<table>
<tr><td>Name</td><td>Nederlands Tweelingen Register/ Netherlands Twin Registry (NTR)</td></tr>
<tr><td>Description</td><td>NTR aims to examine the contribution of genetics on growth and development of children, risk factors of certain diseases and development of behavioral problems. NTR also examines the coherence of living habits (i.e. smoking, drinking, physical activity, etc.) and health and/or disease development.</td></tr>
<tr><td>Location</td><td>National (the entire country of the Netherlands)</td></tr>
<tr><td>Lead Institute</td><td>Vrije Universiteit, Amsterdam</td></tr>
<tr><td>Cohort size</td><td>243,646 participants as of 2019
<table>
<tr><td></td><td>0-11 years</td><td>12-17 years</td><td>18+</td><td>Total</td></tr>
<tr><td>Multiples</td><td>27,474</td><td>20,949</td><td>73,734</td><td>122,157</td></tr>
<tr><td>Siblings</td><td>628</td><td>2338</td><td>11,938</td><td>14,904</td></tr>
<tr><td>Parents</td><td>0</td><td>0</td><td>114,278</td><td>114,278</td></tr>
<tr><td>Spouses</td><td>0</td><td>0</td><td>2,616</td><td>2,616</td></tr>
<tr><td>Offspring</td><td>280</td><td>28</td><td>778</td><td>1,086</td></tr>
<tr><td>Other</td><td>1</td><td>4</td><td>683</td><td>688</td></tr>
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<tr><td>Start Cohort</td><td>1987</td></tr>
<tr><td>Follow-up</td><td>Every two or three years the adult participants get a new questionnaire about their health and living habits. This started in 1991
- 1991
- 1993
- 1995
- 1997
- 2000
- 2002
- 2004
- 2008
- 2009
- 2011
- 2013
- 2015

For younger participants surveys were done at age:
- Age 1
- Age 2
- Age 3
- Age 5
- Age 6/7
- Age 9/10
- Age 12
- Age 14-18 (pilot)
- Age 14
- Age 16
- Age 18

For full overview of number of participants per Survey see design paper</td></tr>
<tr><td>Variables and Measurement methods</td><td>Measurements: questionnaires and Biological samples</td></tr>
<tr><td>Availability and Type of -omic data</td><td>NTR Biobank: Biological sample collection (N = ~10,000)
Blood samples
Urine samples</td></tr>
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	Stool samples Transcriptomics: Cell counts Biomarkers (All NTR Biobank participants): - lipids - glucose - insulin - HbA1c - Liver enzymes - C-reactive protein - Fibrinogen - Interleukin (IL)-6 - TNF-α - Soluble IL-6 receptor Other Biomarkers: - Cotinine in blood - Telomere length - Microbiome datasets DNA samples RNA expression
Design Paper	Willemsen et al., 2013
Website	www.tweelingenregister.org