd	6,008	18.9	3,190	15.9	10,707	10.1	10,895	6.8	6,737	5.7	9.6
	Total	13,330	17.3	15,110	27.8	32,196	11.2	32,564	7.3	18,351	4.8	9.0	
Montana	1976	1st	1	-	2,491	11.8	2,918	9.2	2,914	6.1	2,091	2.6	7.6
		2nd	37	8.1	1,308	11.9	1,885	13.3	1,900	6.8	1,672	3.2	8.1
	Total	38	7.9	3,799	11.8	4,803	10.8	4,814	6.4	3,763	2.9	7.8	
Ohio	1976	1st	28	10.7	-	-	28	3.6	28	3.6	28	3.6	14.3
		2nd	738	5.3	2,164	14.7	3,997	8.2	4,013	6.4	3,288	6.1	8.3
	Total	766	5.5	2,164	14.7	4,025	8.2	4,041	6.3	3,316	6.1	8.4	
Oregon	1976	1st	88	15.9	1,431	16.7	2,344	8.2	2,345	4.7	1,696	1.7	9.4
		2nd	462	14.1	1,382	10.2	2,515	9.6	2,515	5.3	2,056	2.7	10.1
	Total	550	14.4	2,813	13.5	4,859	9.0	4,860	5.0	3,752	2.3	9.8	
Tennessee	1976	1st	245	7.8	6,375	18.3	8,342	12.3	8,442	6.6	5,808	4.1	12.5
		2nd	279	3.6	10,290	19.2	13,524	11.0	13,668	5.6	9,964	4.2	12.3
	Total	524	5.5	16,665	18.9	21,866	11.5	22,110	6.0	15,772	4.2	12.4	
Washington	1976	1st	420	11.9	4,131	14.6	6,280	13.9	6,271	7.2	5,280	3.7	13.7
		2nd	436	8.9	4,837	11.2	7,544	12.5	7,546	5.9	6,484	3.2	12.5
	Total	856	10.4	8,968	12.8	13,824	13.2	13,817	6.5	11,764	3.4	13.0	
TOTAL	1976	1st	14,889	13.3	34,914	21.1	59,363	12.4	59,605	7.2	40,063	4.1	11.5
		2nd	13,086	14.5	30,686	15.8	57,296	11.4	57,650	6.6	42,550	4.9	11.1
	TOTAL	27,975	13.8	65,600	18.6	116,659	11.9	117,255	6.9	82,613	4.5	11.3	

Table 5a

Nutrition Indices by Ethnic Group, January-December 1976  
Males Less than 18 Years of Age

Ethnic Group	Date	Hemoglobin		Hematocrit		Height For Age		Weight For Age		Weight For Height			
		No. Exam.	% Low	No. Exam.	% Low	No. Exam.	% Low	No. Exam.	% Low	No. Exam.	% Low	% High	
<u>Black</u>	1976	1st	3,294	17.4	5,961	31.2	10,740	12.7	10,827	7.7	6,707	4.1	8.5
		2nd	2,670	19.1	2,770	19.0	7,012	11.3	7,158	6.8	4,819	4.9	10.2
	Total		5,964	18.2	8,731	27.3	17,752	12.1	17,985	7.4	11,526	4.5	9.2
<u>White</u>	1976	1st	2,754	9.6	8,107	16.2	13,105	12.6	13,164	7.0	10,071	3.7	10.6
		2nd	2,864	11.3	10,362	15.8	17,399	11.8	17,477	6.6	13,829	4.7	10.8
	Total		5,618	10.5	18,469	16.0	30,504	12.1	30,641	6.8	23,900	4.3	10.7
<u>Sp. American</u>	1976	1st	1,166	10.6	1,204	17.2	2,436	12.8	2,440	6.9	2,048	3.1	14.1
		2nd	765	10.8	1,025	14.6	1,988	15.0	1,959	8.0	1,577	3.7	10.8
	Total		1,931	10.7	2,229	16.0	4,424	13.8	4,399	7.4	3,625	3.3	12.6
<u>Am. Indian</u>	1976	1st	144	9.0	1,425	17.6	2,217	16.0	2,164	8.0	1,762	6.8	18.3
		2nd	123	5.7	745	14.8	1,545	18.6	1,537	9.4	1,199	7.8	14.8
	Total		267	7.5	2,170	16.6	3,762	17.0	3,701	8.6	2,961	7.2	16.9
<u>Orient., Other &amp; Unknown</u>	1976	1st	109	11.9	415	10.8	922	12.6	925	9.1	655	2.4	8.9
		2nd	98	7.1	612	10.3	1,106	12.9	1,105	6.2	1,031	3.5	9.2
	Total		207	9.7	1,027	10.5	2,028	12.8	2,030	7.5	1,686	3.1	9.1
<u>TOTAL</u>	1976	1st	7,467	13.2	17,112	21.5	29,420	12.9	29,520	7.4	21,243	4.0	10.9
		2nd	6,520	14.3	15,514	16.0	29,050	12.3	29,236	6.9	22,455	4.7	10.8
	TOTAL		13,987	13.7	32,626	18.9	58,470	12.6	58,756	7.1	43,698	4.4	10.8

Table 5b

Nutrition Indices by Ethnic Group, January-December 1976  
Females Less than 18 Years of Age

Ethnic Group	Date	Hemoglobin		Hematocrit		Height For Age		Weight For Age		Weight For Height			
		No. Exam.	% Low	No. Exam.	% Low	No. Exam.	% Low	No. Exam.	% Low	No. Exam.	% Low	% High	
<b>Black</b>													
	1976	1st	3,281	16.9	6,506	29.2	11,316	10.9	11,419	7.0	5,387	4.5	10.3
		2nd	2,755	20.0	2,818	18.3	7,049	9.6	7,172	6.3	4,332	5.8	10.8
	Total		6,036	18.3	9,324	26.0	18,365	10.4	18,591	6.8	9,719	5.1	10.5
<b>White</b>													
	1976	1st	2,623	10.3	8,095	15.4	12,908	11.7	12,988	6.8	8,997	4.4	11.3
		2nd	2,827	11.3	10,067	15.0	16,783	10.5	16,867	6.3	12,326	4.8	10.8
	Total		5,450	10.8	18,162	15.2	29,691	11.0	29,855	6.5	21,323	4.6	11.0
<b>Sp. American</b>													
	1976	1st	1,231	10.7	1,243	15.8	2,476	14.1	2,468	6.8	2,010	2.8	14.5
		2nd	755	9.7	1,015	16.4	1,935	12.5	1,905	7.2	1,412	5.1	13.4
	Total		1,986	10.3	2,258	16.1	4,411	13.4	4,373	7.0	3,422	3.7	14.1
<b>Am. Indian</b>													
	1976	1st	171	9.4	1,534	18.4	2,372	15.7	2,342	7.4	1,823	4.3	20.4
		2nd	136	7.4	734	14.2	1,465	14.8	1,457	7.4	1,103	5.5	19.3
	Total		307	8.5	2,268	17.0	3,837	15.4	3,799	7.4	2,926	4.8	20.0
<b>Orient., Other &amp; Unknown</b>													
	1976	1st	116	12.1	423	13.0	869	13.0	866	7.3	602	2.3	10.6
		2nd	93	11.8	538	10.2	1,014	10.0	1,013	4.8	922	2.8	9.5
	Total		209	12.0	961	11.4	1,883	11.4	1,879	6.0	1,524	2.6	10.0
<b>TOTAL</b>													
	1976	1st	7,422	13.3	17,802	20.7	29,943	11.9	30,085	7.0	18,820	4.2	12.2
		2nd	6,566	14.7	15,172	15.5	28,246	10.6	28,414	6.4	20,095	5.0	11.4
	TOTAL		13,988	13.9	32,974	18.3	58,189	11.3	58,499	6.7	38,915	4.6	11.8

Table 6a

Nutrition Indices by Age, January-December 1976  
Males Less than 18 Years of Age

Age Group	Date	Hemoglobin		Hematocrit		Height For Age		Weight For Age		Weight For Height			
		No. Exam.	% Low	No. Exam.	% Low	No. Exam.	% Low	No. Exam.	% Low	No. Exam.	% Low	% High	
<u>&lt;1</u>	1976	1st	722	9.1	1,523	8.1	7,765	15.2	7,800	6.9	5,193	5.4	12.9
		2nd	753	9.7	1,951	7.8	9,917	14.2	10,013	6.7	6,673	6.3	11.8
	Total	1,475	9.4	3,474	8.0	17,682	14.6	17,813	6.8	11,866	5.9	12.3	
<u>1</u>	1976	1st	998	10.5	2,006	8.9	2,638	17.2	2,680	9.1	2,589	5.0	17.3
		2nd	963	10.9	2,493	8.6	3,257	16.5	3,294	9.1	3,219	6.0	16.0
	Total	1,961	10.7	4,499	8.7	5,895	16.8	5,974	9.1	5,808	5.6	16.6	
<u>2-5</u>	1976	1st	2,580	12.2	5,434	17.1	7,517	11.3	7,536	6.0	7,469	2.9	11.1
		2nd	2,456	12.5	6,489	16.9	8,773	10.6	8,797	5.9	8,713	3.1	9.8
	Total	5,036	12.3	11,923	17.0	16,290	10.9	16,333	5.9	16,182	3.0	10.4	
<u>6-9</u>	1976	1st	1,289	17.1	3,508	38.1	4,778	8.2	4,777	4.6	4,624	3.5	6.1
		2nd	952	24.1	2,210	29.3	3,299	7.7	3,316	5.6	3,244	4.7	6.9
	Total	2,241	20.1	5,718	34.7	8,077	8.0	8,093	5.0	7,868	4.0	6.4	
<u>10-12</u>	1976	1st	924	14.3	2,558	27.7	3,412	11.6	3,417	8.6	1,368	4.2	5.9
		2nd	618	16.0	1,024	18.2	1,649	10.1	1,655	8.0	606	4.6	7.8
	Total	1,542	15.0	3,582	25.0	5,061	11.1	5,072	8.4	1,974	4.4	6.5	
<u>13-17</u>	1976	1st	954	15.6	2,083	19.1	3,310	16.1	3,310	13.3	-	-	-
		2nd	778	15.6	1,347	13.9	2,155	12.6	2,161	9.7	-	-	-
	Total	1,732	15.6	3,430	17.1	5,465	14.7	5,471	11.8	-	-	-	
TOTAL	1976	1st	7,467	13.2	17,112	21.5	29,420	12.9	29,520	7.4	21,243	4.0	10.9
		2nd	6,520	14.3	15,514	16.0	29,050	12.3	29,236	6.9	22,455	4.7	10.8
	TOTAL	13,987	13.7	32,626	18.9	58,470	12.6	58,756	7.1	43,698	4.4	10.8	

Nutrition Indices by Age, January-December 1976  
Females Less than 18 Years of Age

Age Group	Date	Hemoglobin		Hematocrit		Height For Age		Weight For Age		Weight For Height			
		No.	%	No.	%	No.	%	No.	%	No.	%	%	
		Exam.	Low	Exam.	Low	Exam.	Low	Exam.	Low	Exam.	Low	High	
<u>&lt;1</u>	1976	1st	722	6.8	1,497	8.2	7,656	14.1	7,735	6.6	4,711	5.7	13.2
		2nd	760	7.2	1,828	8.9	9,434	12.1	9,516	6.2	5,914	6.0	12.4
	Total	1,482	7.0	3,325	8.6	17,090	13.0	17,251	6.4	10,625	5.9	12.8	
<u>1</u>	1976	1st	972	10.3	1,983	9.4	2,618	15.5	2,647	6.6	2,568	3.7	19.6
		2nd	946	8.1	2,309	9.2	3,047	14.4	3,082	7.6	2,993	5.0	15.9
	Total	1,918	9.2	4,292	9.3	5,665	14.9	5,729	7.1	5,561	4.4	17.6	
<u>2-5</u>	1976	1st	2,493	10.4	5,344	15.8	7,352	11.7	7,371	6.2	7,296	3.2	12.5
		2nd	2,369	11.8	6,257	15.5	8,477	10.3	8,495	6.4	8,404	3.8	10.8
	Total	4,862	11.1	11,601	15.6	15,829	11.0	15,866	6.3	15,700	3.5	11.6	
<u>6-9</u>	1976	1st	1,282	20.3	3,650	36.4	4,893	7.7	4,893	5.6	4,210	4.5	6.3
		2nd	900	23.9	2,136	27.9	3,119	5.8	3,130	5.3	2,762	6.2	6.4
	Total	2,182	21.8	5,786	33.2	8,012	7.0	8,023	5.5	6,972	5.2	6.4	
<u>10-12</u>	1976	1st	868	14.5	2,758	25.1	3,556	10.9	3,562	9.4	35	8.6	0.0
		2nd	609	21.8	1,034	16.3	1,658	9.3	1,660	7.4	22	9.1	0.0
	Total	1,477	17.5	3,792	22.7	5,214	10.4	5,222	8.8	57	8.8	-	
<u>13-17</u>	1976	1st	1,085	17.6	2,570	19.9	3,868	12.0	3,877	9.0	-	-	-
		2nd	982	20.8	1,608	15.2	2,511	8.2	2,531	6.5	-	-	-
	Total	2,067	19.1	4,178	18.1	6,379	10.5	6,408	8.0	-	-	-	
TOTAL	1976	1st	7,422	13.3	17,802	20.7	29,943	11.9	30,085	7.0	18,820	4.2	12.2
		2nd	6,566	14.7	15,172	15.5	28,246	10.6	28,414	6.4	20,095	5.0	11.4
	TOTAL	13,988	13.9	32,974	18.3	58,189	11.3	58,499	6.7	38,915	4.6	11.8	

## SPECIAL REPORTS

### THREE YEAR TABULAR SUMMARY OF NUTRITION INDICES

In the June and September 1976 issues of Nutrition Surveillance no narrative comment on the summarized tables was presented. Comment was omitted because it had become increasingly evident that differences in prevalence rates among states, and within states over short periods of time, were due not so much to biologic or socio-economic factors as to other causes, apparently random in nature. Prominent among these causes are variations in methodology, precision and accuracy in performing the anthropometric and hematologic determinations. These problems have been discussed previously and will be further discussed in future bulletins.

With this December 1976 issue, 3 full years of nutrition surveillance will have been completed. In the perspective of 3 years, certain trends in the various nutrition indices among the children whose measurements are submitted to the nutrition surveillance data bank seem more clearly discernible.

Data presented in Tables 7, 8a & b, and 9a & b summarize the results of all children examined on initial visits in Arizona, Kentucky, Louisiana, Tennessee, and Washington from January 1974 through December 1976.

Nutrition Indices by State, January 1974-December 1976  
Persons Less than 18 Years of Age

State	Date	Hemoglobin		Hematocrit		Height For Age		Weight For Age		Weight For Height			
		No. Exam.	% Low	No. Exam.	% Low	No. Exam.	% Low	No. Exam.	% Low	No. Exam.	% Low	% High	
Arizona	1974	1st	4,252	17.2	2,777	18.3	6,207	16.5	6,249	9.2	5,198	5.9	16.6
		2nd	2,914	19.5	2,390	16.0	4,720	17.7	4,656	10.0	3,311	7.2	17.7
	1975	1st	4,135	15.2	7,485	18.9	13,059	18.8	13,028	8.8	10,959	5.0	18.5
		2nd	3,362	12.7	3,237	16.2	7,356	17.0	7,305	9.3	5,624	6.3	14.1
	1976	1st	4,053	10.1	5,360	14.9	9,708	15.8	9,636	8.5	7,529	5.3	15.3
		2nd	2,593	8.7	3,309	12.6	6,699	15.9	6,550	10.0	4,771	7.1	12.0
Total		21,309	14.0	24,558	16.5	47,749	17.1	47,424	9.2	37,392	5.9	16.0	
Kentucky	1974	1st	5,180	15.4	5,531	22.0	11,654	15.4	11,457	7.5	8,926	6.7	16.0
		2nd	2,669	18.7	1,930	24.7	6,132	15.0	6,134	8.3	4,159	8.6	13.7
	1975	1st	2,041	18.1	2,455	18.0	6,475	14.2	6,486	7.8	4,613	6.7	13.7
		2nd	2,750	14.7	3,690	18.3	8,477	10.7	8,511	6.7	5,725	6.0	9.3
	1976	1st	1,856	12.9	2,404	14.3	6,351	12.6	6,376	6.6	4,248	4.7	12.3
		2nd	2,300	15.3	3,592	17.4	8,694	11.7	8,709	6.8	6,222	5.8	11.7
Total		16,796	15.8	19,602	19.3	47,783	13.3	47,673	7.2	33,893	6.4	13.0	
Louisiana	1974	1st	249	26.5	24	45.8	278	10.4	280	7.1	144	4.2	17.4
		2nd	1,659	20.2	418	24.2	2,081	10.7	2,094	7.0	988	4.5	11.1
	1975	1st	10,556	20.1	3,048	17.1	14,037	10.9	14,197	7.4	7,121	5.0	9.5
		2nd	6,658	19.0	2,436	19.3	9,835	11.3	9,982	7.5	5,777	5.7	10.6
	1976	1st	7,322	16.0	11,920	31.0	21,489	11.7	21,669	7.6	11,614	4.3	8.7
		2nd	6,008	18.9	3,190	15.9	10,707	10.1	10,895	6.8	6,737	5.7	9.6
Total		32,452	18.7	21,036	25.2	58,427	11.1	59,117	7.4	32,381	5.0	9.5	
Tennessee	1974	1st	210	14.3	2,614	19.1	3,102	13.5	3,150	7.9	2,497	5.6	13.4
		2nd	586	7.0	7,402	20.7	8,320	11.0	8,484	6.0	5,872	5.1	10.7
	1975	1st	980	6.3	12,143	20.7	14,481	10.6	14,795	6.3	10,339	4.9	11.3
		2nd	777	6.8	10,293	20.4	12,847	11.2	12,980	6.6	9,115	5.1	10.7
	1976	1st	245	7.8	6,375	18.3	8,342	12.3	8,442	6.6	5,808	4.1	12.5
		2nd	279	3.6	10,290	19.2	13,524	11.0	13,668	5.6	9,964	4.2	12.3
Total		3,077	7.0	49,117	19.9	60,616	11.3	61,519	6.3	43,595	4.8	11.6	
Washington	1974	1st	1,645	8.6	7,891	11.6	10,748	13.8	10,682	6.1	9,981	3.7	15.4
		2nd	561	9.1	4,755	10.3	6,591	12.9	6,598	6.1	5,993	3.9	13.8
	1975	1st	911	9.0	5,977	11.1	8,469	13.6	8,474	7.2	7,375	3.4	13.1
		2nd	563	9.8	5,337	11.2	8,116	11.6	8,105	6.2	6,960	3.1	11.7
	1976	1st	420	11.9	4,131	14.6	6,280	13.9	6,271	7.2	5,280	3.7	13.7
		2nd	436	8.9	4,837	11.2	7,544	12.5	7,546	5.9	6,484	3.2	12.5
Total		4,536	9.2	32,928	11.6	47,748	13.1	47,676	6.4	42,073	3.5	13.5	
TOTAL	1974	1st	11,536	15.3	18,837	16.7	31,989	14.9	31,818	7.4	26,746	5.3	15.7
		2nd	8,389	17.8	16,895	17.7	27,844	13.4	27,966	7.3	20,323	5.8	13.4
	1975	1st	18,623	17.5	31,108	17.9	56,521	13.4	56,980	7.4	40,407	4.9	13.5
		2nd	14,110	15.6	24,993	17.5	46,631	12.1	46,883	7.2	33,201	5.1	11.2
	1976	1st	13,896	13.6	30,190	21.9	52,170	12.9	52,394	7.4	34,479	4.4	12.0
		2nd	11,616	15.1	25,218	16.1	47,168	11.9	47,368	6.8	34,178	5.0	11.7
TOTAL		78,170	15.8	147,241	18.1	262,323	13.0	263,409	7.2	189,334	5.0	12.8	

Nutrition Indices by Ethnic Group, January 1974-December 1976  
Males Less than 18 Years of Age

Ethnic Group	Date	Hemoglobin		Hematocrit		Height For Age		Weight For Age		Weight For Height		
		No. Exam.	% Low	No. Exam.	% Low	No. Exam.	% Low	No. Exam.	% Low	No. Exam.	% Low	% High
<b>Black</b>												
1974	1st	1,061	19.8	1,407	21.7	2,426	16.4	2,398	8.6	1,990	6.0	13.2
	2nd	1,187	20.1	1,193	23.9	2,640	15.1	2,646	8.2	1,730	5.2	12.0
1975	1st	4,683	20.9	2,539	18.5	7,773	12.5	7,851	8.2	4,654	5.3	9.9
	2nd	3,426	18.1	2,287	20.4	6,409	12.2	6,470	7.4	4,154	6.1	10.1
1976	1st	3,242	17.5	5,924	31.3	10,638	12.8	10,719	7.7	6,622	4.2	8.5
	2nd	2,633	19.3	2,561	18.4	6,600	11.6	6,707	6.9	4,488	4.9	10.5
<b>Total</b>		<b>16,232</b>	<b>19.2</b>	<b>15,911</b>	<b>24.2</b>	<b>36,486</b>	<b>12.8</b>	<b>36,791</b>	<b>7.7</b>	<b>23,638</b>	<b>5.1</b>	<b>10.1</b>
<b>White</b>												
1974	1st	3,362	12.8	5,751	17.3	10,028	14.7	9,950	7.2	8,413	5.4	14.0
	2nd	1,938	14.4	5,696	18.9	8,758	12.9	8,822	7.1	6,654	6.6	11.9
1975	1st	2,893	13.0	8,793	18.4	13,305	12.5	13,454	7.4	10,508	5.2	11.2
	2nd	2,489	12.1	8,208	17.7	13,059	11.6	13,146	6.8	10,167	4.8	10.4
1976	1st	2,590	9.5	6,435	16.4	10,953	13.2	11,012	7.2	8,327	4.0	11.4
	2nd	2,330	12.4	8,129	16.4	13,451	12.4	13,503	6.8	10,488	4.8	11.8
<b>Total</b>		<b>15,602</b>	<b>12.3</b>	<b>43,012</b>	<b>17.5</b>	<b>69,554</b>	<b>12.8</b>	<b>69,887</b>	<b>7.1</b>	<b>54,557</b>	<b>5.1</b>	<b>11.7</b>
<b>Sp. American</b>												
1974	1st	943	18.5	999	17.1	1,941	18.5	1,952	7.9	1,736	5.4	19.0
	2nd	829	24.2	857	15.5	1,614	19.7	1,603	8.7	1,319	6.7	18.0
1975	1st	1,076	18.5	1,049	19.3	2,038	18.8	2,048	8.4	1,660	4.3	15.0
	2nd	753	13.1	723	14.4	1,695	15.6	1,699	7.7	1,349	5.7	15.3
1976	1st	918	11.9	972	15.8	1,909	13.8	1,914	7.4	1,555	3.6	14.3
	2nd	647	10.0	845	13.5	1,564	15.7	1,532	8.7	1,197	4.3	10.4
<b>Total</b>		<b>5,166</b>	<b>16.4</b>	<b>5,445</b>	<b>16.1</b>	<b>10,761</b>	<b>17.1</b>	<b>10,748</b>	<b>8.1</b>	<b>8,816</b>	<b>5.0</b>	<b>15.6</b>
<b>Am. Indian</b>												
1974	1st	282	12.1	804	10.0	1,024	13.4	1,017	4.3	941	3.1	23.0
	2nd	139	9.4	488	9.6	634	14.2	634	7.6	546	4.4	18.7
1975	1st	234	10.7	2,487	19.3	3,913	20.0	3,867	9.0	3,491	4.5	20.4
	2nd	239	12.6	780	20.5	1,531	18.7	1,501	9.6	1,217	5.9	15.4
1976	1st	143	8.4	1,106	18.6	1,853	18.0	1,801	8.9	1,506	7.5	19.0
	2nd	97	4.1	615	14.3	1,327	19.0	1,312	10.1	1,018	8.2	15.4
<b>Total</b>		<b>1,134</b>	<b>10.4</b>	<b>6,280</b>	<b>16.9</b>	<b>10,282</b>	<b>18.3</b>	<b>10,132</b>	<b>8.7</b>	<b>8,719</b>	<b>5.5</b>	<b>19.0</b>
<b>Orient., Other &amp; Unknown</b>												
1974	1st	207	10.6	566	10.2	769	17.7	769	9.8	716	6.4	13.7
	2nd	115	11.3	340	9.7	453	13.9	459	7.2	378	4.2	10.3
1975	1st	375	17.3	670	14.9	1,083	12.9	1,095	6.8	801	4.4	9.6
	2nd	116	17.2	453	14.1	669	13.2	667	8.4	518	5.8	9.8
1976	1st	80	12.5	302	9.9	430	17.2	433	12.0	358	3.4	11.5
	2nd	54	7.4	491	10.4	854	12.4	852	5.8	798	3.1	9.5
<b>Total</b>		<b>947</b>	<b>14.1</b>	<b>2,822</b>	<b>11.9</b>	<b>4,258</b>	<b>14.3</b>	<b>4,275</b>	<b>8.0</b>	<b>3,569</b>	<b>4.6</b>	<b>10.7</b>
<b>TOTAL</b>												
1974	1st	5,855	14.9	9,527	16.9	16,188	15.5	16,086	7.5	13,796	5.4	15.1
	2nd	4,208	17.7	8,574	18.4	14,099	14.2	14,164	7.5	10,627	6.2	12.9
1975	1st	9,261	17.8	15,538	18.5	28,112	14.0	28,315	7.9	21,114	5.0	12.7
	2nd	7,023	15.3	12,451	18.0	23,363	12.5	23,483	7.3	17,405	5.3	11.0
1976	1st	6,973	13.5	14,739	22.4	25,783	13.5	25,879	7.6	18,368	4.3	11.2
	2nd	5,761	15.1	12,641	16.3	23,796	12.8	23,906	7.1	17,989	4.9	11.5
<b>TOTAL</b>		<b>39,081</b>	<b>15.7</b>	<b>73,470</b>	<b>18.6</b>	<b>131,341</b>	<b>13.6</b>	<b>131,833</b>	<b>7.5</b>	<b>99,299</b>	<b>5.1</b>	<b>12.3</b>



Nutrition Indices by Ethnic Group, January 1974-December 1976  
Females Less than 18 Years of Age

Table 8b

Ethnic Group	Date	Hemoglobin		Hematocrit		Height For Age		Weight For Age		Weight For Height		
		No.	%	No.	%	No.	%	No.	%	No.	%	High
		Exam.	Low	Exam.	Low	Exam.	Low	Exam.	Low	Exam.	Low	High
<b>Black</b>												
1974	1st	1,064	20.2	1,469	21.5	2,474	14.0	2,453	8.0	1,981	5.7	15.8
	2nd	1,239	17.9	1,244	20.3	2,739	12.6	2,740	7.8	1,616	5.9	14.2
1975	1st	4,705	20.6	2,531	19.2	7,811	11.0	7,897	6.4	3,880	5.0	10.8
	2nd	3,347	19.2	2,435	20.7	6,402	10.6	6,475	6.6	3,691	5.3	11.6
1976	1st	3,199	17.0	6,473	29.3	11,182	10.9	11,273	7.1	5,275	4.5	10.3
	2nd	2,708	20.1	2,612	17.8	6,622	9.8	6,709	6.4	4,036	5.9	11.1
Total		16,262	19.3	16,764	23.4	37,230	11.0	37,547	6.8	20,479	5.2	11.6
<b>White</b>												
1974	1st	3,111	13.4	5,524	16.2	9,597	14.0	9,532	7.4	7,689	5.7	14.9
	2nd	1,847	17.0	5,484	17.1	8,372	11.8	8,436	6.5	6,026	5.5	12.5
1975	1st	2,902	13.1	8,756	16.5	13,428	11.5	13,600	7.2	9,582	5.1	12.1
	2nd	2,581	12.6	8,217	16.1	13,104	11.5	13,197	7.1	9,230	5.0	10.3
1976	1st	2,476	10.3	6,438	15.1	10,801	12.3	10,870	7.1	7,358	4.9	12.2
	2nd	2,317	11.7	8,006	15.9	13,072	10.9	13,120	6.4	9,337	4.8	11.5
Total		15,234	12.9	42,425	16.2	68,374	11.9	68,755	7.0	49,222	5.2	12.1
<b>Sp. American</b>												
1974	1st	1,022	20.2	1,005	20.4	1,980	16.5	1,997	7.0	1,716	4.6	18.0
	2nd	855	20.8	823	16.8	1,632	17.6	1,612	8.9	1,203	5.3	18.8
1975	1st	1,163	15.0	1,115	18.8	2,150	15.5	2,169	6.9	1,617	4.8	14.7
	2nd	767	13.7	708	13.7	1,621	13.4	1,624	7.5	1,242	4.4	14.0
1976	1st	981	11.7	1,000	14.3	1,928	15.4	1,929	7.2	1,501	3.5	15.6
	2nd	649	9.1	865	14.9	1,539	12.9	1,509	7.8	1,089	6.2	13.5
Total		5,437	15.4	5,516	16.7	10,850	15.3	10,840	7.5	8,368	4.7	15.9
<b>Am. Indian</b>												
1974	1st	286	8.4	819	8.9	1,089	14.0	1,090	5.1	986	2.4	25.5
	2nd	124	18.5	431	10.7	578	11.1	581	5.9	502	2.0	20.1
1975	1st	217	7.8	2,497	18.0	3,928	19.7	3,899	7.7	3,481	3.8	25.4
	2nd	286	11.5	797	17.7	1,553	15.5	1,512	7.0	1,202	4.7	17.0
1976	1st	170	9.4	1,218	20.0	2,011	17.6	1,982	7.9	1,607	4.7	22.0
	2nd	120	7.5	630	14.8	1,294	15.5	1,283	7.8	957	6.1	20.0
Total		1,203	10.1	6,392	16.4	10,453	17.1	10,347	7.3	8,735	4.1	22.7
<b>Orient., Other &amp; Unknown</b>												
1974	1st	198	16.7	493	10.1	661	13.0	660	6.8	578	4.0	14.0
	2nd	116	10.3	339	10.3	424	11.3	433	6.2	349	2.3	10.5
1975	1st	375	19.7	671	14.6	1,092	12.3	1,100	6.2	733	4.1	12.4
	2nd	106	21.7	385	12.7	588	14.6	592	9.0	431	3.2	9.7
1976	1st	97	11.3	322	14.6	465	17.0	461	8.9	370	2.4	11.6
	2nd	61	11.5	464	11.0	845	9.1	841	4.2	770	2.3	9.6
Total		953	16.8	2,674	12.3	4,075	12.5	4,087	6.6	3,231	3.2	11.5
<b>TOTAL</b>												
1974	1st	5,681	15.8	9,310	16.5	15,801	14.3	15,732	7.3	12,950	5.3	16.2
	2nd	4,181	17.9	8,321	17.0	13,745	12.6	13,802	7.0	9,696	5.3	13.9
1975	1st	9,362	17.2	15,570	17.3	28,409	12.8	28,665	7.0	19,293	4.8	14.5
	2nd	7,087	15.9	12,542	16.9	23,268	11.7	23,400	7.0	15,796	5.0	11.4
1976	1st	6,923	13.6	15,451	21.4	26,387	12.4	26,515	7.2	16,111	4.6	12.8
	2nd	5,855	15.2	12,577	16.0	23,372	10.9	23,462	6.5	16,189	5.1	11.9
TOTAL		39,089	15.9	73,771	17.7	130,982	12.4	131,576	7.0	90,035	5.0	13.4

Nutrition Indices by Age, January 1974-December 1976  
Males Less than 18 Years of Age

Table Ya

Age Group	Date	Hemoglobin		Hematocrit		Height For Age		Weight For Age		Weight For Height			
		No. Exam.	% Low	No. Exam.	% Low	No. Exam.	% Low	No. Exam.	% Low	No. Exam.	% Low	% High	
<u>&lt;1</u>	1974	1st	773	10.7	1,519	9.8	4,930	16.0	4,870	6.6	3,820	7.7	13.7
		2nd	408	12.7	930	7.6	4,472	14.9	4,494	6.4	3,033	9.2	13.0
	1975	1st	736	13.9	2,010	10.3	8,178	15.4	8,256	7.4	5,752	7.0	11.6
		2nd	670	10.6	1,404	9.8	7,497	14.2	7,555	7.0	5,012	7.1	12.2
	1976	1st	711	9.1	1,411	8.3	7,367	15.4	7,398	6.8	4,915	5.5	13.0
		2nd	651	10.1	1,690	7.9	8,534	14.7	8,603	6.9	5,618	6.6	12.7
Total		3,949	11.1	8,964	9.1	40,978	15.0	41,176	6.9	28,150	7.0	12.6	
<u>1</u>	1974	1st	1,286	13.8	2,360	10.2	3,129	19.6	3,112	8.0	3,046	5.8	20.6
		2nd	646	18.9	1,567	10.7	1,797	20.9	1,845	8.7	1,769	6.4	19.7
	1975	1st	1,197	16.2	3,073	10.7	3,826	19.2	3,889	8.4	3,778	5.8	19.2
		2nd	998	12.5	1,913	9.4	2,557	19.1	2,598	7.7	2,525	5.5	17.4
	1976	1st	972	10.5	1,820	9.0	2,428	17.4	2,466	9.3	2,381	5.2	17.5
		2nd	839	11.6	2,057	8.9	2,638	16.7	2,657	9.0	2,604	5.9	17.0
Total		5,938	13.8	12,790	9.9	16,375	18.8	16,567	8.5	16,103	5.8	18.6	
<u>2-5</u>	1974	1st	2,571	17.3	4,529	21.2	6,018	15.0	6,000	7.5	5,921	3.9	14.8
		2nd	1,597	16.7	3,730	19.0	4,369	14.1	4,373	7.6	4,303	4.1	12.5
	1975	1st	2,592	15.5	6,395	20.9	7,997	13.5	8,040	6.9	7,952	3.5	13.8
		2nd	2,218	14.1	5,025	18.7	6,651	11.7	6,673	6.4	6,598	3.8	10.2
	1976	1st	2,282	13.2	4,379	18.1	6,045	11.9	6,064	6.3	6,009	3.3	11.7
		2nd	2,060	13.4	5,227	17.6	6,936	11.1	6,939	5.8	6,884	3.0	10.3
Total		13,320	15.1	29,285	19.3	38,016	12.8	38,089	6.7	37,667	3.6	12.2	
<u>6-9</u>	1974	1st	498	19.1	550	30.0	875	9.5	870	6.8	841	3.9	6.3
		2nd	551	25.6	924	34.2	1,225	9.0	1,214	6.3	1,167	5.7	6.5
	1975	1st	1,526	23.9	1,678	29.6	2,837	7.2	2,840	5.0	2,739	4.2	5.1
		2nd	1,078	22.4	1,932	31.1	2,696	6.6	2,689	5.7	2,626	5.0	5.6
	1976	1st	1,143	17.1	2,970	39.6	3,928	8.5	3,931	4.8	3,785	3.9	5.8
		2nd	846	25.3	1,675	29.2	2,408	7.6	2,421	5.9	2,361	5.3	6.9
Total		5,642	22.2	9,729	33.3	13,969	7.8	13,965	5.5	13,519	4.6	5.9	
<u>10-12</u>	1974	1st	300	10.7	285	18.2	545	8.4	546	7.7	168	4.8	4.8
		2nd	409	16.1	692	27.7	1,009	9.2	1,009	7.8	355	7.3	4.8
	1975	1st	1,373	19.2	1,085	21.3	2,256	9.4	2,267	7.1	893	4.0	4.3
		2nd	872	17.2	993	20.0	1,725	8.8	1,723	8.5	644	6.7	7.5
	1976	1st	917	14.4	2,343	29.0	3,177	11.8	3,181	8.7	1,278	4.1	5.9
		2nd	597	16.2	901	18.6	1,441	10.4	1,445	8.8	522	5.2	6.9
Total		4,468	16.6	6,299	24.1	10,153	10.1	10,171	8.2	3,860	5.0	5.8	
<u>13-17</u>	1974	1st	427	8.7	284	14.1	691	10.9	688	11.2	-	-	-
		2nd	597	16.2	731	16.4	1,227	11.7	1,229	10.3	-	-	-
	1975	1st	1,837	17.4	1,297	20.6	3,018	15.1	3,023	14.2	-	-	-
		2nd	1,187	14.5	1,184	15.9	2,237	12.0	2,245	11.3	-	-	-
	1976	1st	948	15.4	1,816	20.3	2,838	17.3	2,839	14.0	-	-	-
		2nd	768	15.5	1,091	14.7	1,839	12.9	1,841	10.1	-	-	-
Total		5,764	15.5	6,403	17.9	11,850	14.1	11,865	12.4	-	-	-	
TOTAL	1974	1st	5,855	14.9	9,527	16.9	16,188	15.5	16,086	7.5	13,796	5.4	15.1
		2nd	4,208	17.7	8,574	18.4	14,099	14.2	14,164	7.5	10,627	6.2	12.9
	1975	1st	9,261	17.8	15,538	18.5	28,112	14.0	28,315	7.9	21,114	5.0	12.7
		2nd	7,023	15.3	12,451	18.0	23,363	12.5	23,483	7.3	17,405	5.3	11.0
	1976	1st	6,973	13.5	14,739	22.4	25,783	13.5	25,879	7.6	18,368	4.3	11.2
		2nd	5,761	15.1	12,641	16.3	23,796	12.8	23,906	7.1	17,989	4.9	11.5
TOTAL		39,081	15.7	73,470	18.6	131,341	13.6	131,833	7.5	99,299	5.1	12.3	

Nutrition Indices by Age, January 1974-December 1976  
Females Less than 18 Years of Age

Table 9b

Age Group	Date	Hemoglobin		Hematocrit		Height For Age		Weight For Age		Weight For Height			
		No. Exam.	% Low	No. Exam.	% Low	No. Exam.	% Low	No. Exam.	% Low	No. Exam.	% Low	% High	
<1	1974	1st	773	9.7	1,489	10.2	4,802	14.0	4,771	6.6	3,551	8.3	13.5
		2nd	410	12.0	972	9.4	4,448	12.6	4,467	6.5	2,771	8.3	13.3
	1975	1st	744	10.9	1,924	10.6	8,232	13.8	8,335	6.1	5,513	6.5	13.1
		2nd	710	8.9	1,322	8.7	7,296	12.9	7,341	6.2	4,514	6.0	12.4
	1976	1st	709	6.9	1,398	8.2	7,270	14.3	7,339	6.7	4,458	5.9	13.3
		2nd	673	7.3	1,555	8.9	8,108	12.7	8,160	6.3	4,949	6.1	13.4
	Total		4,019	9.1	8,660	9.4	40,156	13.4	40,413	6.4	25,756	6.7	13.1
1	1974	1st	1,194	13.1	2,190	10.2	2,933	17.7	2,921	7.2	2,846	5.0	22.5
		2nd	631	13.5	1,475	9.4	1,750	15.5	1,778	6.8	1,727	3.8	18.1
	1975	1st	1,116	13.0	2,871	10.1	3,595	17.2	3,676	7.0	3,546	4.5	21.0
		2nd	931	12.1	1,830	8.8	2,439	16.4	2,471	8.0	2,398	4.8	16.1
	1976	1st	957	10.3	1,815	9.7	2,428	15.9	2,447	6.6	2,380	3.7	20.3
		2nd	830	8.3	1,945	10.1	2,494	14.9	2,516	7.7	2,451	4.9	16.9
	Total		5,659	11.8	12,126	9.8	15,639	16.4	15,809	7.2	15,348	4.5	19.4
2-5	1974	1st	2,490	17.8	4,428	19.6	5,924	14.7	5,894	7.7	5,827	3.5	15.9
		2nd	1,526	18.3	3,616	18.1	4,255	13.9	4,245	7.2	4,168	4.2	14.5
	1975	1st	2,548	14.3	6,201	18.3	7,855	14.1	7,902	7.3	7,796	3.6	15.1
		2nd	2,227	15.0	4,945	17.1	6,541	12.7	6,576	7.4	6,503	3.7	10.9
	1976	1st	2,178	11.3	4,290	16.9	5,886	12.7	5,908	6.6	5,845	3.6	13.4
		2nd	2,033	12.2	5,078	16.2	6,789	10.3	6,785	6.3	6,722	3.9	11.1
	Total		13,002	14.7	28,558	17.7	37,250	13.0	37,310	7.1	36,861	3.7	13.4
6-9	1974	1st	468	22.2	531	31.8	845	7.7	846	6.1	725	5.5	7.7
		2nd	581	27.7	837	33.0	1,158	8.3	1,160	6.6	1,017	4.3	6.1
	1975	1st	1,530	22.3	1,735	30.9	2,889	6.9	2,890	5.3	2,415	5.2	6.1
		2nd	1,092	22.1	1,896	29.4	2,713	6.2	2,713	6.2	2,354	6.4	6.2
	1976	1st	1,137	20.7	3,083	37.1	4,039	7.6	4,042	5.6	3,396	5.1	6.1
		2nd	823	24.3	1,676	28.6	2,355	5.6	2,361	5.4	2,047	7.2	5.5
	Total		5,631	22.8	9,758	32.4	13,999	6.9	14,012	5.7	11,954	5.7	6.1
10-12	1974	1st	250	14.0	279	18.6	485	10.1	487	11.5	1	0.0	0.0
		2nd	375	19.2	620	20.8	867	9.9	869	9.8	13	0.0	7.7
	1975	1st	1,401	18.8	1,223	18.5	2,407	9.3	2,416	8.4	23	8.7	8.7
		2nd	835	15.1	1,149	18.8	1,812	8.9	1,818	7.6	27	14.8	0.0
	1976	1st	867	14.5	2,552	26.2	3,320	11.1	3,325	9.5	32	9.4	0.0
		2nd	592	22.3	937	16.9	1,464	9.3	1,466	7.6	20	5.0	0.0
	Total		4,320	17.5	6,760	21.4	10,355	9.9	10,381	8.8	116	8.6	2.6
13-17	1974	1st	506	16.2	393	19.6	812	9.4	813	7.4	-	-	-
		2nd	658	15.5	801	15.1	1,267	10.3	1,283	7.2	-	-	-
	1975	1st	2,023	20.8	1,616	18.6	3,431	10.4	3,446	8.7	-	-	-
		2nd	1,292	19.4	1,400	15.8	2,467	9.5	2,481	7.9	-	-	-
	1976	1st	1,075	17.4	2,313	20.7	3,444	12.5	3,454	9.5	-	-	-
		2nd	904	21.1	1,386	15.1	2,162	8.6	2,174	6.8	-	-	-
	Total		6,458	19.1	7,909	17.8	13,583	10.4	13,651	8.2	-	-	-
TOTAL	1974	1st	5,681	15.8	9,310	16.5	15,801	14.3	15,732	7.3	12,950	5.3	16.2
		2nd	4,181	17.9	8,321	17.0	13,745	12.6	13,802	7.0	9,696	5.3	13.9
	1975	1st	9,362	17.2	15,570	17.3	28,409	12.8	28,665	7.0	19,293	4.8	14.5
		2nd	7,087	15.9	12,542	16.9	23,268	11.7	23,400	7.0	15,796	5.0	11.4
	1976	1st	6,923	13.6	15,451	21.4	26,387	12.4	26,515	7.2	16,111	4.6	12.8
		2nd	5,855	15.2	12,577	16.0	23,372	10.9	23,462	6.5	16,189	5.1	11.9
	TOTAL		39,089	15.9	73,771	17.7	130,382	12.4	131,576	7.0	90,035	5.0	13.4

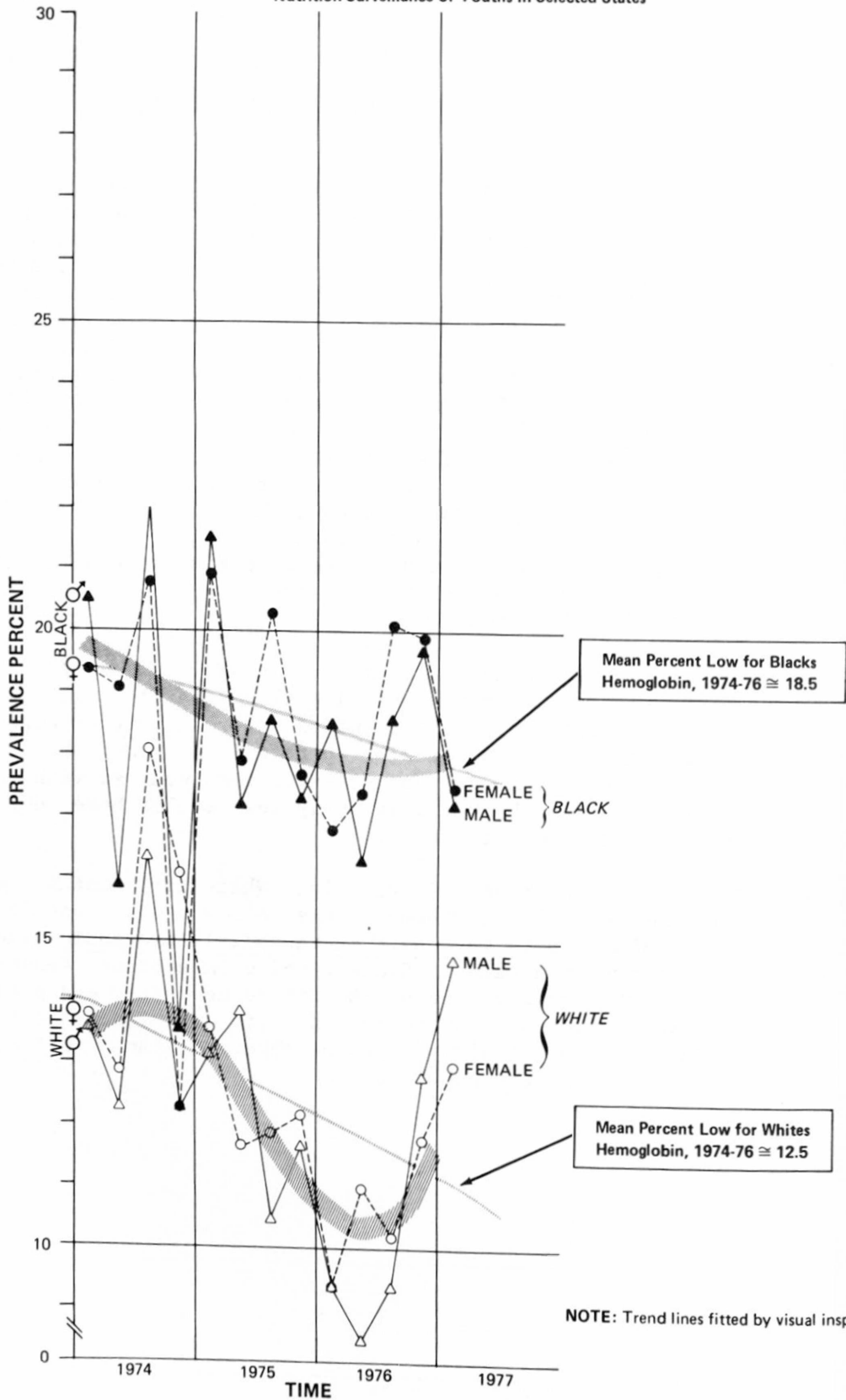
### THREE YEAR GRAPHIC SUMMARY OF HEMATOLOGIC DATA

Inspection of Figures 1 and 2 permits the following conclusions. There is an impression of an overall slight downward trend in the prevalence rate of low values over the 3 years, but sharp, short-term fluctuations characterize all prevalence rates. Although these short-term fluctuations are probably random, the tendency for lower values in most rates is particularly evident during the early quarters of 1976. The overall mean prevalence rates for low hemoglobin values over the 3-year period are in the neighborhood of 18.5 and 12.5 percent, respectively for Blacks and Whites, and for low hematocrit, 19.5 and 16.5 percent, respectively. The differential between Black and White prevalence rates is greater for low hemoglobin than for low hematocrit. The differential between low hemoglobin and low hematocrit rates is greater for Whites than for Blacks. The problem of different prevalence rates based on hemoglobin and hematocrit determinations will be discussed in a future bulletin. It should be noted, however, that the hemoglobin and hematocrit determinations reported to the nutrition surveillance data bank are for the most part from different children and from different localities.

Sex differences in these prevalence rates are small. For low hemoglobin among both Blacks and Whites, the rates are slightly higher for females than for males. For low hematocrit, differential sex rates are reversed, with rates for males higher than for females, particularly among Whites. The rates depicted in these graphs are for all ages combined, so with only a small proportion being past puberty, relatively few females have low hematologic values because of menstruation.

Another factor of possible importance in the Black-White differential in prevalence rates of low hematologic values is the following: In one State, Louisiana, which contributes more than half of the total hemoglobin values, the determinations are predominately on Blacks, while in another, Tennessee, which contributes more than half of the hematocrit values, they are predominately on Whites. Systematic inter-state methodologic differences in these determinations could thus appreciably affect the observed ethnic differences in prevalence rates for all states combined.

Prevalence of Low Hemoglobin by Quarter, 1974-76 for Children, 6 Months through 17 Years of Age  
 Nutrition Surveillance of Youths in Selected States



Prevalence of Low Hematocrit by Quarter, 1974-76 for Children, 6 Months through 17 Years of Age  
 Nutrition Surveillance of Youths in Selected States

