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| **Vitamin D** | |
| **Protocol Id** | 051101 |
| **Version #** | 1 |
| **Description of Protocol** | Any methodology that uses the appropriate National Institute of Standards and Technology (NIST) standard reference material and whose use is monitored by participation in Vitamin D External Quality Assessment Scheme (DEQAS) can be used to quantify vitamin D exposure. |
| **Specific Instructions** | None |
| **Protocol Text** | All bioassays that follow the guidelines present in the Description of Protocol are equally valid, and the data collected can be compared across studies. |
| **Selection Rationale** | The PhenX Working Group selected this protocol because two recent systematic evidence-based reviews suggest that serum 25 hydroxy vitamin D is the best biomarker for vitamin D exposure and captures exposure levels from both diet and sunlight. |
| **Source** | National Institute of Standards and Technology (NIST)  Vitamin D External Quality Assessment Scheme (DEQAS) |
| **Language** | Not Applicable |
| **Participant** | All ages, but most important for infants and the elderly. |
| **Personnel and Training Required** | Personnel and required training will depend on Vitamin D protocol selected. |
| **Equipment Needs** | Equipment needed will depend on Vitamin D protocol selected. |
| **Standards** | |  |  |  |  | | --- | --- | --- | --- | | **Standard** | **Name** | **ID** | **Source** | | Common Data Elements (CDE) | Person Serum Vitamin D Level Number | 2946961 | [CDE Browser](https://cdebrowser.nci.nih.gov/CDEBrowser/search?elementDetails=9&FirstTimer=0&PageId=ElementDetailsGroup&publicId=2946961&version=1.0) | | Logical Observation Identifiers Names and Codes (LOINC) | PhenX - vitamin D protocol | 62288-6 | [LOINC](http://s.details.loinc.org/LOINC/62288-6.html?sections=Web) | |
| **General References** | None |
| **Protocol Type** | Bioassay |
| **Derived Variables** | None |
| **Requirements** | |  |  | | --- | --- | | **Requirement Category** | **Required** | | Average time of greater than 15 minutes in an unaffected individual  Average time of greater than 15 minutes in an unaffected individual | No | | Major equipment  This measure requires a specialized measurement device that may not be readily available in every setting where genome wide association studies are being conducted. Examples of specialized equipment are DEXA, Echocardiography, and Spirometry | No | | Specialized requirements for biospecimen collection  This protocol requires that blood, urine, etc. be collected from the study participants. | No | | Specialized training  This measure requires staff training in the protocol methodology and/or in the conduct of the data analysis. | No | |