



MIDUS 3 Project 2:

National Study of Daily Experiences

Saliva Collection

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Saliva Collection Description

As part of the 3rd wave of MIDUS, NSDE participants were asked to provide four saliva samples on days 2 through 5 in addition to completing short telephone interviews about their daily experiences across eight consecutive days. Saliva samples were collected at waking (before getting out of bed), 30 minutes after getting out of bed, before lunch, and before bed. Participants were instructed to collect samples before eating, drinking, brushing their teeth, or smoking. In addition, participants were asked not to consume any caffeinated products (e.g., coffee, tea, soda, or chocolate) before collecting samples. Data on the exact time respondents provide each saliva sample was obtained from the nightly telephone interviews and from a paper-pencil log sent with the collection kit. Prescription and over-the-counter medications taken during the collection period were recorded during the telephone interview of the last day of saliva collection.

When all 16 tubes were ready to be returned, participants used a pre-addressed, paid courier package for shipping to the MIDUS Biological Core at the University of Wisconsin, where they were stored in an ultracold freezer at -60° C. For analysis, the salivettes are thawed and centrifuged at 3000 rpm for 5 minutes, yielding a clear fluid with low viscosity. Cortisol concentrations are quantified with a commercially available luminescence immunoassay (IBL, Hamburg, Germany), with intra-assay and inter-assay coefficients of variation below 5%.

Saliva and Cortisol Variables

A. The first set of saliva- and cortisol-related variables allows for a descriptive examination of the saliva and cortisol data.

C2DCORT: denotes whether a participant provide any saliva samples (1=yes, 2=no). This is a between-person variable.

B. Raw Cortisol Values

The raw cortisol values for the four occasions are represented by C2DCORW (cortisol at waking), C2DCORA (30 minutes after waking), C2DCORL (before lunch), and C2DCORB (before bed). Cortisol values are in nanomoles per liter (nmol/l). No boundary restrictions are placed on the cortisol values, such that values as low as .01 nmol/l and as high as 1346.14 nmol/l are observed in the data.

In addition to actual raw values, the following values denote some type of non-response.

999994. UNRELIABLE
999996. EMPTY
999997. NOT ENOUGH SALIVA
999998. REFUSED/MISSING
999999. INAPPLICABLE

Unreliable includes zero and unreliable values. Not done means the sample is missing. Empty reflects that a sample was sent to the lab, it was spun down, and there was little or no saliva in the bottom of the tube.

C. Cortisol Collection Time

Cortisol collection time variables (C2DCORWT, C2DCORAT, C2DCORLT, and C2DCORBT) appear in 24-hour military time. Collection times outside of 0-to-24 hour window occur in cases where a participant collects a saliva sample particularly early (i.e., prior to the beginning of interview day) or late (i.e., after the end of interview day). For example, an early awakening time of 11 p.m. would result in C2DCORWT value of -1.00. Similarly, a relatively late bedtime of 2 a.m. would result in C2DCORBT value of 26.00.

Two sources of data provide information on cortisol collection times: 1) paper-pencil log, as completed by the participant, and 2) cortisol collection times obtained by the interviewer from the participant during the telephone interview. Participants fill out the appropriate time for each cortisol collection occasion on the paper-pencil log and mail it along with their completed saliva samples. In addition, the interviewer records each cortisol collection time during interview days that are relevant to saliva collection.

Interviewer-obtained saliva collection time is a secondary source of cortisol collection time information, which is used to supplement paper-pencil log cortisol collection time. Specifically, participant-provided paper-pencil log times are first used to create C2DCORWT, C2DCORAT, C2DCORLT, and C2DCORBT variables. In cases where one or more paper-pencil log cortisol collection times are not available, the interviewer-obtained saliva collection times are entered into these variables instead.

Cortisol Collection Time Variables:

C2DCORWT: CORTISOL COLLECTION TIME AT WAKING

C2DCORAT: CORTISOL COLLECTION TIME 30 MINUTES AFTER WAKING

C2DCORLT: CORTISOL COLLECTION TIME BEFORE LUNCH

C2DCORBT: CORTISOL COLLECTION TIME BEFORE BED

98. REFUSED/MISSING

99. INAPPLICABLE

D. Medication Use During Saliva Collection

Information on use of over-the-counter and prescription medications relevant to cortisol levels is obtained on the last day of saliva collection. Participants endorse use of seven

types of medication (see below) with a 1 (yes) or 2 (no) response. Typically, these questions are administered on day 5 of the NSDE interview, unless the participant finishes saliva collection early (e.g., day 4) or late (e.g., day 6).

Medication Use Variables:

During the days you provided saliva, did use you use any of the following medications?

- C2DMED1:* STEROID NASAL SPRAY
(e.g., Flonase, Nasonex, Rinocort, Nasarel, Nasacort, Omnaris, Beconase, Veramyst)
- C2DMED2:* INHALED STEROID MEDICATION
(e.g., Advair, Aerobid, Symbicort, Asmanax, Azmacort, Flovent, Pulmicort, Qvar)
- C2DMED3:* ORAL STEROID MEDICATION
(E.G., PREDNISONE)
- C2DMED4:* CREAM OR OINTMENT CONTAINING CORTISONE
(e.g., CORTAID)
- C2DMED5:* CORTICOSTEROID INJECTION
(e.g., epidural corticosteroid injection, joint corticosteroid injection)
- C2DMED6:* ANTI-DEPRESSANTS OR ANTI-ANXIETY MEDICATION
- C2DMED7:* OTHER HORMONAL MEDICATIONS
1. YES
 2. NO
 7. DON'T KNOW
 8. REFUSED/MISSING
 9. INAPPLICABLE

E. Alpha-Amylase Values

C2DAA: denotes whether a participant has any alpha-amylase data (1=yes, 2=no).

The raw alpha-amylase values for the four occasions are represented by C2DAAW (alpha-amylase at waking), C2DAAA (30 minutes after waking), C2DAAL (before lunch), and C2DAAB (before bed). No boundary restrictions are placed on the values.

In addition to actual raw values, the following values denote some type of non-response.

9998. MISSING
9999. INAPPLICABLE

We also provide an adjusted value for total alpha-amylase for a minute of saliva flow. These variables are represented by C2DAA2W (alpha-amylase at waking), C2DAA2A (30 minutes after waking), C2DAA2L (before lunch), and C2DAA2B (before bed).