points organized

* Assisted Human Reproduction Act, first introduced in 2004 and passed within the Bill C-38 in 2012 under Stephen Harper
* https://en.wikipedia.org/wiki/Jobs,\_Growth\_and\_Long-term\_Prosperity\_Act
* outlines the principles and regulations regulating assisted human reproduction and related research.
* It prioritizes the safety, wellbeing and dignity of those involved such as the donors (parents) and children born through the application of such technologies.
* considers the ethical concerns of applying technologies in medical setting
* Of the 10 explicitly outlined prohibitions, two reads "one shall not: for the purpose of creating a human being, perform any procedure or provide, prescribe or administer anything that would ensure or increase the probability that an embryo will be of a particular sex, or that would identify the sex of an *in vitro* embryo, except to prevent, diagnose or treat a sex-linked disorder or disease; alter the genome of a cell of a human being or *in vitro* embryo such that the alteration is capable of being transmitted to descendants;
* So currently, preimplantation genetic screening (PGS) or preimplantation genetic diagnosis (PGD), usually done during in vitro fertilization (IVF) is allowed, but actually altering the genetic make-up of the embryo upon discovery that there is a crippling disease or something is illegal.
* Altering the genome of a cell of human being or in vitro embryo such that the alteration is capable of being transmitted to descendants is illegal (https://www.cma.ca/Assets/assets-library/document/en/advocacy/assisted-reproduction-in-canada-e.pdf)
* Selecting which embryo is to be planted according to which one is the healthiest or the parents selecting which gender the baby will (more likely) be is legal, because that does not involve any alteration of the existing embryo and DNA
* http://laws-lois.justice.gc.ca/eng/acts/a-13.4/page-1.html#h-2
* This does not include selecting which embryo will be planted into the woman according to the sex of the embryo, to avoid sex-linked diseases that the offspring may be prone to (aka health-related reason, not cosmetic or simply because the mom wants a daughter)
* https://www.cma.ca/Assets/assets-library/document/en/advocacy/assisted-reproduction-in-canada-e.pdf
* Internationally: several countries say no PGD at all (germany, italy, ireland, state of western austrlia)
* http://www.cmaj.ca/content/suppl/2009/09/21/cmaj.080658.DC1/gen-bouffard-4-at.pdf
* In America, it is not restricted by law but professionally regulated. Centers for Medicare and Medicaid Services (CMS) regulates lab testing to ensure labs are complying with ammendments and such http://canadianbioethicscompanion.ca/the-canadian-bioethics-companion/chapter-5-genetic-and-reproductive-control/#GENETIC-TESTING
* Breaking the law in Canada means up to a $500,000 fine, jail time of up to 10 years or both. For both the person requresting, actively helping (doctors or health care professionals), or advising the person who committed the offense can be considered accomplices
* https://www.canada.ca/en/health-canada/services/drugs-health-products/biologics-radiopharmaceuticals-genetic-therapies/legislation-guidelines/assisted-human-reproduction/prohibitions-scientific-research-clinical-applications.html
* changes to genetics that may affect future generations is called germline gene transfer. Different than somatic gene transfer, that only affects the host
* https://www.genome.gov/10004764/germline-gene-transfer/
* In Canada in 2007-2008 there was $262.5 million allocated by the Canadian Institutes for Health Research (CIHR) for genetic research.
* http://canadianbioethicscompanion.ca/the-canadian-bioethics-companion/chapter-5-genetic-and-reproductive-control/#GENETIC-TESTING
* Assisted Human Reproduction Canada, created in 2006, is the organization that enforces the AHR act. They're in charge of licensing, steps of consequences but due to conflicts with federal government regarding sections being unconstitutional, the AHRC was dismantled in 2013.
* The AHR act was taken under the gigantic wing of Bill C-38 'Jobs, Growth and Long-Term Prosperity Act' and now Health Canada in Ottawa is in charge of enforcing the transformed version of the act.
* https://embryo.asu.edu/pages/assisted-human-reproduction-act-2004