



United States
Department of
Agriculture

Food and
Nutrition
Service

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SUBJECT: USDA-approved Software Requirements Regarding Vitamin A

TO: Regional Directors
Special Nutrition Programs
All Regions

There have been several questions from State agencies regarding how USDA-approved software reports vitamin A in the nutrient analysis of menus for School Meals Initiative (SMI) requirements. A shift in how vitamin A data is presented in USDA-approved software has occurred because the vitamin A nutrient requirement is no longer presented in Retinol Equivalents (RE) in the Dietary Reference Intakes recommendations, manufacturers are no longer reporting RE data for their products, and the USDA National Nutrient Database for Standard Reference no longer reports vitamin A in RE. Furthermore, Nutrition Facts labels report vitamin A in percent of International Units (IU).

Although the National School Lunch Program regulations define the requirements for vitamin A in units of RE, the Food and Nutrition Service (FNS) has since the inception of Nutrient Standard Menu Planning, requested that software developers use the attached nutrient standard specifications for comparing menu analyses to the defined nutrient requirements. The nutrient standard specification provides the requirement for vitamin A in both RE and IU. USDA-approved software developers are aware that displaying both units for vitamin A data is preferred. However, they have the option to display vitamin A in either RE or IU within the nutrient analysis reports.

When State agencies are given data for vitamin A in IU from a USDA-approved software program, it is acceptable to use the IU data as it is presented or they may convert the vitamin A data using the 1 RE to 5 IU ratio. For example, if the report displays 1125 IU of vitamin A, the State agency can manually convert the data to units of RE by dividing by 5 for a total of 225 units of RE for vitamin A. Likewise the RE data can be converted to IU by multiplying the units of RE by 5. It is important to note that if data is reported in both IU and RE, any discrepancy for the 1:5 ratio can be attributed to the combination of analytical and calculated RE data.

Please share this information with your State agencies so that they are aware that USDA-approved software developers have the information necessary to accurately report the nutrient analysis of the vitamin A requirement in units of Retinol Equivalents (RE) and/or International Units (IU).

Original Signed

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MODIFIED RDA DATA SETS

These values represent the nutrient standards and the set of default nutrients. Meals will be evaluated in comparison to these Nutrient Standards. Schools must plan breakfast and lunch meals that provide the following nutrients when averaged over a school week:

BREAKFAST RDAs (1/4)

NUTRIENTS	Ages 3-6 years	Ages 7-10 years	Ages 11-13 years	Ages 14-17 years
Calories	419	500	588	625
Protein (g)	5.5	7	11.25	12.5
Calcium (mg)	200	200	300	300
Iron (mg)	2.5	2.5	3.4	3.4
Vitamin A (RE)	119	175	225	225
Vitamin A (IU)	595	875	1125	1125
** Fat (g)				
Vitamin C (mg)	11	11.25	12.5	14.4
** Saturated Fat (g)				

LUNCH RDAs (1/3)

NUTRIENTS	Ages 3-6 years	Ages 7-10 years	Ages 11-13 years	Ages 14-17 years
Calories	558	667	783	846
Protein (g)	7.3	9.3	15	16.7
Calcium (mg)	267	267	400	400
Iron (mg)	3.3	3.3	4.5	4.5
Vitamin A (RE)	158	233	300	300
Vitamin A (IU)	790	1165	1500	1500
** Fat (g)				
Vitamin C (mg)	14.6	15	16.7	19.2
** Saturated Fat (g)				

** There are no RDAs for fat or saturated fat; menu planners will monitor the fat content of meals and the percentage of calories from fat and saturated. The nutrient standard for fat will be based on 30 percent of calories from fat. The nutrient standard for saturated fat will be based on 10 percent of calories from saturated fat. The fat and saturated fat standards will vary depending upon the amount of calories per meal; therefore, these columns have been left blank.

STANDARD RDA DATA SET

Not all school districts are divided into the age groups of 3-6, 7-10, 11-13, or 14-17; therefore, the process must support the menu planners ability to create additional RDA standards and categories by weighting, combining, and/or averaging the RDAs from the four different age groups.

Schools in which the age groupings differ from the established standard may create new RDA standards that correlate with the age groups in their school district.

The following Breakfast and Lunch – Standard RDA Data Sets are to be used to determine the RDAs for those schools whose age groupings do not correlate with the standard age groupings:

BREAKFAST RDAs (1/4)

	Calories	Protein (g)	Calcium (mg)	Iron (mg)	Vitamin A		** Fat (g)	Vitamin C (mg)	Sat Fat (g)
					(RE)	(IU)			
Age 3	325	4	200	2.5	100	500		10	
Age 4	450	6	200	2.5	125	625		11.25	
Age 5	450	6	200	2.5	125	625		11.25	
Age 6	450	6	200	2.5	125	625		11.25	
Age 7	500	7	200	2.5	175	875		11.25	
Age 8	500	7	200	2.5	175	875		11.25	
Age 9	500	7	200	2.5	175	875		11.25	
Age 10	500	7	200	2.5	175	875		11.25	
Age 11	588	11.4	300	3.4	225	1125		12.5	
Age 12	588	11.4	300	3.4	225	1125		12.5	
Age 13	588	11.4	300	3.4	225	1125		12.5	
Age 14	588	11.4	300	3.4	225	1125		12.5	
Age 15	650	13	300	3.4	225	1125		15	
Age 16	650	13	300	3.4	225	1125		15	
Age 17	650	13	300	3.4	225	1125		15	

** There are not RDAs for fat or saturated fat.

STANDARD RDA DATA SET

LUNCH RDAs (1/3)

	Calories	Protein (g)	Calcium (mg)	Iron (mg)	Vitamin A		** Fat (g)	Vitamin C (mg)	Sat Fat (g)
					(RE)	(IU)			
Age 3	433	5.3	267	3.3	133	665		13.3	
Age 4	600	8	267	3.3	167	835		15	
Age 5	600	8	267	3.3	167	835		15	
Age 6	600	8	267	3.3	167	835		15	
Age 7	667	9.3	267	3.3	233	1165		15	
Age 8	667	9.3	267	3.3	233	1165		15	
Age 9	667	9.3	267	3.3	233	1165		15	
Age 10	667	9.3	267	3.3	233	1165		15	
Age 11	783	15.2	400	4.5	300	1500		16.7	
Age 12	783	15.2	400	4.5	300	1500		16.7	
Age 13	783	15.2	400	4.5	300	1500		16.7	
Age 14	783	15.2	400	4.5	300	1500		16.7	
Age 15	867	17.2	400	4.5	300	1500		20	
Age 16	867	17.2	400	4.5	300	1500		20	
Age 17	867	17.2	400	4.5	300	1500		20	

**There are no RDAs for fat or saturated fat