



National Health and Nutrition Examination Survey: 1999–2020 Survey Content Brochure



National Center for Health Statistics
Division of Health and Nutrition Examination Surveys



This Survey Content Brochure summarizes the available 1999–2020 National Health and Nutrition Examination Survey data.

The National Health and Nutrition Examination Survey (NHANES) is a program of studies designed to assess the health and nutritional status of adults and children in the United States. The survey is unique in combining interviews with physical and laboratory examinations.

The online version of this brochure is available from: <https://wwwn.cdc.gov/nchs/data/nhanes/survey-contents-508.pdf>.

For more information about NHANES, visit: <https://www.cdc.gov/nchs/nhanes.htm>.

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Table 1. Questionnaire components: National Health and Nutrition Examination Survey, 1999–2020



Sections	Sample description	 Component or lab test conducted on original sample description Change from original sample description Component or lab test not conducted												
		1999–2000	2001–2002	2003–2004	2005–2006	2007–2008	2009–2010	2011–2012	2013–2014	2015–2016	2017–2018	2019–2020		
Survey participant (SP) questionnaire														
Acculturation (ACQ)	12 years and over													
Allergy (AGQ)	1 year and over													
Air quality (AQQ)	16 years and over													
Balance (BAQ)	40 years and over													
Blood pressure and cholesterol (BPQ)	16 years and over													
Cardiovascular disease (CDQ)	40 years and over													
Cognitive functioning (CFQ)	60 years and over													
Demographics (DMQ)	All ages													
Dermatology (DEQ)	6–59 years													
Diabetes (DIQ)	1 year and over													
Diet behavior and nutrition (DBQ)	All ages													
Dietary screener module (DTQ)	2–11 years													
Dietary supplements (DSQ) and prescription medications (RXQ)	All ages													
Disability status (DLQ)	1 year and over													
Early childhood (ECQ)	Birth–15 years													
Functioning (FNQ)	5 years and over													
Health insurance (HIQ)	All ages													
Hearing/audiometry (AUQ)	1 year and over													
Hepatitis (HEQ)	6 years and over													
Hospital utilization and access to care (HUQ)	All ages													
Immunization (IMQ)	All ages													
Infant formula (IFQ)	Birth to 2 years													
Inflammatory arthritis pain (ARQ)	20–69 years													
Kidney conditions (KIQ)	20 years and over													
Medical conditions (MCQ)	1 year and over													
Miscellaneous pain (MPQ)	20 years and over													
Occupation (OCQ)	16 years and over													
Oral health (OHQ)	2 years and over													

Table 1. Questionnaire components: National Health and Nutrition Examination Survey, 1999–2020 (Cont.)



		 Component or lab test conducted on original sample description Change from original sample description Component or lab test not conducted											
Sections	Sample description	1999–2000	2001–2002	2003–2004	2005–2006	2007–2008	2009–2010	2011–2012	2013–2014	2015–2016	2017–2018	2019–2020	
Osteoporosis (OSQ)	20 years and over												
Physical activity and physical fitness (PAQ)	2 years and over												
Physical functioning (PFQ)	1 year and over												
Respiratory health and disease (RDQ)	1 year and over												
Sleep disorders (SLQ)	16 years and over												
Smoking and tobacco use (SMQ)	20 years and over												
Social support (SSQ)	60 years and over												
Standing balance (BAQ)	40 years and over												
Taste and smell (CSQ)	40 years and over												
Tuberculosis (TBQ)	1 year and over												
Vision (VIQ)	50 years and over												
Weight history (WHQ)	16 years and over												
Family questionnaire													
Consumer behavior (CBQ)	All ages												
Demographic background (HFQ) occupation (DMQ)	All ages												
Food security (FSQ)	All ages												
Health insurance (HIQ)	All ages												
Housing characteristics (HOQ)	All ages												
Income (INQ)	All ages												
Pesticide use (PUQ)	All ages												
Salt use (SUQ)	All ages												
Smoking-household (SMQ)	All ages												
Mobile examination center (MEC) questionnaire													
Audio computer-assisted self-interview (ACASI)	8 years and over												
Alcohol use (ALQ)	12–19 years												
Drug use (DUQ)	12–69 years												
Food security (FSQ)	12–15 years												
Mental health	8 years and over												

Table 1. Questionnaire components: National Health and Nutrition Examination Survey, 1999–2020 (Cont.)



Sections	Sample description	 Component or lab test conducted on original sample description Change from original sample description Component or lab test not conducted											
		1999–2000	2001–2002	2003–2004	2005–2006	2007–2008	2009–2010	2011–2012	2013–2014	2015–2016	2017–2018	2019–2020	
Attention deficit hyperactivity disorder (ADHD)	8–15 years												
Anxiety	8–19 years												
Conduct disorders	8–19 years												
Depression	8–19 years												
Depression and depression screener	1/2 sample 20–39 years												
Eating disorders	8–19 years												
Elimination disorders	8–11 years												
Generalized anxiety	1/2 sample 20–39 years												
Panic disorder	8–19 years												
Panic disorder	1/2 sample 20–39 years												
Prostate conditions (PSQ)	Males 20 years and over												
Pubertal maturation (PMQ)	8–19 years												
Sexual behavior (SXQ)	14–59 years												
Smoking and tobacco use (SMQ)—Youth	12–19 years												
Computer-assisted personal interview (CAPI)	8 years and over												
Alcohol use (ALQ)	20 years and over												
Bowel health (BHQ)	20 years and over												
Current health status (HSQ)	1 year and over												
Dietary screener module (DTQ)	12–69 years												
Kidney conditions/urology (KIQ)	20 years and over												
Muscle pain/creatinine kinase (CKQ)	12 years and over												
Pesticide use (PUQMEC)	6 years and over												
Physical activity and physical fitness (PAQ)	12–15 years												
Prostate conditions (KIQ)	Males 20 years and over												

Table 1. Questionnaire components: National Health and Nutrition Examination Survey, 1999–2020 (Cont.)

		■ Component or lab test conducted on original sample description		■ Change from original sample description		□ Component or lab test not conducted							
Sections	Sample description	1999–2000	2001–2002	2003–2004	2005–2006	2007–2008	2009–2010	2011–2012	2013–2014	2015–2016	2017–2018	2019–2020	
Reproductive health (RHQ)	Females 12 years and over	■										□	
Smoking and tobacco use (SMQ)—Adult	20 years and over	■							■				
Volatile toxicants (VTQ)	1/2 sample 12 years and over	□		■									
Weight history—youth (WHQMEC)	8–15 years	■											

Table 2. Post-examination follow-up questionnaire components: National Health and Nutrition Examination Survey, 1999–2020



		 Component or lab test conducted on original sample description Change from original sample description Component or lab test not conducted											
Component	Sample description	1999–2000	2001–2002	2003–2004	2005–2006	2007–2008	2009–2010	2011–2012	2013–2014	2015–2016	2017–2018	2019–2020	
Dietary, day 2	All ages												
Dietary supplement, day 2	All ages												
Flexible consumer behavior survey module (FCBS) phone follow-up (CBQ)	1 year and over												
Food frequency (FFQ)	2 years and over												
Hepatitis C follow-up (HCQ)	6 years and over with Hepatitis C												
Prostate-specific antigen follow-up (PSQ)	Males 40 years and over with high results												

Table 3. Examination components: National Health and Nutrition Examination Survey, 1999–2020



Component	Sample description	■ Component or lab test conducted on original sample description ■ Change from original sample description ■ Component or lab test not conducted											
		1999–2000	2001–2002	2003–2004	2005–2006	2007–2008	2009–2010	2011–2012	2013–2014	2015–2016	2017–2018	2019–2020	
Arthritis body measures	20–69 years												
Audiometry	1/2 sample (20–69 years)												
Balance	1/2 sample (40–69 years)												
Bioelectrical impedance analysis	8–49 years												
Blood pressure	8 years and over												
Body measurements	All ages												
Cardiovascular (CV) fitness	12–49 years												
Cognitive functioning	60 years and over												
Dermatology	20–59 years												
Dietary	All ages												
Dietary supplement	All ages												
Dual energy x-ray absorptiometry	8 years and over												
Abdominal aortic calcification	40 years and over												
Body composition	8 years and over												
Bone density—hip and spine	8 years and over												
Vertebral fracture assessment	40 years and over												
Grip strength test	6 years and over												
Liver ultrasound transient elastography	12 years and over												
Lower extremity disease	40 years and over												
Peripheral neuropathy	40 years and over												
Peripheral vascular disease	40 years and over												
Ophthalmology	40 years and over												
Retinal photo	40 years and over												
Visual fields	40 years and over												
Oral health	2 years and over												
Dental fluorosis imaging	6–19 years												
Physical activity monitor	6 years and over												
Muscle strength	50 years and over												
8-foot timed walk	50 years and over												

Table 3. Examination components: National Health and Nutrition Examination Survey, 1999–2020 (Cont.)



Component	Sample description	 Component or lab test conducted on original sample description Change from original sample description Component or lab test not conducted											
		1999–2000	2001–2002	2003–2004	2005–2006	2007–2008	2009–2010	2011–2012	2013–2014	2015–2016	2017–2018	2019–2020	
20-foot timed walk	50 years and over												
Isokinetic	50 years and over												
Physician exam	All ages												
Respiratory health	6–79 years												
Exhaled nitric oxide	6–79 years												
Spirometry	6–79 years												
Taste and smell	40 years and over												
Tuberculin skin test	1 year and over												
Vision	12 years and over												
Visual acuity	40 years and over												

Table 4. Laboratory components: National Health and Nutrition Examination Survey, 1999–2020

Component	Sample description	 Component or lab test conducted on original sample description Change from original sample description Component or lab test not conducted											
		1999–2000	2001–2002	2003–2004	2005–2006	2007–2008	2009–2010	2011–2012	2013–2014	2015–2016	2017–2018	2019–2020	
Acrylamide (blood)	3 years and over												
Albumin (urine)	6 years and over												
Albumin (home urine)	6 years and over												
Aldehydes (blood)	1/3 sample (12 years and over) and all smokers 18 and over												
Androstenedione (blood)	6 years and over												
Anti-Mullerian hormone (female only) (blood)	6 years and over												
Apolipoprotein (B) (blood)	1/2 sample 12 years and over (fasting)												
Aromatic amines (urine)	1/3 sample (6 years and over) and all smokers 18 and over												
Aromatic diamines/amines (formerly diisocyanates) (urine)	3–5 years and 1/3 sample (6 years and over)												
Arsenic and arsenic species (including metabolites) (urine)	1/3 sample (6 years and over)												
Bone alkaline phosphatase (blood)	8 years and over												
BV/trichomonas Bacterial vaginosis (BV)/trichomonas (urine)	Females 14–49 years												
Cadmium (blood) (urine)	1 year and over												
Caffeine and caffeine metabolites (urine)	1/3 sample (6 years and over)												
CD4/CD8 (blood)	18–49 years, HIV+, and controls												
Celiac disease (tTG-EMA) (blood)	6 years and over												
Chemistry panel (standard biochemistry panel) (blood)	12 years and over												
Chlamydia (urine)	14–39 years												

Table 4. Laboratory components: National Health and Nutrition Examination Survey, 1999–2020 (Cont.)



Component	Sample description	 Component or lab test conducted on original sample description Change from original sample description Component or lab test not conducted												
		1999–2000	2001–2002	2003–2004	2005–2006	2007–2008	2009–2010	2011–2012	2013–2014	2015–2016	2017–2018	2019–2020		
Cholesterol (total) (blood)	3 years and over													
High density lipoprotein (HDL)	3 years and over													
Low density lipoprotein (LDL)	3 years and over (fasting)													
Chromium/cobalt (blood)	40 years and over													
Complete blood count (blood)	1 year and over													
Cotinine (blood)	3 years and over													
Cotinine and nicotine analogs (urine)	1/3 sample (6 years and over)													
C-reactive protein (CRP)\High-sensitivity C-reactive protein (HSCRP) (blood)	3 years and over													
Creatine phosphokinase (blood)	12 years and over													
Creatinine (urine)	6 years and over													
Creatinine (home urine)	6 years and over													
Cryptosporidium (blood)	6–49 years													
Cytomegalovirus (blood)	1–5 years													
Dehydroepiandrosterone (blood)	6 years and over													
Dust allergens	1 year and over													
Environmental phenols (blood)	1/3 sample (6 years and over)													
Erythrocyte protoporphyrin (blood)	1 year and over													
Estradiol (blood)	6 years and over													
Estrone (blood)	6 years and over													
Estrone sulfate (blood)	6 years and over													
Ferritin (blood)	1 year and over													
Fibrinogen (blood)	40 years and over													
Flame Retardants (urine)	3–5 years, 1/3 sample (6 years and over)													
Fluoride (blood - plasma)	6–19 years													
Fluoride (urine)	6–19 years													
Fluoride (water)	Birth–19 years													

Table 4. Laboratory components: National Health and Nutrition Examination Survey, 1999–2020 (Cont.)

Component	Sample description	 Component or lab test conducted on original sample description Change from original sample description Component or lab test not conducted											
		1999–2000	2001–2002	2003–2004	2005–2006	2007–2008	2009–2010	2011–2012	2013–2014	2015–2016	2017–2018	2019–2020	
Folate (RBC) (blood)	3 years and over												
Folate (blood)	3 years and over												
Follicle stimulating hormone/luteinizing hormone (FSH/LH) (blood)	Females 35–60 years												
Fungicides (urine)	1/2 sample (6–11 years)												
Glucose (blood)	12 years and over												
Glycohemoglobin (blood)	12 years and over												
Gonorrhea (urine)	14–39 years												
Halogenated phenolic compounds/ environmental pesticides (urine)	1/2 sample (6–11 years)												
Helicobacter pylori (blood)	3 years and over												
Hepatitis (antiHBs) (blood)	2 years and over												
Hepatitis A, B, C, D, E (blood)	6 years and over												
Herbicides—substituted ureas and others (urine)	1/2 sample (6–11 years)												
Herpes 1 and 2 antibody (blood)	14–49 years												
Heterocyclic aromatic amines (urine) (Tobacco Markers)	1/3 sample (6 years and over) and all smokers 18 and over												
HLA-B27 (inflammatory arthritis) (blood)	20–69 years												
Homocysteine (blood)	3 years and over												
Human immunodeficiency virus (HIV) antibody (blood)	18–49 years												
Human papillomavirus (HPV) (blood)	14–59 years												
Human papillomavirus (HPV) (oral rinse)	14–69 years												
Human papillomavirus (HPV) (swab)	Females 14–59 years												
Human papillomavirus (HPV) (swab)	Males 14–59 years												
Hydroxyprogesterone (blood)	6 years and over												
Immunoglobulin E-allergens (blood)	1 year and over												
Insulin/C-peptide (blood)	12 years and over (fasting)												

Table 4. Laboratory components: National Health and Nutrition Examination Survey, 1999–2020 (Cont.)



Component	Sample description	 Component or lab test conducted on original sample description Change from original sample description Component or lab test not conducted											
		1999–2000	2001–2002	2003–2004	2005–2006	2007–2008	2009–2010	2011–2012	2013–2014	2015–2016	2017–2018	2019–2020	
Iodine (urine)	1/3 sample (6 years and over)												
Iron (blood)	1 year and over												
Latex (blood)	12–59 years												
Lead (blood)	1 year and over												
Lead (urine)	1/3 sample (6 years and over)												
Lead dust	1–5 years												
Liver genetics (blood)	12 years and over												
Lp(a) (Lipoprotein(a)) (blood)	12 years and over (fasting)												
Luteinizing hormone (blood)	6 years and over												
Manganese (blood)	1 year and over												
Manganese (urine)	1/3 sample (6 years and over)												
Measles/varicella/rubella (blood)	6–49 years												
Mercury (hair)	1–5 years, females 16–49 years												
Mercury, speciated (urine)	Females 16–49 years												
Mercury, total (blood)	1–5 years, females 16–49 years												
Metals (blood)	1/3 sample (6 years and over)												
Metals (urine)	1/3 sample (6 years and over)												
Methicillin resistant staphylococcus aureus (MRSA) (blood)	1 year and over												
Methylmalonic acid (blood)	3 years and over												
Neonicotinoids (urine)	3–5 years, 1/3 sample (6 years and over)												

Table 4. Laboratory components: National Health and Nutrition Examination Survey, 1999–2020 (Cont.)

Component	Sample description	 Component or lab test conducted on original sample description Change from original sample description Component or lab test not conducted											
		1999–2000	2001–2002	2003–2004	2005–2006	2007–2008	2009–2010	2011–2012	2013–2014	2015–2016	2017–2018	2019–2020	
Polyaromatic hydrocarbons (PAH) (urine)	1/3 sample (6 years and over)												
Polybrominated diphenyl ethers (blood) (pooled)	1/3 sample (12 years and over)												
Polychlorinated and polybrominated dibenzo-p-dioxins, dibenzo-furans, coplanar and mono-ortho-substituted biphenyls (blood) (pooled)	1/3 sample (12 years and over)												
Polyunsaturated fatty acids (blood)	3 years and over												
Progesterone (blood)	6 years and over												
Prostate specific antigen (PSA) (blood)	Males 40 years and over												
Selenium (blood)	1 year and over												
Selenium/copper/zinc (blood)	1/3 sample (6 years and over)												
Sex hormone binding globulin (blood)	6 years and over												
Stored sera (blood)	6 years and over												
Stored urine (urine)	6 years and over												
Syphilis (blood)	18–49 years												
Testosterone (blood)	6 years and over												
Thyroid function testing (blood)	1/3 sample (12 years and over)												
Tobacco-specific nitrosamines (urine)	1/3 sample (6 years and over) and all smokers 18 and over												
Total iron binding capacity (TIBC)/ transferrin saturation (blood)	1 year and over												
Toxoplasma (blood)	6–49 years												
Trans fatty acids (blood)	3–11 years, a.m. 12 years and over												
Transferrin receptor (blood)	1–5 years, females 12–49 years												
Trichomonas (blood)	14–59 years												

Table 4. Laboratory components: National Health and Nutrition Examination Survey, 1999–2020 (Cont.)

Component	Sample description	 Component or lab test conducted on original sample description Change from original sample description Component or lab test not conducted											
		1999–2000	2001–2002	2003–2004	2005–2006	2007–2008	2009–2010	2011–2012	2013–2014	2015–2016	2017–2018	2019–2020	
Triglycerides (blood)	Subsample 3 years and over												
Tuberculosis (blood)	6 years and over												
Urine flow rate calculation (urine)	6 years and over												
Vitamin A/E/carotenoids (blood)	3 years and over												
Vitamin B6 (blood)	1 year and over												
Vitamin B12 (blood)	3 years and over												
Vitamin C (blood)	6 years and over												
Vitamin D (blood)	6 years and over												
Volatile N-nitrosamines (urine)	1/3 sample (6 years and over) and all smokers 18 and over												
Volatile organic compounds (VOC) (blood)	Subsample 20–59 years												
Volatile organic compounds (VOC) exposure monitor (blood)	Subsample 20–59 years												
Volatile organic compounds (VOC) (urine)	Subsample (6 years and over) and all adult smokers												
Volatile organic compounds (VOC) (water)	Subsample 20–59 years												
White blood cells/deoxyribonucleic acid (WBC/DNA) (blood)	20 years and over												

NHANES Data Access

Data are posted for free download on the NHANES website: <https://www.cdc.gov/nchs/nhanes.htm>.

Research Data Center

The National Center for Health Statistics (NCHS) is responsible for protecting the confidentiality of all survey respondents, including NHANES respondents. To reduce the risk of disclosure, not all available data are released to the public. Secure access to restricted data may be granted through NCHS' Research Data Center (RDC). All researchers who are interested in using NHANES restricted data must submit a research proposal outlining the need for more sensitive data. Once approved, analysts from RDC work with researchers to create a data file specific to the research question. These data sets are never released to the researcher, but several modes of secure unidentifiable access are available. For more information about accessing NHANES data through RDC, including the format for the research proposal, the type of data available, and the estimated cost of access, visit: <https://www.cdc.gov/rdc/>.

Confidentiality—Maintaining study participant confidentiality is the primary objective of RDC. Together, the confidentiality orientation, confidentiality forms, and disclosure manual outline practices that are essential to protecting the data and preventing disclosure of confidential information. The research team and other authors listed in the proposal must complete the Confidentiality Orientation and Confidentiality forms.

Disclosure Review—RDC disclosure review policies and procedures exist to protect the confidentiality of NCHS study participants. Your output will be reviewed by an RDC staff member for disclosure concerns. It is your responsibility to use these statistics in a way that does not pose additional risk to the respondents.

FSRDC—The Federal Statistical Research Data Centers are partnerships between federal statistical agencies and leading research institutions. They are secure facilities managed by the U.S. Census Bureau to provide secure access to a range of restricted-use microdata for statistical data use purposes only. For more information, visit: <https://www.census.gov/fsrdc>.

Data Linkage

For information about NCHS data linkage, visit: <https://www.cdc.gov/nchs/data-linkage/index.htm>.