

Parsnip Solutions Without Pesticides


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Mississippi Mills Town Council, February 6th. 2018





Overview

- Clearview chemicals
 - Pesticide assessment
 - Risks
 - Parsnip concerns
 - Pesticide-free solutions
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Clearview Herbicide

- Two active ingredients **Metsulfuron** and **Aminopyralid** have been tested individually – not together.
- **Gateway** is added for better spreading and penetration of chemicals into living tissues (solvent plus surfactant).
- **Gateway** is toxic if inhaled, and may cause cancer (per label).
- **Titanium dioxide** is carcinogenic if inhaled (International Agency for Research on Cancer)

Mixture toxicity is untested.



Health Canada's “acceptable risk”

- Based on high dose animal testing by the manufacturer.
- Drug approval methods are not followed for pesticides.
- Chronic and/or low dose exposures not considered.
- Human studies are rarely considered by Health Canada.
- Human studies are rarely conducted.
- Effects of mixtures are not considered.



Reported “Incidents” with Clearview

Online Health Canada incident reporting system
<http://pr-rp.hc-sc.gc.ca/pi-ip/ir-di-eng.php>

Events reported with Clearview include:

- Weakness and pain
- Headache, dizziness, difficulty concentrating and speaking
- Nausea and vomiting
- Imbalance, muscle spasms, and ataxia
- Incontinence, diarrhea
- Prolonged periods of being unwell (reported by two separate individuals)

Also

- Death of a cat
- Damage to desirable plants

Health Canada regulates to control “adverse” and “established” effects

Is this good enough, if there are safer options?



- “Adverse” is a very high bar.
- Effects are “established” once human harm occurred, been studied, reached statistical significance, repeated, etc.



***How many people must be hurt AND studied before
“establishing” harm?
This can take generations.***

Hormone Mimicry

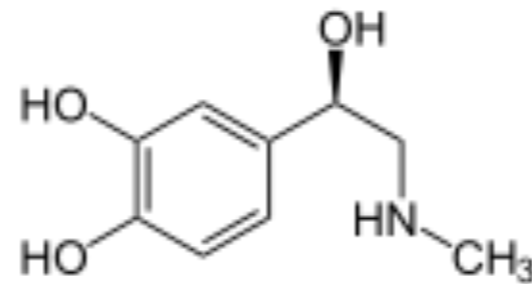
Hormone mimicry disrupts the endocrine system and has been linked to birth defects, lower IQ, obesity, diabetes, thyroid conditions, chronic diseases and cancer.

Pesticide assessment does not cover endocrine disruption.

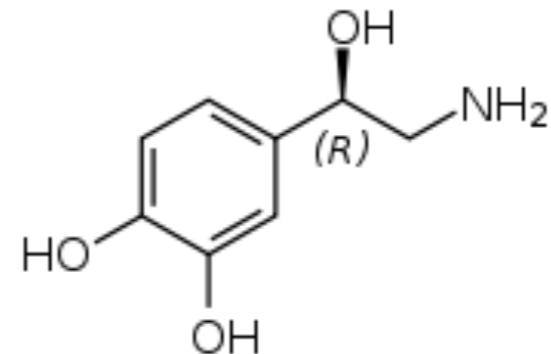
Amine Hormones

Our neurological hormones have similar molecular structures:

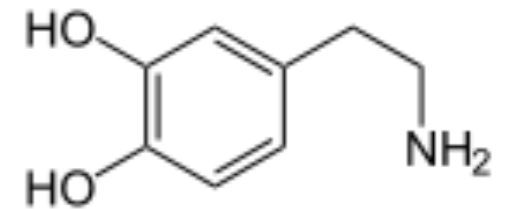
- Epinephrine



- Norepinephrine

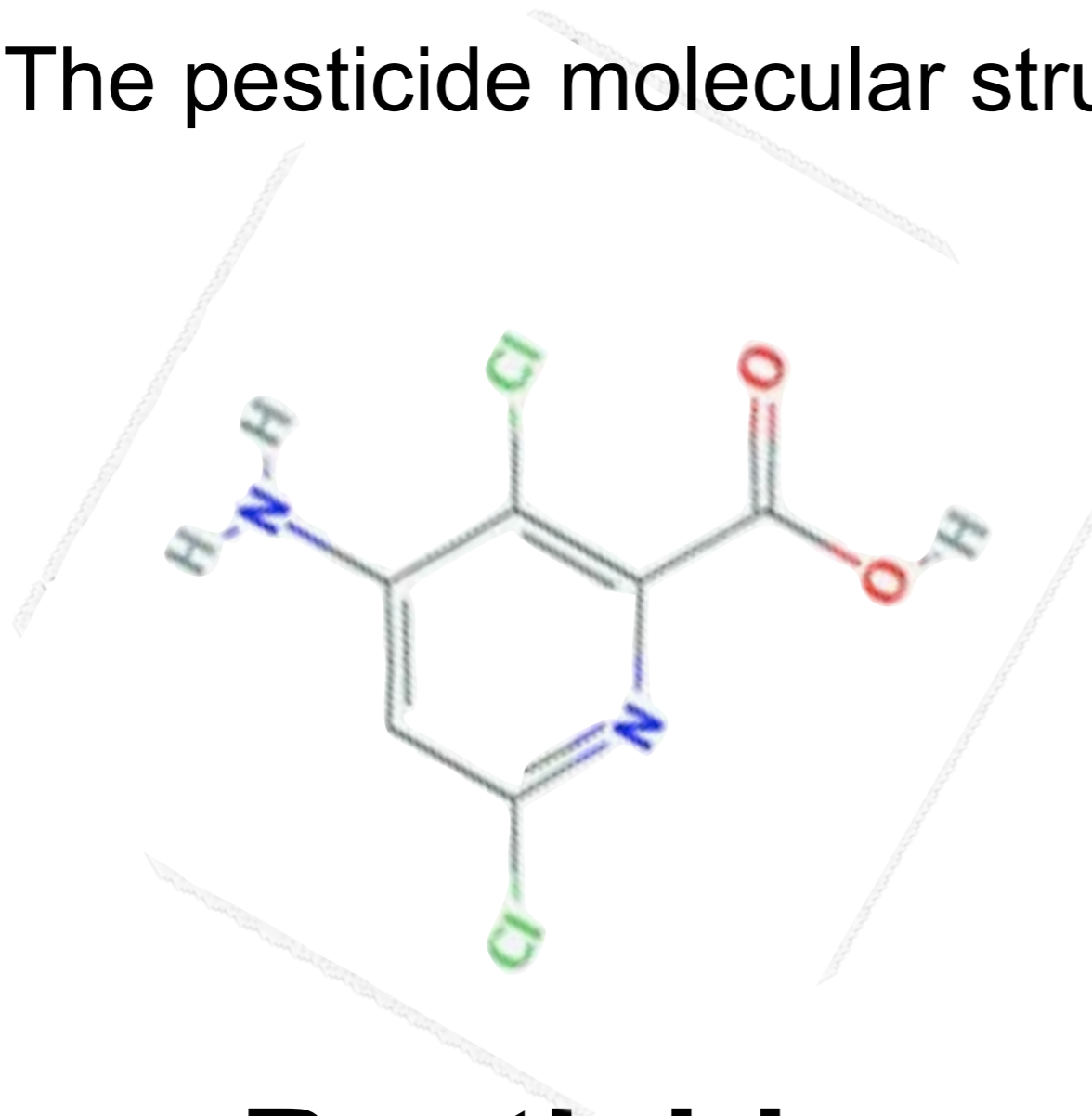


- Dopamine

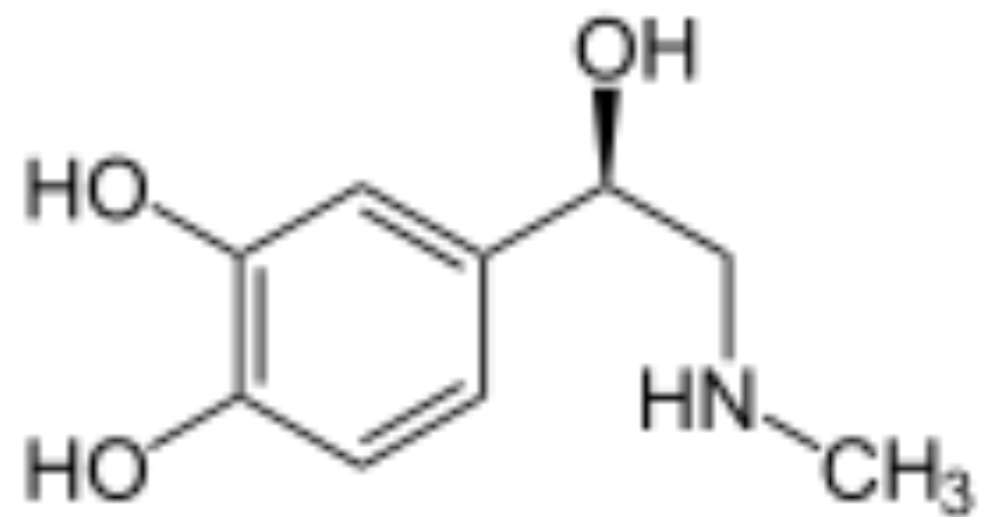


Amopyralid / Epinephrine

The pesticide molecular structure is also similar.



Pesticide

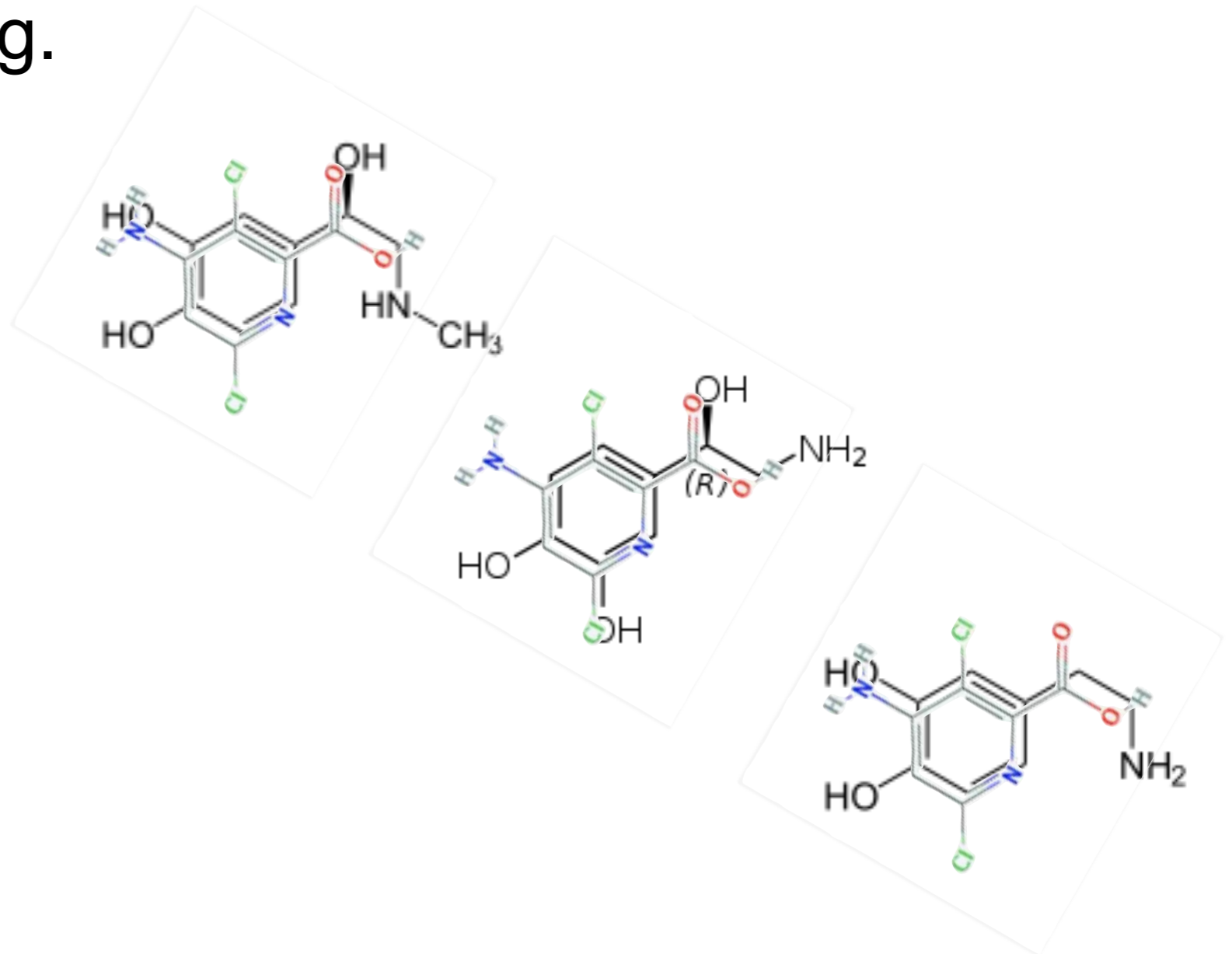


Hormone

Amine Hormones

Overlaying the structures highlights the similarities and potential for mimicking.

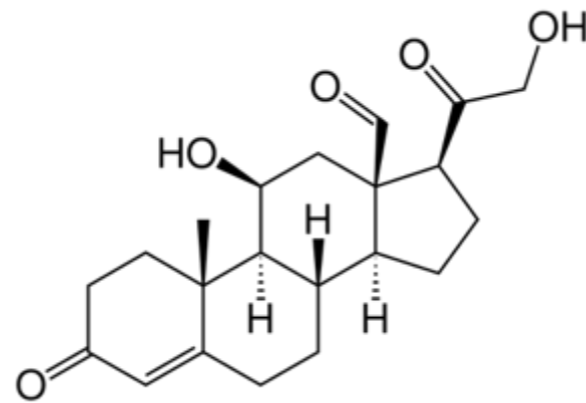
- Epinephrine
- Norepinephrine
- Dopamine



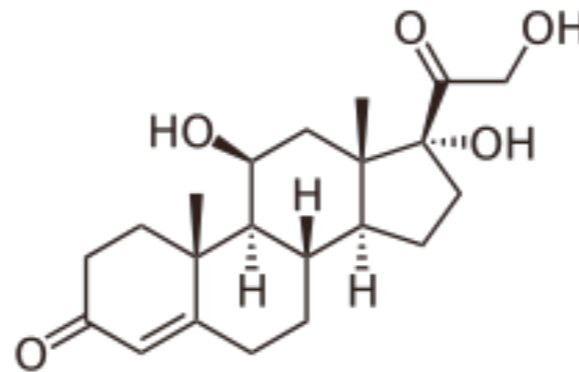
Steroid Hormones

The same risk of hormone mimicry exists with Steroid Hormones and the other active ingredient:

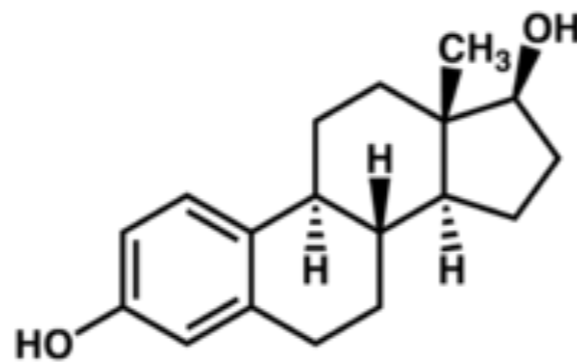
- Aldosterone



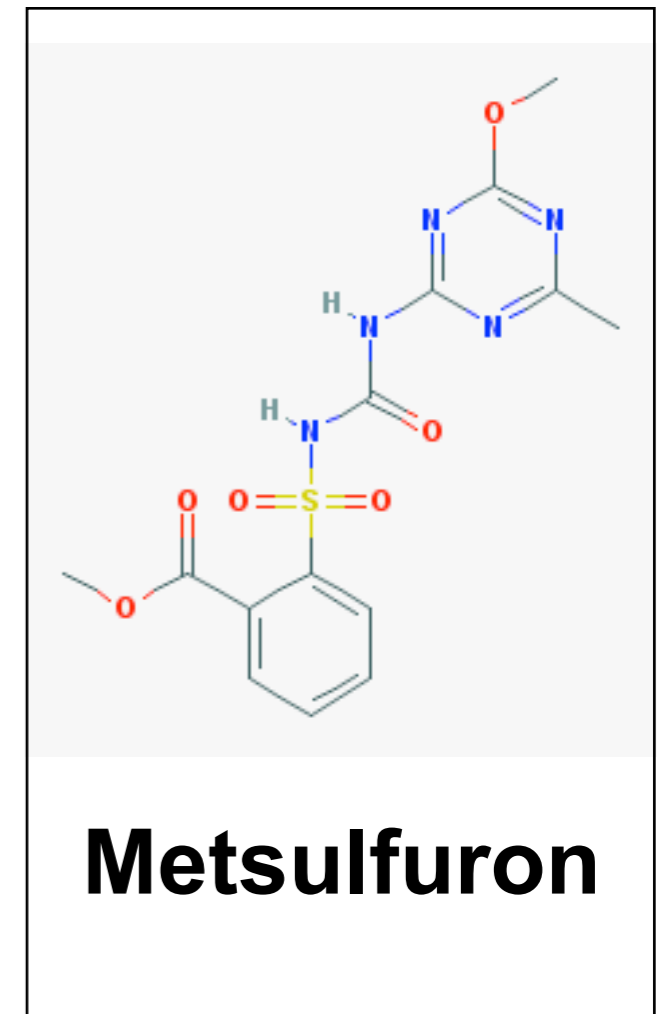
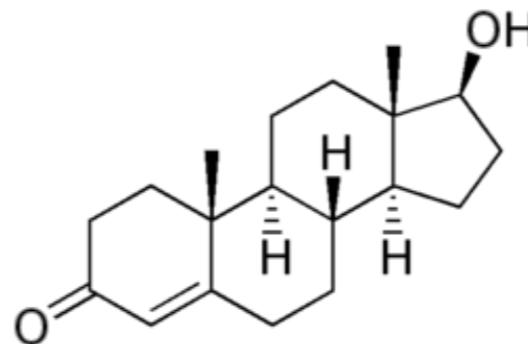
- Cortisol



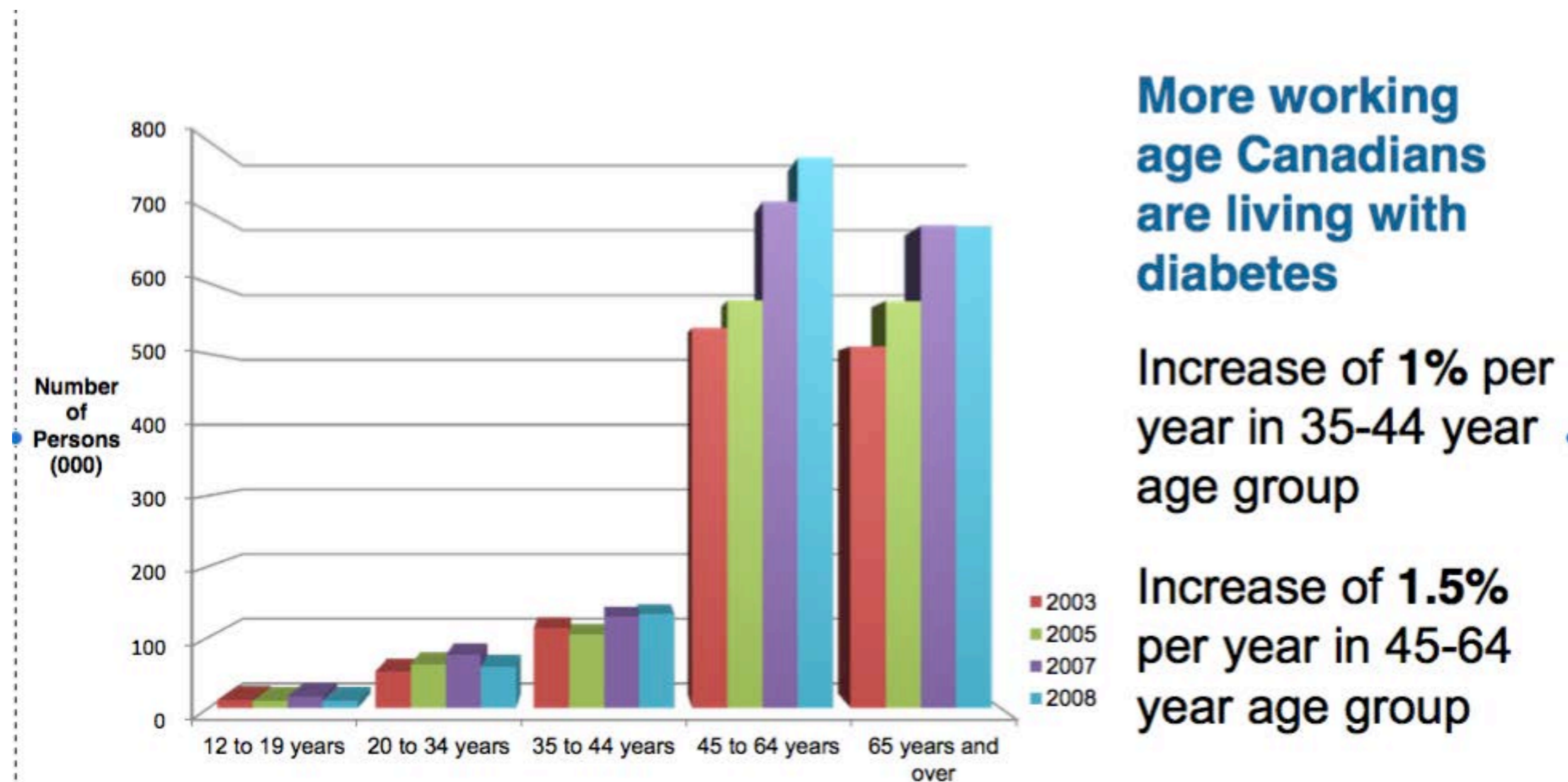
- Estradiol



- Testosterone



Endocrine Disruption is linked to the chronic diseases that are affecting more and younger Canadians. A majority of healthcare dollars is spent on these conditions.



Source: Centre for Chronic Disease Prevention and Control, Public Health Agency of Canada, using data from Labour Force Survey, Statistics Canada.

Routes of Exposure

The young are most vulnerable

“Do not enter or allow worker entry to treated area for 12 hours following application”
– Clearview Label



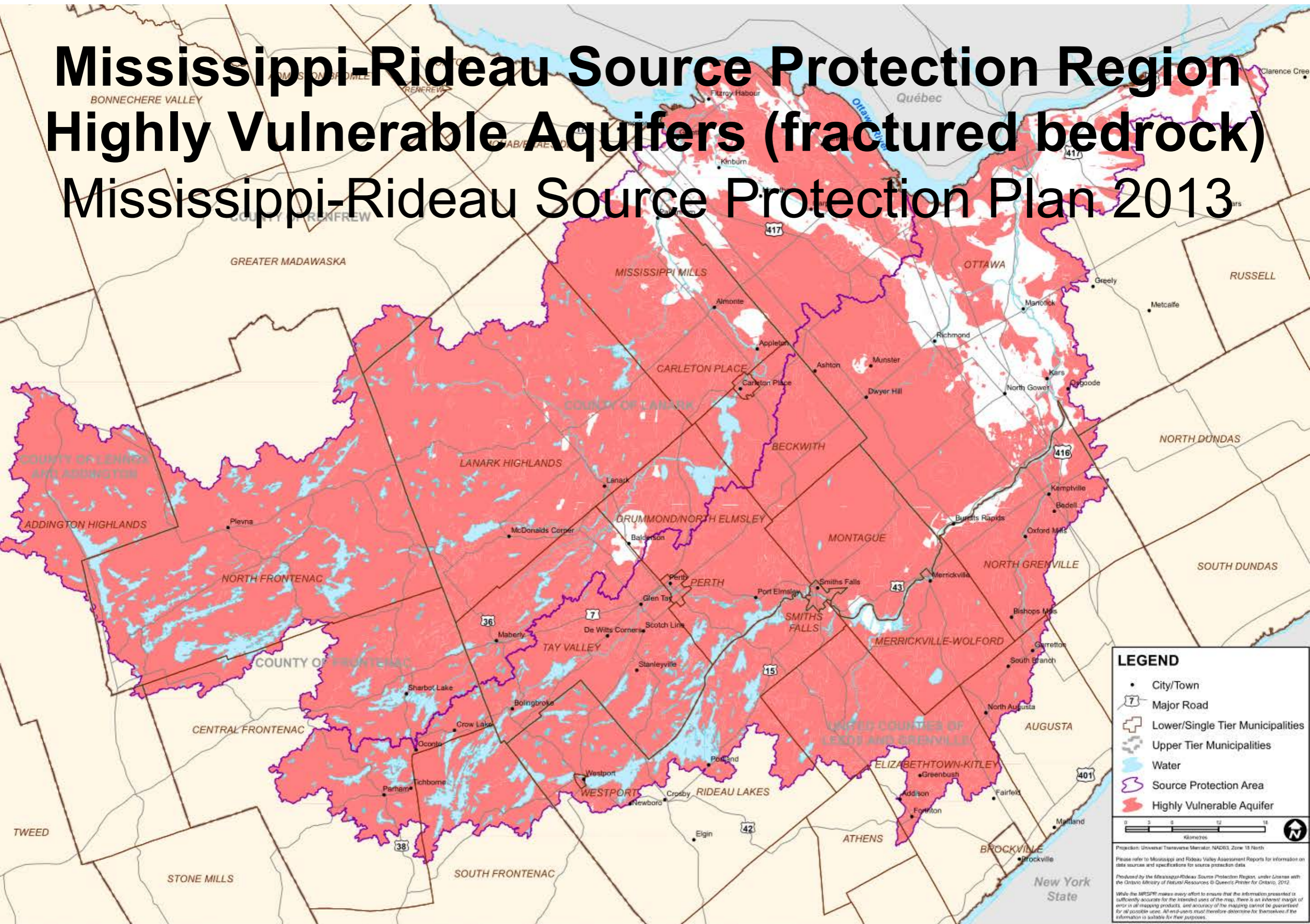
TRUE STORY: In Lanark County, a school bus followed a spray truck. Children crossed the freshly sprayed strip to get home.

Water concerns

- Both pesticide ingredients are soluble, persistent.
- Buffer strips required to avoid contamination.
- Aminopyralid banned in Sweden, Norway and NY State due to potential groundwater contamination.
- Groundwater contamination detected in Montana at 18X Scandinavian limit.
- Groundwater contamination is not readily reversible.

Groundwater baseline testing or monitoring?

Mississippi-Rideau Source Protection Region Highly Vulnerable Aquifers (fractured bedrock) Mississippi-Rideau Source Protection Plan 2013



“Do not apply to steep slopes”
Keep away from water
OK for high and dry, flat ditches?



Parsnip Burns can be Avoided

- Stem must be damaged.
- Parsnip *sap* reacts in *sunshine* and can cause burns.



Little risk with:

- Mowed, dried plants.
- Casual brushing against the plant.
- Pets transferring wet parsnip sap (pets *frequently* transfer poison ivy oil).

What is the “end game”?

- Parsnip will never be eliminated.
- Groundwater is highly vulnerable.
- Present chemicals are suspect.
- Older chemicals do cause cancer, chronic diseases.
- Plans to avoid herbicide resistance are flawed.
- Parsnip webworm might help to control the plant over time.

Pulling parsnip can work!

Adopt-a-Road Volunteers Pulled Parsnip



2017 Outcomes Demonstrated:

- Feasibility, safety and effectiveness without pesticides.
- Water sources adjacent to roadsides unaffected.
- Pollinator habitats maintained.
- Known risks were readily avoided.
- Known risks were readily accepted over pesticide use.

What is the Answer?

- EDUCATION
 - Know your plants.
 - Teach your children. Mitigate risk – just like “leaves of three.”
- DON'T PANIC
 - Parsnip burns are easily prevented.
 - Avoid contact and wash if exposed.
- LONG TERM STRATEGY?
 - There is no Exit Strategy for the *War on Weeds*.
 - Pesticides won't work and they put us at risk.
 - Learn to live with parsnip.

Thank You! Questions?



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www.PreventCancerNow.ca