

# Phenotypes CoLaus

**B:** Base 2003-2008 **F1:** Followup 2009-2013 **F2:** Followup 2014-2018 **F3:** Followup 2018-2021

## Interview

|   |   |    |    |    |
|---|---|----|----|----|
| Age, gender, origin, ethnicity (up to grandparents)   | B | F1 | F2 | F3 |
| Education level, occupation, socio-economic status  | B | F1 | F2 | F3 |
| Smoking, alcohol intake, physical activity  | B | F1 | F2 | F3 |
| Personal history of CVD, hypertension, diabetes, stroke, myocardial infarction, and coronary procedures or surgery. | B | F1 | F2 | F3 |
| Current medication (over the counter or prescription)   | B | F1 | F2 | F3 |
| Screen for cognitive disorders (Mini-Mental State Evaluation: MMSE; in subjects $\geq 65$ years)                    | B | F1 | F2 | F3 |
| Familial history of CVRF or CVD   | B |    |    |    |
| Service utilization   |   |    | F2 | F3 |
| Health economic data  |   |    |    | F3 |

## Physical exam

|   |   |    |    |    |
|---|---|----|----|----|
| Height, weight, waist and hip circumference, blood pressure, heart rate, percent fat (bio impedance), hand grip | B | F1 | F2 | F3 |
|---|---|----|----|----|

## Blood (fasting)

### Markers of diabetes and insulin resistance:

|                                       |   |    |    |    |
|---------------------------------------|---|----|----|----|
| glucose, insulin, leptin, adiponectin | B | F1 | F2 | F3 |
| HbA1c                                 |   |    | F2 | F3 |

### Makers of dyslipidemia:

|  |   |    |    |    |
|--|---|----|----|----|
| total, HDL and LDL-cholesterol, triglycerides, LDL-size <sup>1</sup> , ApoB <sup>1</sup> | B | F1 | F2 | F3 |
| Lp(a), ApoA-IV   |   | F1 |    |    |

### Markers associated with increased CVD risk:

|  |   |    |    |    |
|--|---|----|----|----|
| ultra-sensitive CRP, homocystein <sup>1</sup> , NT-pro BNP | B | F1 | F2 | F3 |
| TNFa <sup>2</sup> , IL-6 <sup>2</sup> , IL-1b <sup>2</sup> | B | F1 | F2 | F3 |
| High sensitivity Troponin T                                |   |    | F2 | F3 |

### Markers of co-morbid conditions:

|   |   |    |    |    |
|---|---|----|----|----|
| liver function tests: ASAT, ALAT, g-GT, alkaline phosphatase                          | B | F1 | F2 | F3 |
| renal function: creatinine, urea  | B | F1 | F2 | F3 |
| chronic elevated alcohol consumption: carbohydrate deficient transferrin <sup>1</sup> | B | F1 | F2 | F3 |
| others: uric acid, calcium, albumin <sup>1</sup> , total proteins                     | B | F1 | F2 | F3 |
| blood count   |   | F1 | F2 | F3 |
| iron status (iron, transferrin, ferritin),  | B |    | F2 | F3 |
| Vitamine D, Metabolome (n=835) by nuclear magnetic resonance (NMR)                    | B |    |    |    |

### Urine

|   |   |    |    |    |
|---|---|----|----|----|
| Microalbuminuria, Creatinine  | B | F1 | F2 | F3 |
| Electrolytes (Na <sup>+</sup> , K <sup>+</sup> , Mg <sup>++</sup> , Ca <sup>++</sup> , phosphate), uric acid and osmolarity | B |    |    |    |
| Uromodulin  | B |    |    |    |
| Metabolome (n=835) by NMR and tandem mass spectrometry (MS/MS)  | B |    |    |    |

### DNA

|   |   |    |    |    |
|---|---|----|----|----|
| Genotyping (500K SNP) imputed to 30,061,896 SNPs using 1000 Genome data | B |    |    |    |
| Full exome sequencing of 500 subjects                                   | B |    |    |    |
| Exome sequencing of 200 selected genes in 2000 subjects                 | B |    |    |    |
| Whole blood collected for additional DNA extraction                     | B | F1 | F2 | F3 |
| or epigenetic analyses  |   |    | F2 | F3 |

### Self-ratings

|   |   |    |    |    |
|---|---|----|----|----|
| Psychopathology screening (General Health Questionnaire: GHQ-12)  | B |    |    |    |
| Depression screening (CES-D), dietary habits, physical activity ( <b>see ActiLaus</b> ), sleep patterns and disorders ( <b>see HypnoLaus</b> ), persistent pain, depression state |   | F1 | F2 | F3 |
| Physical health and a mental health summary score (The 12-item Short Form Health Survey (SF12))   |   |    | F2 | F3 |
| Fatigue screening (Krupp fatigue severity scale, Chalder fatigue scale)   |   |    | F2 | F3 |

## Mortality and incident CVD

|   |    |    |    |
|---|----|----|----|
| Continuous comparison between the CoLaus PsyCoLaus database and the registry of inhabitants.  | F1 | F2 | F3 |
| Collection of information on CVD and cause of death from medical records or the Swiss National Death Registry and establishment of diagnoses of CVD by an adjudication committee according to international recommendations | F1 | F2 | F3 |

## Additional phenotypes

|  |    |    |    |
|--|----|----|----|
| Polysomnography (n=2214, <b>see HypnoLaus</b> )  | F1 |    |    |
| Bone densitometry (women, n=1501, <b>see OsteoLaus</b> )   | F1 |    |    |
| Whole Body composition (women, n=800, <b>see OsteoLaus</b> )   | F1 |    |    |
| Daily salivary cortisol <sup>3</sup> (a-amylase (Autonomic nervous system function), 4 time points)                                  | F1 | F2 | F3 |
| Electrocardiogram (12 Lead)  |    | F2 | F3 |
| Physical activity with wrist worn accelerometer, electronic daily monitoring of mood regulation and activity ( <b>see ActiLaus</b> ) |    | F2 | F3 |
| Pulmonary function test (spirometry, <b>see PneumoLaus</b> )   |    | F2 | F3 |
| Heart rate variability   |    |    | F3 |
| Gut microbiota (stool material collection)   |    |    | F3 |

### Additional information

<sup>1</sup> only baseline; <sup>2</sup> retrospectively assessed for baseline; <sup>3</sup> during PsyCoLaus at F1

Dietary habits: Questionnaire alimentaire Bus Santé - food frequency questionnaire (FFQ).

Pain: Persistent pain and the TnsSofres questionnaire.

**COMPLEMENTARY INFORMATION ON ASSESSEMENTS OF COLAUS|PSYCOLAUS [here](#)**