![CanPath logo] Canadian Partnership for Tomorrow's Health — Partenariat canadien pour la santé de demain

CANADA'S LARGEST POPULATION HEALTH STUDY

CanPath - The Canadian Partnership for Tomorrow's Health - is Canada's national population health platform built to enable scientists to explore the complex factors that contribute to chronic disease and cancer.

CanPath has collected data from approximately 330,000 volunteer Canadians, including information about health, lifestyle, environment and behaviour.

Large subsets of participants have also provided physical measures, mental health measures, magnetic resonance imaging (MRI) data and biological samples such as blood and urine.

The size of the cohort and the richness of its epidemiological, clinical and biological data positions Canada amongst the world's leaders in longitudinal cancer and chronic disease research.

The power of this cohort continues to increase with time as new data are added, technology advances, and incident health outcomes occur.

CanPath is a partnership of seven regional cohorts across ten provinces:

- BC Generations Project
- Alberta's Tomorrow Project
- Saskatchewan PATH
- The Manitoba Tomorrow Project
- Ontario Health Study
- CARTaGENE
- Atlantic PATH

BC GENERATIONS PROJECT — Your time today builds a healthier tomorrow.
ALBERTA'S TOMORROW PROJECT — Exploring research for a healthier tomorrow
Saskatchewan PATH in development
CancerCare Manitoba / ActionCancer Manitoba — THE MANITOBA TOMORROW PROJECT
Atlantic PATH
CARTaGENE
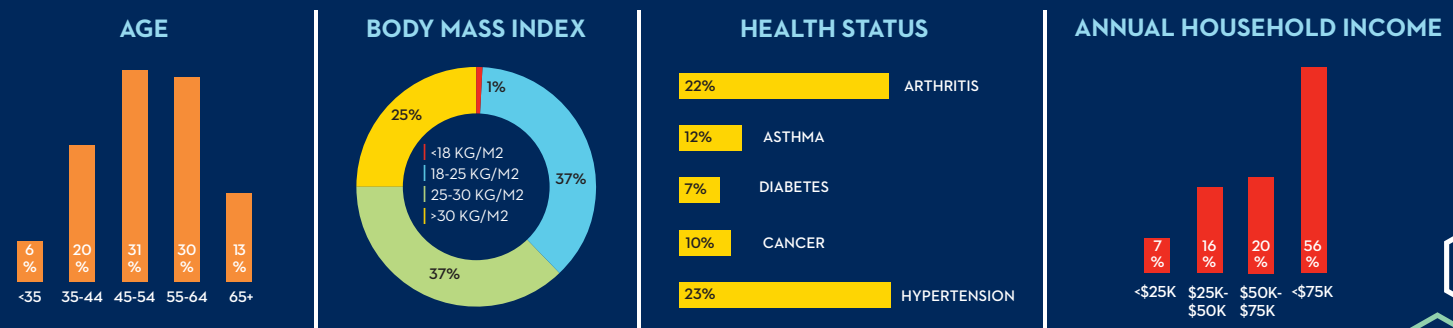Ontario Health Study — Étude sur la santé Ontario

A HARMONIZED RESEARCH PLATFORM

- Baseline and follow-up data from the five mature regional cohorts have been harmonized, creating a pan-Canadian resource of more than 2,800 measures of participant health and lifestyle factors.
- Harmonized data from over 100,000 responses to the COVID-19 Questionnaire are now available.
- The cohort is designed to facilitate collaboration with other large-scale international research initiatives, such as the International HundredK+ Cohorts Consortium (IHCC).

- The dataset includes unique features and measures such as imaging data, detailed blood biochemistry, and genotyping results from more than 20,000 participant samples.
- Participants have agreed to the linkage of their questionnaire and biospecimen data to their administrative health records and are open to being re-contacted by their regional cohorts for future studies to collect additional data and samples.

* Dummer TJB, Awadalla P, Boileau C, et al. The Canadian Partnership for Tomorrow Project: a pan-Canadian platform for research on chronic disease prevention. CMAJ 2018;190:E710-7.

PARTICIPANT SNAPSHOT AT RECRUITMENT
Demographic and health status of participants

AGE
- <35: 6%
- 35-44: 20%
- 45-54: 31%
- 55-64: 30%
- 65+: 13%

BODY MASS INDEX
- 1% <18 KG/M2
- 37% 18-25 KG/M2
- 37% 25-30 KG/M2
- 25% >30 KG/M2

HEALTH STATUS
- ARTHRITIS: 22%
- ASTHMA: 12%
- DIABETES: 7%
- CANCER: 10%
- HYPERTENSION: 23%

ANNUAL HOUSEHOLD INCOME
- <$25K: 7%
- $25K-$50K: 16%
- $50K-$75K: 20%
- <$75K: 56%

RESEARCH PLATFORM HIGHLIGHTS

CanPath has supported more than 200 research projects that are working to better understand the complex factors that contribute to disease.

- CanPath is a unique resource for scientists that has captured information on individuals across Canada who may be healthy or unwell, of differing ethno-cultural and genomic origins, and whose exposures will have varying impacts on their health outcomes.

- Over a decade in, CanPath supports both retrospective and prospective health research. Data from the first follow-up questionnaire is now available and allows for the investigation of changes in health conditions across the cohort.

- Due to its scale and scope, CanPath is internationally recognized as Canada's primary population cohort that can contribute to major global initiatives in genomics and health.

- CanPath is partnering with the Health Data Research Network Canada (HDRN Canada) to facilitate multi-jurisdictional data linkage between CanPath cohorts and regional data holders through HDRN Canada's Data Access Support Hub.

COVID-19 INITIATIVE

With CanPath being active for more than a decade, it was possible to respond quickly to the pandemic by leveraging existing infrastructure to support the following aims:

1. Determine population-level prevalence of COVID-19 in Canada;
2. Determine biological, societal and behavioural factors that affect susceptibility to COVID-19;
3. Capture the socio-economic, mental health and long-term health outcomes of COVID-19;
4. Capture biospecimens to enable population-level serological surveillance of the SARS-CoV-2 virus, as well as pre- and post-vaccine immunity.

CanPath distributed a COVID-19 Questionnaire to the entire cohort and was awarded funding by CIHR and the COVID-19 Immunity Task Force to conduct a seroprevalence study on 20,000 participants.

ACCESSING CANPATH RESOURCES

CanPath shares its resources with the research community to advance scientific knowledge while protecting the privacy of its participants and enriching the content of the database.

Application Submission
Researchers are invited to submit Access Applications directly through the **CanPath Portal** at **portal.canpath.ca.** CanPath's **Access Office** will assist applicants throughout the access process.

Access Review Process
CanPath offers **Expedited Review** for Access Applications requesting only the harmonized datasets. The Expedited Review takes approximately 3 weeks. All other applications require a **Full Access Committee Review** and are reviewed at quarterly meetings.

Application Evaluation
An independent **Access Committee** evaluates applications based on the provision of a scientifically and ethically sound research plan, use of appropriate privacy and confidentiality measures and evidence of adequate financial resources.

CURRENT PROJECTS
Research areas of current projects

RESPIRATORY DISEASE

DIABETES

HEART DISEASE

ARTHRITIS

CANCER

VARIABLES COLLECTED
Examples of key measures contained in the current datasets (certain measures are for subsets only but are actively being enhanced)

Health measures
Socio-economic factors and demographics, education level and employment status, personal and family disease histories, geographical location and occupational history, mental health status, cancer screening history, prescription and over-the-counter medication use, sex and reproductive health, diet and nutrition, sun exposure, alcohol and tobacco use, cannabis and e-cigarette use, physical activity and sleep patterns

Biosamples
Blood and urine samples, blood biochemistry and haematological analyses

Physical measures
Height, weight, waist and hip circumference, blood pressure, resting heart rate, BMI and body composition, grip strength, lung function, imaging and MRI data (>6,000 MRIs collected)

Molecular data
Genotyping, whole genome sequencing, exome sequencing, RNA sequencing, single cell sequencing

Environmental measures
Air and noise pollution, land use, transportation, physical infrastructure, and socioeconomic conditions

Contact Us
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Learn More
www.canpath.ca

Explore & Request Our Data
portal.canpath.ca

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