



*Healthy Life Trajectories Initiative*

## **Sex-and-Gender Based Analysis**

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# CIHR Sex-and-Gender Based Analysis Mandate

- "The Canadian Institutes of Research (CIHR) SGBA Research Action Plan aims to systematically integrate an SGBA into CIHR-funded research to ensure that funded research is relevant and impactful for Canada's diverse population".
- The goal is to ensure the research CIHR funds are relevant and impactful for Canada's diverse population by building SGBA capacity and strengthening SGBA expertise within the research community and CIHR.

From: "How CIHR is supporting the integration of SGBA" from CIHR website 2018 [Available from: <https://cihr-irsc.gc.ca/e/50837.html>.]

# What is Sex-and-Gender Based Analysis?

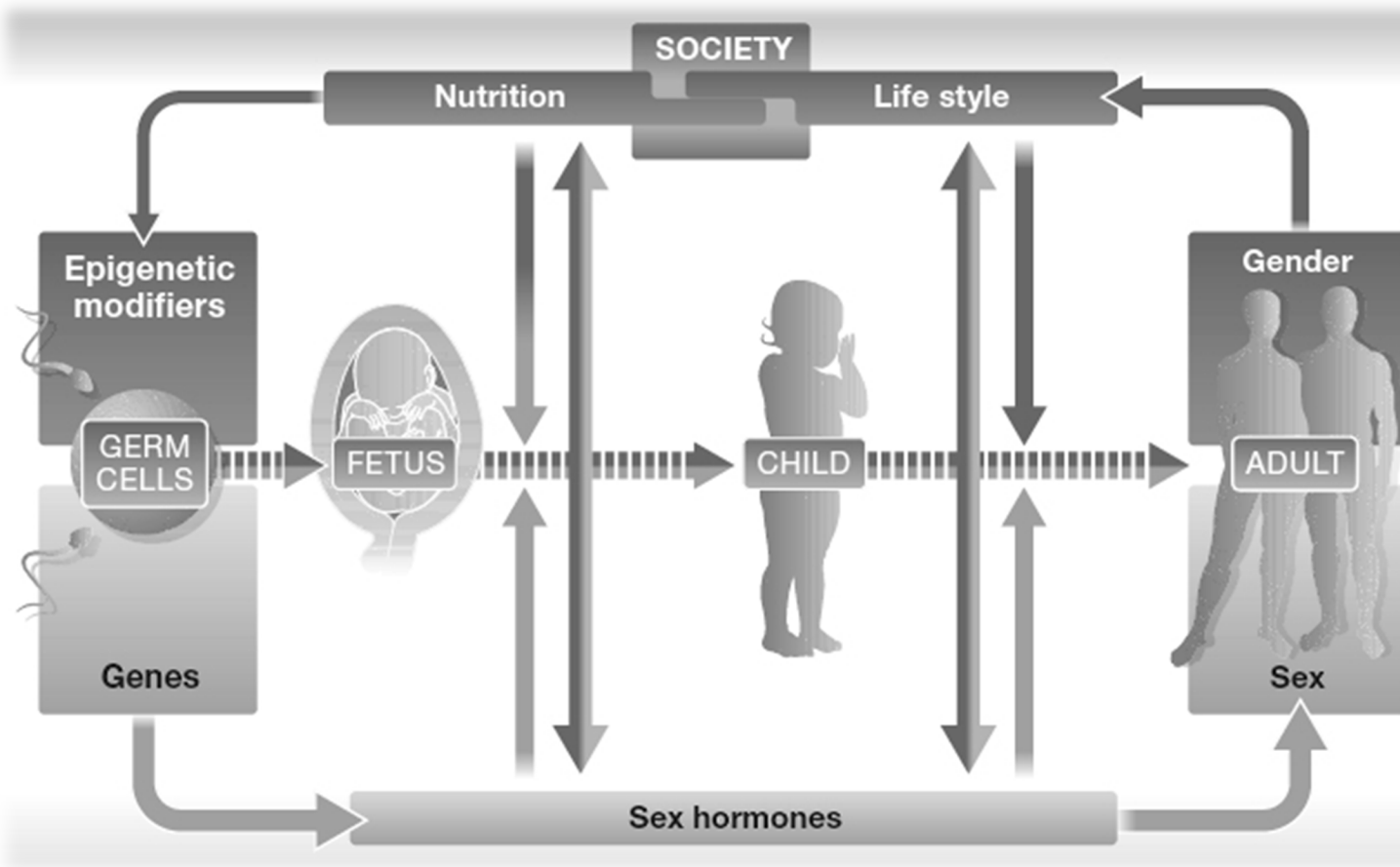
- **Sex-and-Gender based analysis (SGBA)** is an analytical process used in health research to determine whether interventions have differential effects for men and women or girls and boys.
- **Sex** refers to biological attributes in humans and animals primarily associated with physical and physiological features, including chromosomes, gene expression, hormone levels and function, and reproductive/sexual anatomy.
- **Gender** refers to the socially constructed roles, behaviours, expressions and identities of girls, women, boys, men, and gender-diverse people.

From: CIHR. What is Gender? What is Sex? Ottawa: Institute of Gender and Health 2020 [Available from: <https://cihr-irsc.gc.ca/e/48642.html>].

# HeLTI SGBA Strategy

- The HeLTI SGBA strategy aims to generate, understand and apply evidence related to sex/or gender-related factors and interactions through a life course approach that will inform international policy and decision-making for improving health and preventing non-communicable diseases (NCDs).

# How Sex and Gender Interact throughout the Life Course

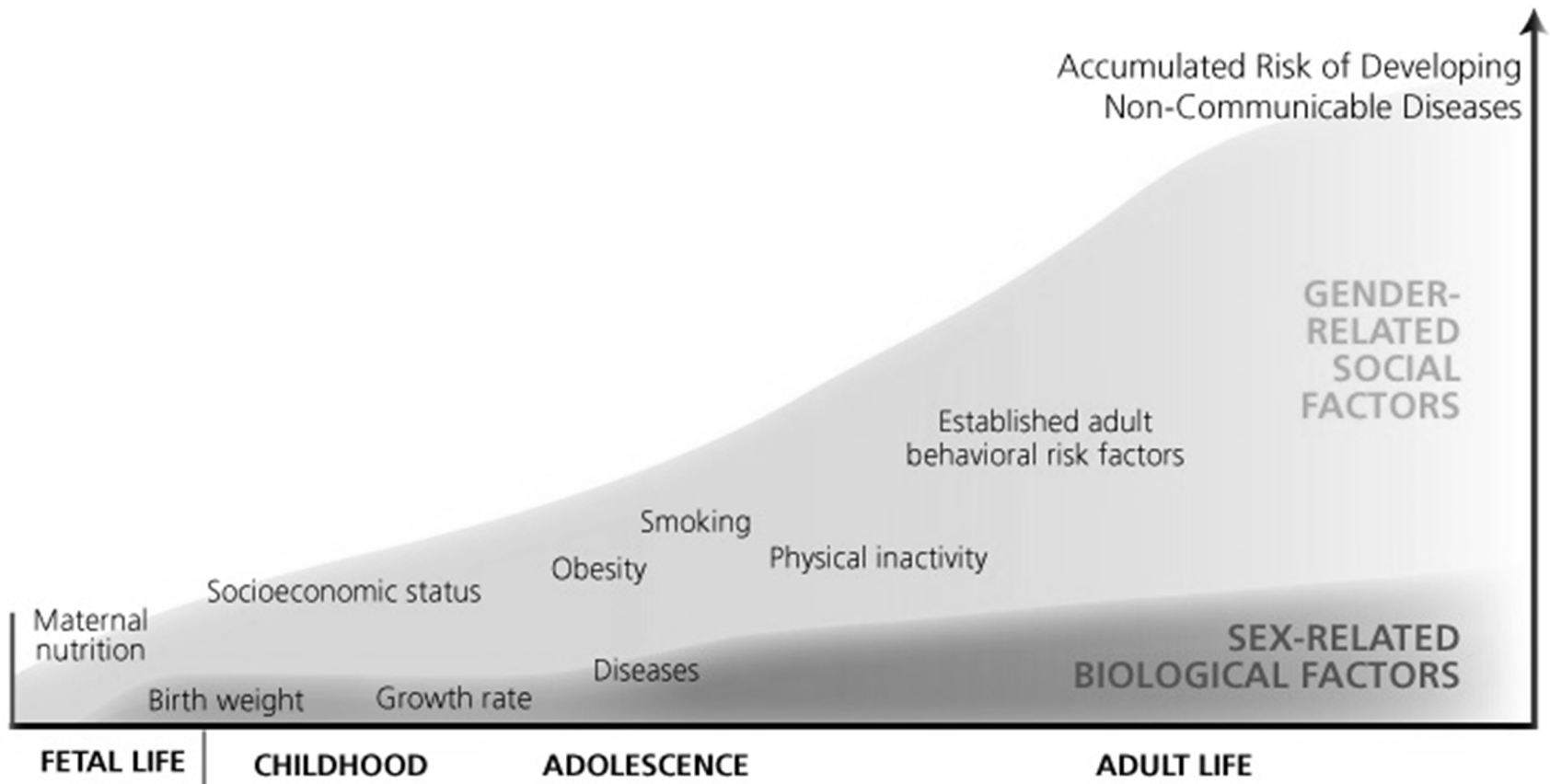


Taken from: Gendered Innovations in Science, Health & Medicine, Engineering, and Environment, downloaded April 11, 2023, from <http://genderedinnovations.stanford.edu/methods/how.html>

# How Sex, Gender, and other Factors Interact in Nutrigenomics

## Cumulative Life Course Risk Factors for Non-Communicable Disease (NCD)

Highlighting the influence of sex and gender-related factors



Adapted from Darton-Hill et al., 2004

# Sex as a Biological Variable

- CIHR recommends accounting for sex as a biological variable in basic science, clinical, health system and population health studies where appropriate.
- **A strong SGBA plan:**
  - Clearly articulates that a phenomenon, condition or disease under study has, or does not have, a different incidence or prevalence based on sex
  - Includes or recruits male and female cells, tissues, animals or humans when studying models of disease that affect males and females
  - Documents and analyzes the sex of the cells, tissues, animals or humans used in the protocol
  - Disaggregates results by sex
  - Builds on what is already known about sex differences as well as sex-related mechanisms in the field of study

# Gender as a Social Determinant of Health

- CIHR recommends accounting for gender as a sociocultural determinant of health in the clinical, health system and population health studies where appropriate.
- **A strong SGBA plan:**
  - Reports what is known about gender, gender theories, and/or intersectionality in the field of study where relevant in the literature review
  - Describes how gender will be measured or investigated in the population under study
  - Addresses and mitigates bias in recruitment strategies
  - Describes how gendered sub-groups will be compared and that the findings will be reported separately in the results section
  - Considers aspects affected by gender in the implementation and knowledge translation plan.



# SBGA Objective – Program Domains

- The HeLTI SGBA objective is to integrate an SGBA into its program domains, namely, research study design and methods, data collection and analyses, knowledge translation and implementation, partnerships and patient/public involvement.

# Domain #1 – Research Design and Methods

1. Literature review and research objectives.
  - Knowledge and gaps or questions about sex and gender are identified.
  - Clear articulation that the condition or disease under study has, or does not have, a different incidence or prevalence based on sex.
  - Research objectives include exploration of sex and gender.
  - Sex and gender considered in the design, e.g. In addition to maternal factors in child health, the role of fathers/partners, including the genetic/epigenetic and environmental factors.
  
2. Participant recruitment and retention.
  - Inclusion/exclusion and recruitment methods address potential barriers and mitigate gender bias (implementation evaluation)
  - Sex and gender considered in the recruitment and retention strategies i.e., examining the barriers and enablers (implementation evaluation)
  - Sample size calculation – is the sample sufficiently powered to identify potentially relevant sex/gender findings

# Domain #2 – Data Collection and Analysis

## 1. Data collection

- Intake forms capture sex and gender identities.
- DCIs include variables to conduct sex/gender analysis.

## 2. Analysis

- Data is disaggregated by sex.
- Statistical analysis assesses the effect or association of sex and/or gender.
- Primary outcome is stratified by sex and/or gender.
- Describing how gendered sub-groups will be compared and that the findings are reported separately in the results section.

# Domain #3 – Knowledge Translation and Implementation

1. Implementation and knowledge translation plans consider input by sex and gender, e.g., incl in KT advisory committee composition.
2. KT messengers – delivered by women only, men only, men and women separately or together.
3. KT messaging and strategies –dissemination messages are tailored to respond to sex and gender-related factors.
4. Target policies and system change, e.g., addressing "gender gaps" in policies and systems.
5. Implementation evaluation – consider sex and gender in decision-making, engagement, barriers, enablers and preferences for the uptake of the intervention.
6. Publications reporting using Sex and Gender Equity in Research (SAGER) guidelines.

# Domain #4 – Partnerships and Patient/Public Involvement

1. Capacity Building – Providers, collaborators and research team training– SGBA Training (free online competency modules from CIHR’s, Institute of Gender and Health (IGH), <https://cihr-irsc.gc.ca/e/49347.html> ).
2. Patient/public involvement where sex and gender are considered in governance and committee composition.
3. Partnerships including sex and gender expertise such as Women’s College Hospital, Women’s Xchange to support the integration of sex and gender in health research.

# Evaluating Sex and Gender Integration

- Evaluation of sex and gender integration will be conducted in collaboration with the Women's Xchange Sex and Gender Research Support Services.
- Quantitative and qualitative indicators will be developed for relevant aspects of the study findings, and the KT and the intervention implementation evaluation.
- Sex and gender indicators and evaluation metrics will be selected based on the previous work done by sex and gender experts (Day S., et al. 2016 & 2017)

# Discussion and Q & A

