



National Health and Nutrition Examination Survey: 1999–2022 Survey Content Brochure



**Centers for Disease
Control and Prevention**
National Center for
Health Statistics

This Survey Content Brochure summarizes the available 1999–2022 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 examinations and laboratory tests.

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

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Table 1. Questionnaire components: National Health and Nutrition Examination Survey, 1999–2022

		 Component or laboratory test conducted on original sample description Change from original sample description Component or laboratory test not conducted												
Section	Sample description	1999–2000	2001–2002	2003–2004	2005–2006	2007–2008	2009–2010	2011–2012	2013–2014	2015–2016	2017–2018	2019–2020	2021–2022	
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													
COVID-19 (COQ)	All ages													
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													

Table 1. Questionnaire components: National Health and Nutrition Examination Survey, 1999–2022—Con.



		 Component or laboratory test conducted on original sample description Change from original sample description Component or laboratory test not conducted												
Section	Sample description	1999–2000	2001–2002	2003–2004	2005–2006	2007–2008	2009–2010	2011–2012	2013–2014	2015–2016	2017–2018	2019–2020	2021–2022	
Oral health (OHQ)	2 years and over													
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													
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													
Alcohol use (ALQ)	20 years and over													
Current health status (HSQ)	1 year and over													
Drug use (DUQ)	12–69 years													

Table 1. Questionnaire components: National Health and Nutrition Examination Survey, 1999–2022—Con.



		Component or laboratory test conducted on original sample description			Change from original sample description			Component or laboratory test not conducted					
Section	Sample description	1999–2000	2001–2002	2003–2004	2005–2006	2007–2008	2009–2010	2011–2012	2013–2014	2015–2016	2017–2018	2019–2020	2021–2022
Food security (FSQ)	12–15 years												
Kidney conditions/urology (KIQ)	20 years and over												
Mental health	8 years and over												
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 (DPQ)	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												
Physical activity and physical fitness (PAQ)	12–15 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												
Bowel health (BHQ)	20 years and over												
Dietary screener module (DTQ)	12–69 years												
Muscle pain/creatine kinase (CKQ)	12 years and over												
Pesticide use (PUQMEC)	6 years and over												
Prostate conditions (KIQ)	Males 20 years and over												

Table 1. Questionnaire components: National Health and Nutrition Examination Survey, 1999–2022—Con.



		 Component or laboratory test conducted on original sample description Change from original sample description Component or laboratory test not conducted												
Section	Sample description	1999–2000	2001–2002	2003–2004	2005–2006	2007–2008	2009–2010	2011–2012	2013–2014	2015–2016	2017–2018	2019–2020	2021–2022	
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. Postexamination follow-up questionnaire components: National Health and Nutrition Examination Survey, 1999–2022



		 Component or laboratory test conducted on original sample description Change from original sample description Component or laboratory 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	2021–2022	
Dietary, day 1	All ages													
Dietary, day 2	All ages													
Dietary supplement, day 2	All ages													
Dietary supplement use, 30 day	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, 1999–2022

Component	Sample description	■ Component or laboratory test conducted on original sample description ■ Change from original sample description ■ Component or laboratory 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	2021–2022	
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													

Table 3. Examination components: National Health and Nutrition Examination Survey, 1999–2022—Con.



		 Component or laboratory test conducted on original sample description Change from original sample description Component or laboratory 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	2021–2022
8-foot timed walk	50 years and over												
20-foot timed walk	50 years and over												
Isokinetic	50 years and over												
Physician examination	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												

Table 4. Laboratory components: National Health and Nutrition Examination Survey, 1999–2022—Con.

Component	Sample description	 Component or laboratory test conducted on original sample description Change from original sample description Component or laboratory 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	2021–2022	
Chemistry panel (standard biochemistry panel) (blood)	12 years and over													
Chlamydia (urine)	14–39 years													
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)													
COVID-19 serology (blood)	1 year 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													
Dust allergens	1 year and over													
Enterovirus (EVD-68) (blood)	1–11 years													
Environmental phenols (urine)	1/3 sample (6 years and over)													
Erythrocyte protoporphyrin (blood)	1 year and over													
Fatty Acids, washed RBCs (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													

Table 4. Laboratory components: National Health and Nutrition Examination Survey, 1999–2022—Con.



		 Component or laboratory test conducted on original sample description Change from original sample description Component or laboratory 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	2021–2022		
Insulin/C-peptide (blood)	12 years and over (fasting)														
Iodine (urine)	1/3 sample (6 years and over)														
Iodine (salt)	3–5 years and 1/3 sample (6 years and over)														
Iron (blood)	12 years and over														
Iron Panel—Iron, Total iron-binding capacity (TIBC)/transferrin saturation (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)	18 years and over														
Lp(a) (Lipoprotein(a)) (blood)	12 years and over (fasting)														
Magnesium (blood)	12 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 (urine)	Females 16–49 years														
Mercury, total and speciated (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)														

Table 4. Laboratory components: National Health and Nutrition Examination Survey, 1999–2022—Con.



		 Component or laboratory test conducted on original sample description Change from original sample description Component or laboratory 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	2021–2022	
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)													
Nicotine analogs (urine)	1/3 sample (6 years and over) and all smokers 18 years and over													
NNAL (urine)	6 years and over													
Nondioxin-like polychlorinated biphenyls (blood) (pooled)	1/3 sample (12 years and over)													
Nondioxin-like polychlorinated biphenyls (blood)	1/3 sample (12 years and over)													
N-teleopeptide (NTX) (blood)	8 years and over													
Oral glucose tolerance (OGTT) (blood)	12 years and over (fasting)													
Organophosphate insecticides (urine)	1/2 sample (6–11 years) and 1/3 sample (12 years and over)													
Osmolality (urine)	6 years and over													
Parathyroid hormone (blood)	6 years and over													
Perchlorate/thiocyanate/nitrates (urine)	1/3 sample (6 years and over)													
Perchlorate (water)	1/2 sample 12 years and over													
Personal care and consumer product chemicals and metabolites (urine)	1/3 sample (6 years and over)													
Pesticides (urine) (pooled)	1/3 sample (6 years and over)													
Pesticides (urine)	1/3 sample (6 years and over)													

Table 4. Laboratory components: National Health and Nutrition Examination Survey, 1999–2022—Con.



		 Component or laboratory test conducted on original sample description Change from original sample description Component or laboratory 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	2021–2022	
Organochlorine (blood)	1/3 sample (12 years and over)													
Pyrethroid (urine)	1/3 sample (6 years and over)													
Phthalates (urine)	1/3 sample (6 years and over)													
Phytoestrogens (urine)	1/3 sample (6 years and over)													
Polyaromatic hydrocarbons (PAH) (urine)	1/3 sample (6 years and over)													
Polybrominated diphenyl ethers (blood) (pooled)	1/3 sample (12 years and over)													
Polybrominated diphenyl ethers (blood)	1/3 sample (12 years and over)													
Polychlorinated and polybrominated dibenzo-p-dioxins, dibenzofurans, coplanar and mono-ortho-substituted biphenyls (blood) (pooled)	1/3 sample (12 years and over)													
Polychlorinated and polybrominated dibenzo-p-dioxins, dibenzofurans, coplanar and mono-ortho-substituted biphenyls (blood)	1/3 sample (12 years and over)													
Perfluoroalkyl and polyfluoroalkyl substances (blood)	1/3 sample (12 years and over)													
Polyunsaturated fatty acids (blood)	3 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 steroid hormone panel (blood)	3 years and over													
17 α -hydroxyprogesterone	6 years and over													
Androstenedione	6 years and over													
Anti-Müllerian hormone	6 years and over													

Table 4. Laboratory components: National Health and Nutrition Examination Survey, 1999–2022—Con.



		 Component or laboratory test conducted on original sample description Change from original sample description Component or laboratory 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	2021–2022
Dehydroepiandrosterone	6 years and over												
Estradiol	6 years and over												
Estrone	6 years and over												
Estrone sulfate	6 years and over												
Follicle-stimulating hormone/ luteinizing hormone (FSH/LH)	Females 35–60 years												
Progesterone	6 years and over												
Sex hormone binding globulin	6 years and over												
Testosterone	6 years and over												
Stored sera (blood)	6 years and over												
Stored urine (urine)	6 years and over												
Syphilis (blood)	18–49 years												
Terpenes (blood)	1/3 sample (6 years and over for 2021) and 1/2 sample (6 years and over for 2022)												
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												
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 (urine)	14–59 years												
Triglycerides (blood)	Subsample 3 years and over												
Tuberculosis (blood)	6 years and over												
Urine flow rate calculation (urine)	6 years and over												

Table 4. Laboratory components: National Health and Nutrition Examination Survey, 1999–2022—Con.

		■ Component or laboratory test conducted on original sample description ■ Change from original sample description ■ Component or laboratory 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	2021–2022	
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: 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: 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.

Federal Statistical Research Data Centers—The Federal Statistical RDCs 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: www.census.gov/fsrdc.

Data Linkage

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