



Prescription for a Healthy
Canada:
Towards a National
Environmental Health Strategy

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Health Goals for Canada

- **Canada is a country where:**

The air we breathe, the water we drink, the food we eat, and the places we live, work and play are safe and healthy - now and for generations to come

-F/P/T Ministers of Health, 2005

Environmental Burden of Disease

- Respiratory illnesses
- Cardiovascular disease
- Cancer
- Congenital affliction
- Diabetes
- Gastrointestinal illnesses
- Neurological problems
- Poisonings

Canada's Environmental Record

- Conference Board ranked Canada 14th out of 17 nations
- Suzuki Foundation ranked Canada 28th out of 30 nations
- OECD highly critical of Canadian record and policies in five year environmental review



What Canadians are saying...

- Environmental pollution is among the top health concerns of Canadians.
- 68% of Canadians feel that environmental problems will affect the health of their children and grandchildren “a great deal.”
- Air quality and water quality are top-of-mind environmental concerns for Canadians, along with climate change.

Economics

- Prevention cheaper than treatment
- Economic competitiveness
- Benefits of environmental regulations generally outweigh costs
- High return on investment from long-term health studies

Environmental Justice

- Adverse health effects associated with environmental hazards are not evenly or fairly distributed
- Aboriginal people, children, and low-income Canadians appear to face disproportionate risks

QuickTime™ and a
TIFF (LZW) decompressor
are needed to see this picture.



Canada is lagging behind I

"The area of environmental impacts on health has been seriously neglected in Canada and requires urgent investment."

National Advisory Committee on SARS and Public Health, 2003



Funding for Environmental Health Research

US Funding

- National Center for Environmental Health (\$148 million in 2006)
- National Institute for Environmental Health Sciences (\$648 million in 2006)

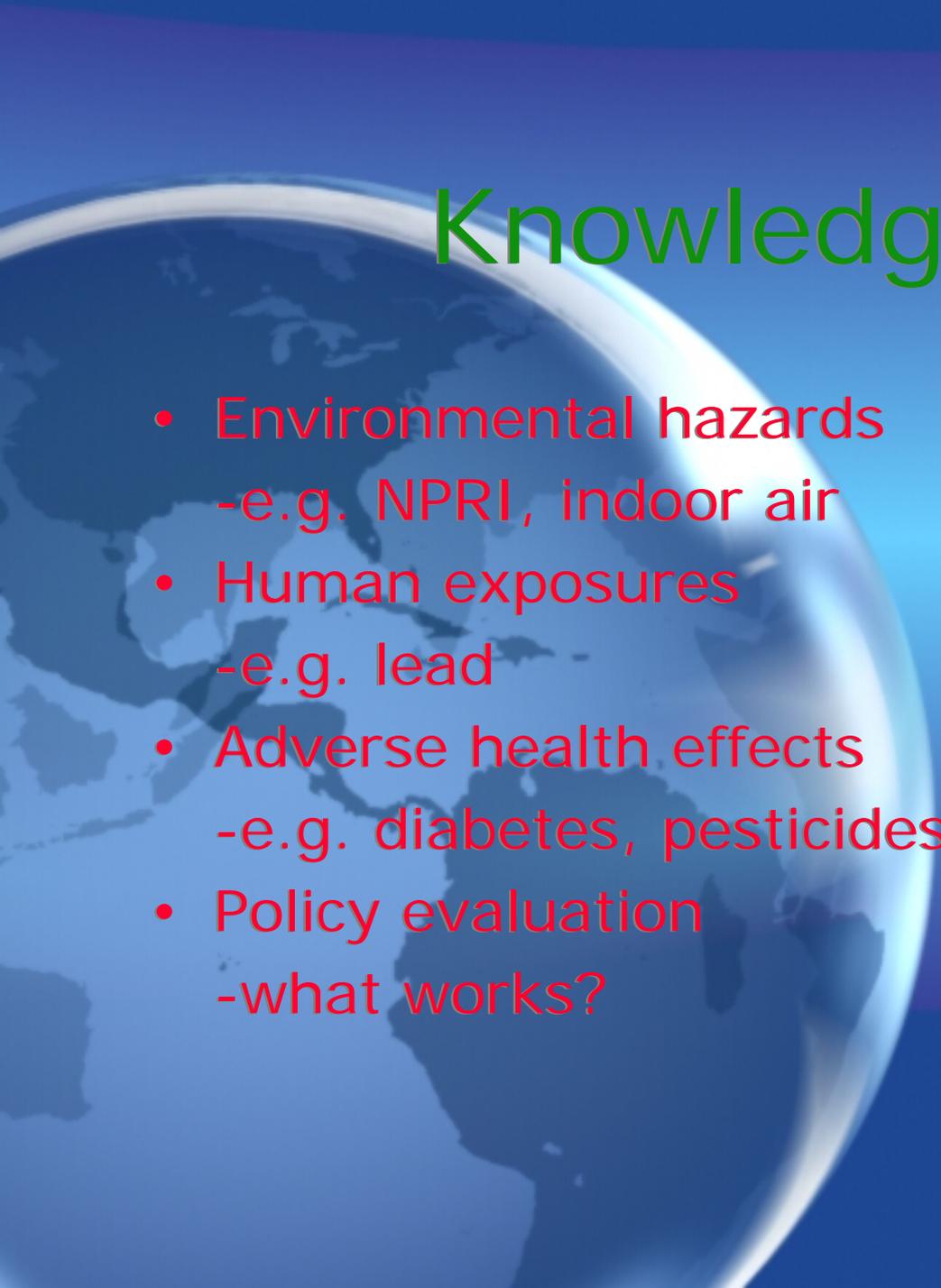
Canadian funding

- National Collaborating Centre for Environmental Health \$1.5 million
- Canadian Institutes for Health Research averages \$5 million per year in grants for environmental health

Environmental Health Surveillance

- Surveillance refers to the systematic collection, assessment, integration, analysis, interpretation, and dissemination of data in order to prevent or control disease.
- Unlike other jurisdictions, such as the US and Europe, Canada has no national, integrated health and environment surveillance system
- Health Canada acknowledges that “environmental health surveillance lags behind other health domains.”

Knowledge Gaps



- Environmental hazards
 - e.g. NPRI, indoor air
- Human exposures
 - e.g. lead
- Adverse health effects
 - e.g. diabetes, pesticides
- Policy evaluation
 - what works?

Canada is lagging behind II

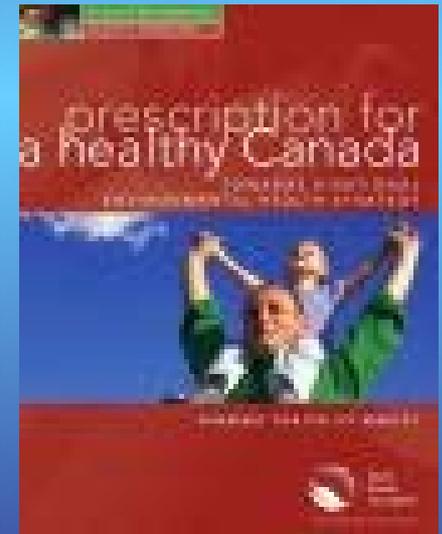
- No national sustainable development strategy despite a series of commitments dating back to 1992
- No national environment and health action plan despite 1999 Cabinet approval
- Refusal to recognize that all citizens have the right to live in a healthy environment

Weak Environmental Health Policies

- Canada allows the use of more than 50 chemicals, used in +/- 1,000 pesticide products
- Canada relies on voluntary guidelines for air and drinking water quality instead of enforceable national standards
- Canadian rules governing lead, asbestos, PBDEs, etc. are weaker
- International policies=Embarrassment

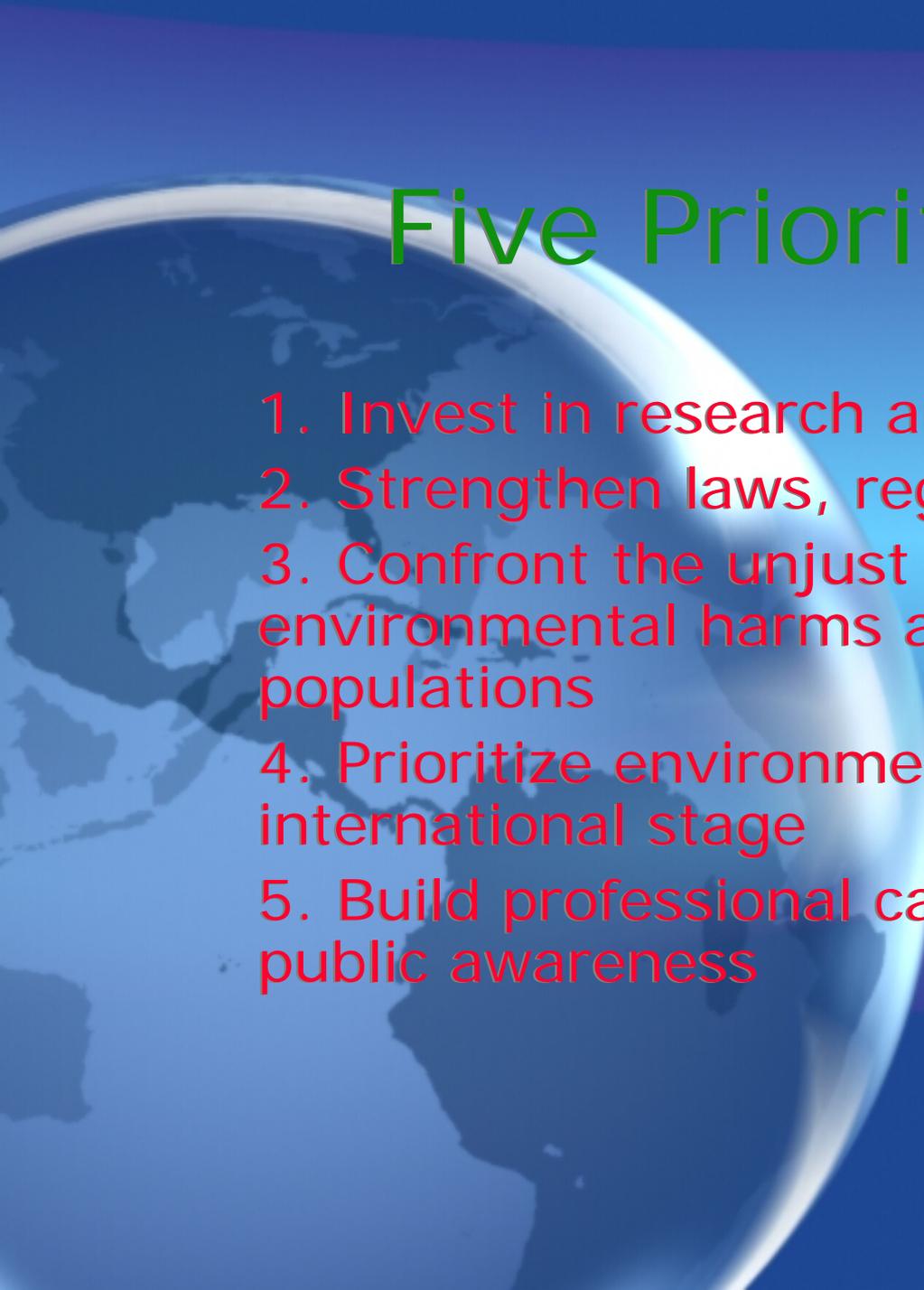
Proposal for a National Environmental Health Strategy

- *Prescription for a Healthy Canada: Towards a National Environmental Health Strategy*
 - Released in Sep. 2007 at the national conference of the Canadian Public Health Association
 - Canadian Medical Association and Canadian Cancer Society are supportive of the framework



International Best Practices

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Five Priority Areas

1. Invest in research and surveillance
2. Strengthen laws, regulations, and policies
3. Confront the unjust distribution of environmental harms and protect vulnerable populations
4. Prioritize environmental health on the international stage
5. Build professional capacity and raise public awareness



Surveillance and Research Needs

- Establish national environmental health tracking system
- Conduct comprehensive & regular biomonitoring
- Develop environmental health indicators
- Fund health & environment research

Europe's ENHIS

- In the EU, a project called the European Environment and Health Information System is striving to develop a consistent and comparable set of data that combines environmental and health indicators to enable evaluation of different policies, programs, and practices.
- 29 core EH indicators including hazards, exposures, adverse health effects, and policies
 - e.g. ambient PM, dioxin levels in breast milk, asthma prevalence, implementation of policies to reduce children's exposure to ETS

US National Environmental Public Health Tracking System

- The CDC's vision is to accomplish five goals:
 - build a national surveillance network;
 - enhance the capacity of the environmental health workforce and infrastructure;
 - disseminate useful information to guide policies and practices;
 - advance science and research on health-environment linkages; and
 - foster broad collaboration among health and environmental sectors.

Policy: The Big Picture



- Most OECD nations have national sustainable development strategies that integrate environmental health objectives
- Most OECD nations have national health and environment action plans that establish research, policy, and education priorities
- Most OECD nations recognize that citizens have a constitutional right to live in a healthy environment

Law and Policy Priorities

- Establish goals & timelines for improving environmental health
- Raise health & environmental standards to meet or beat international best practices
- Codify the precautionary principle & substitution principle in relevant legislation
- Require health assessments in conjunction with environmental assessments
- Enshrine the "Community's Right to Know"

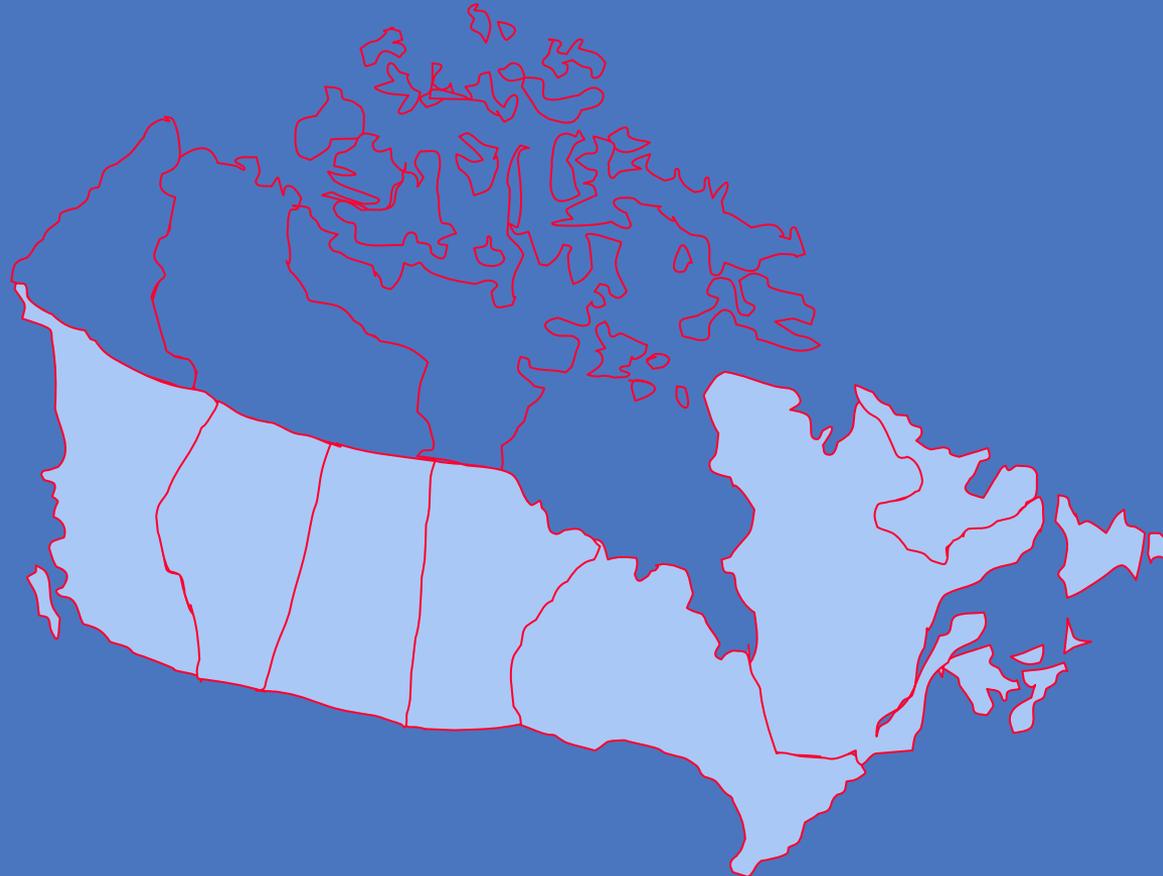
Policies that work

- Regulations
 - extended producer responsibility
 - e.g. vehicles, electronics, packaging
 - substitution
 - e.g. industrial chemicals, pesticides
- Pollution taxes and other market-based instruments that internalize envtl costs
 - e.g. Swedish tax on Sox emissions
- Urban design and planning
 - e.g. fixed boundaries

Thank You!



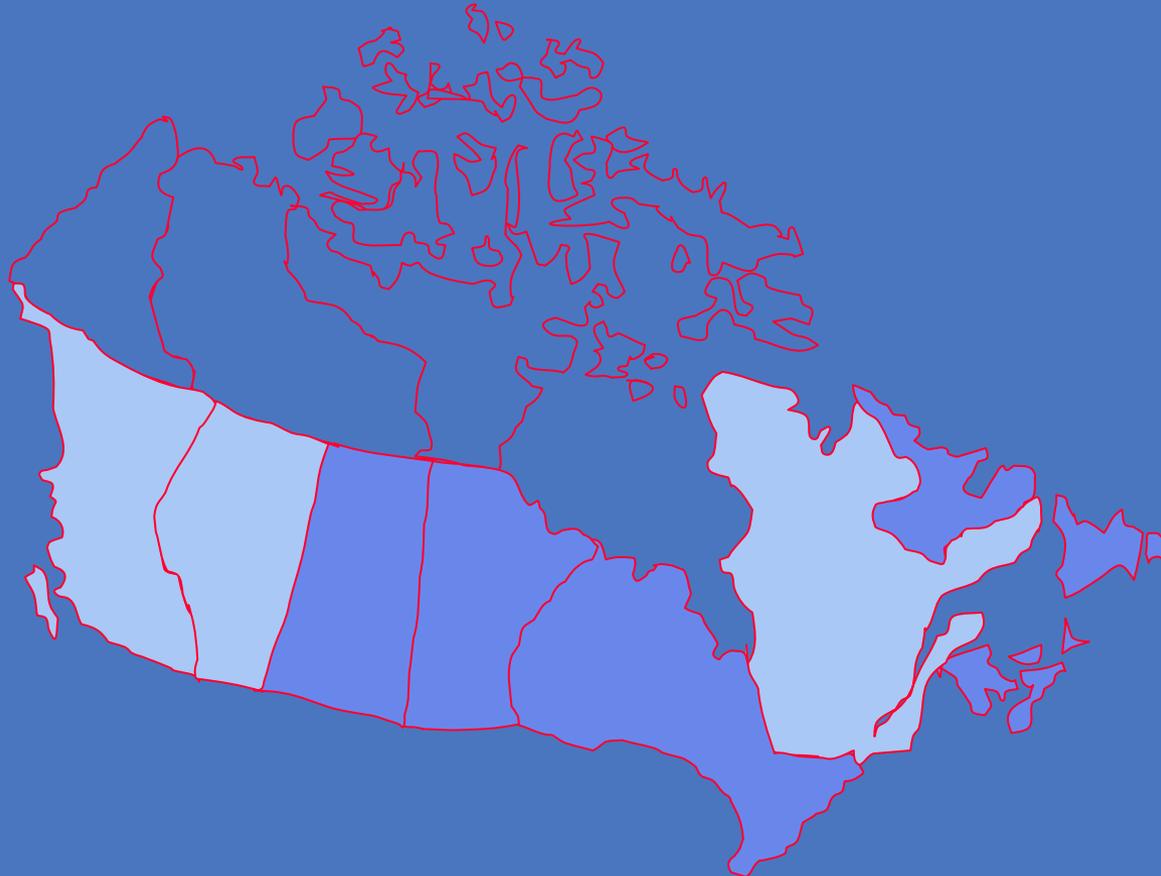
Obesity Trends Among Canadian Adults HPS, 1985



No Data <10% 10%-14% 15-19% ≥20%

Obesity Trends Among Canadian Adults

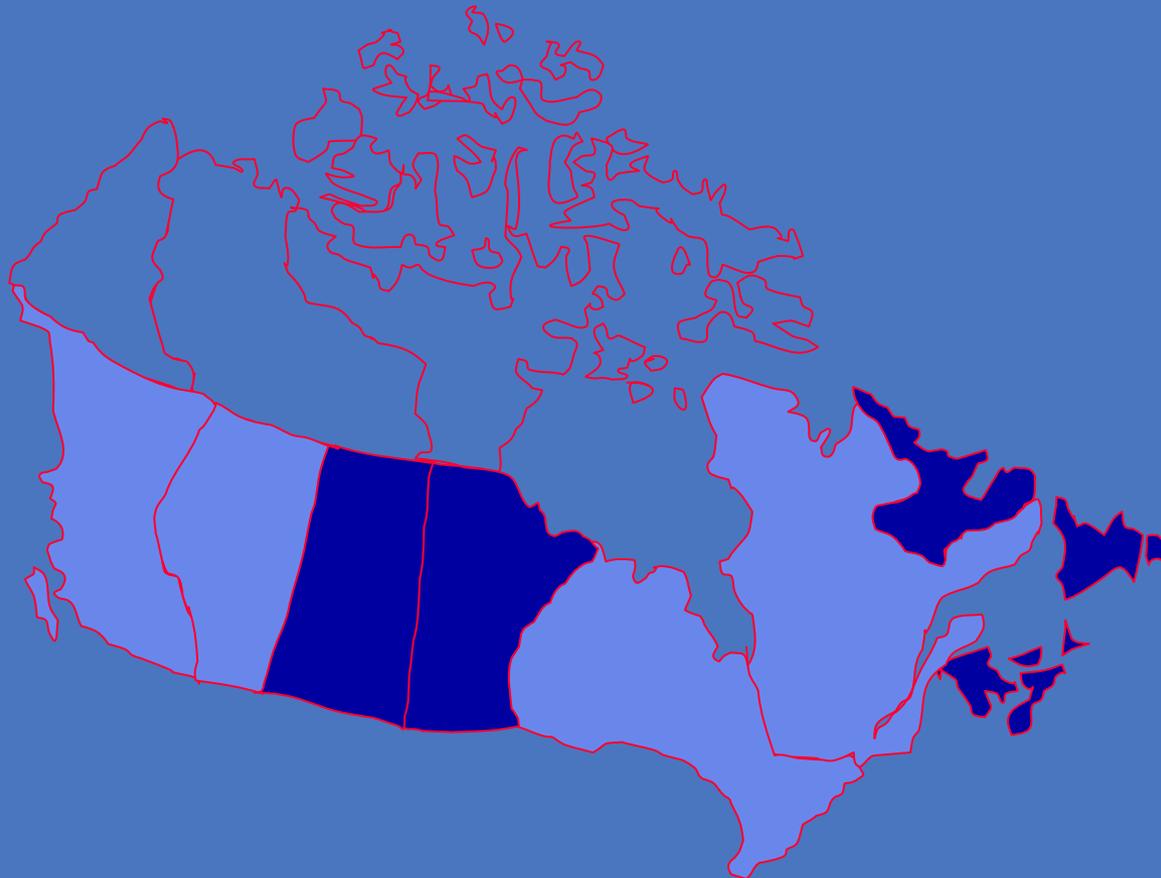
HPS, 1990



No Data  <10%  10%-14%  15-19%  ≥20% 

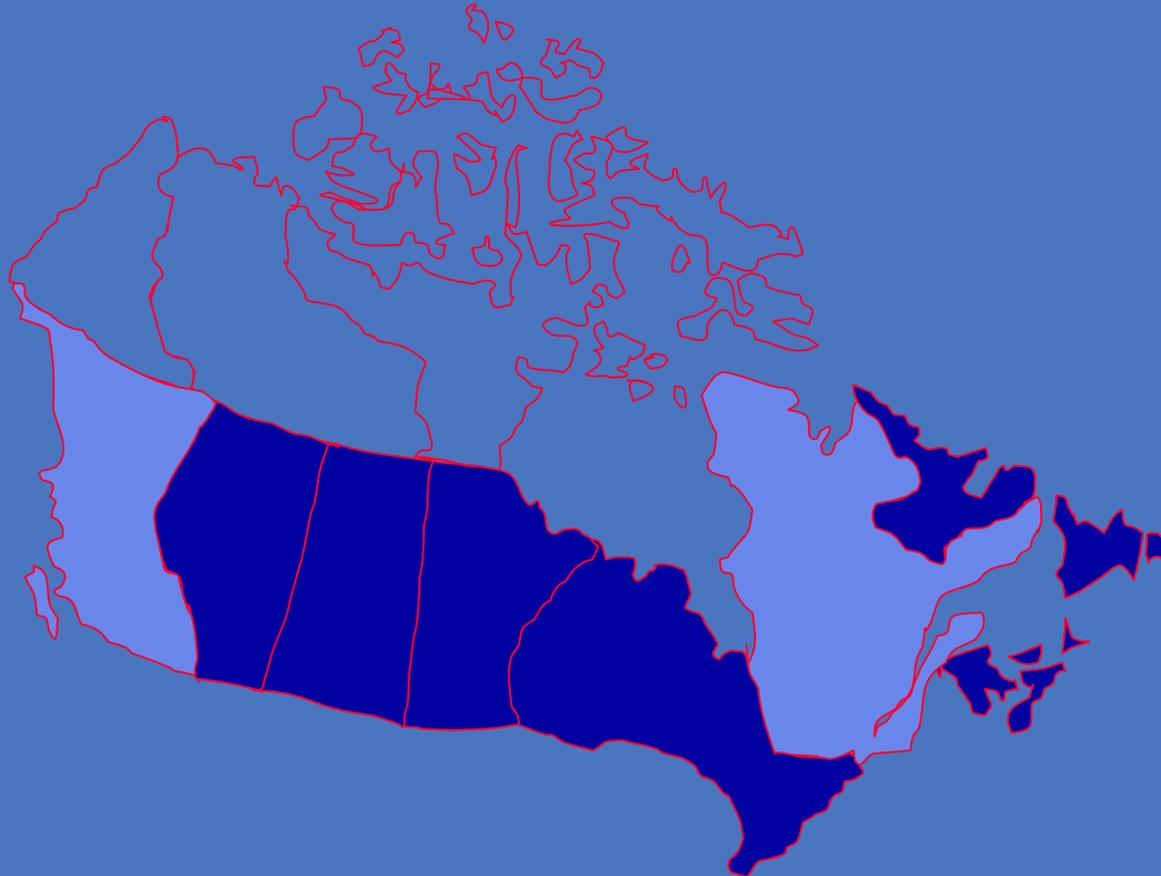
Obesity Trends Among Canadian Adults

NPHS, 1994



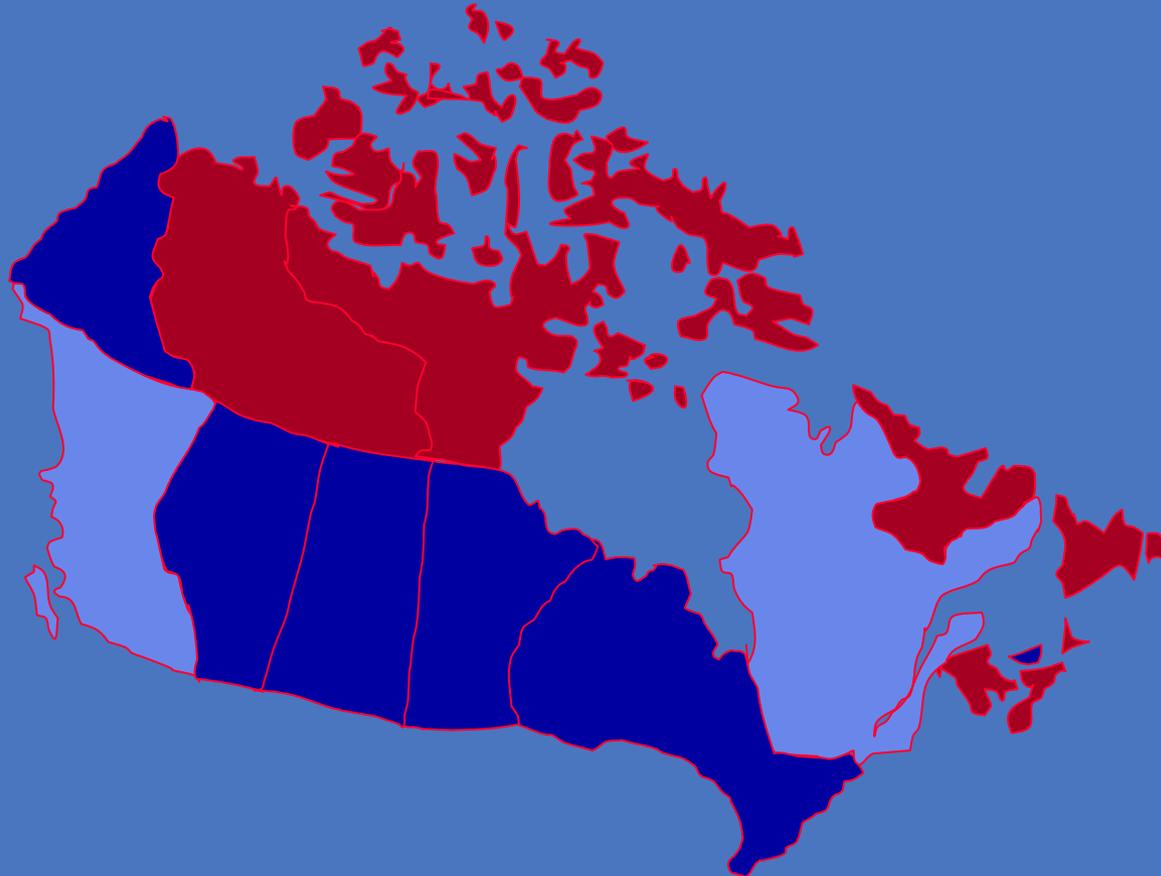
Obesity Trends Among Canadian Adults

NPHS, 1998



Obesity Trends Among Canadian Adults

CCHS, 2000





Childhood obesity/overweight in Canada

- 1978 level was 12%
- 2006 increased to 26%
- Aboriginal children on reserve 55%
- Diabetes rates also soaring
- Today's children may be first in more than a century to expect worse health outcomes than parents

Diabetes Projected Risks: For Babies Born in 2000 (US)

Girls: 38% lifetime risk

-If diabetic before age 40,
Lifespan shortened by 14 years

Boys: 33% lifetime risk

-If diabetic before age 40,
Lifespan shortened by 12 years

The Atlanta Journal-Constitution / Sunday, June 15, 2003

CDC: Diabetes to afflict 1 in 3 born in 2000

Scientist says
kids must
eat healthier,
exercise more

By JANET McCONNAUGHEY
Associated Press

New Orleans — One in three U.S. children born in 2000 will become diabetic unless many more people start eating less and exercising more, a scientist with the Centers for Disease Control and Prevention warned Saturday.

The odds are worse for African-American and Latino children: Nearly half of them are likely to develop the disease, said Dr. K.M. Venkat Narayan, a diabetes epidemiologist at the CDC.

"I think the fact that the diabetes epidemic has been raging has been well-known to us for several years. But looking at the risk in these terms was very shocking to us," Narayan said.

The 33 percent lifetime risk is

by 2050, to 29 million, an earlier CDC study by Narayan and others found.

"These estimates I am giving you now are probably quite conservative," Narayan said in an interview before the diabetes association's annual scientific meeting here.

Narayan said it would be difficult to say whether undiagnosed cases would rise at the same rate.

If they did, that could push the 2050 figure to 40 million or more.

Doctors had known for some time that Type 2 diabetes — what used to be called adult-onset diabetes because it typically showed up in middle-aged people — is on the rise, and that patients are getting younger.

Nobody else had crunched the numbers to look at current odds of getting the disease, Narayan said.

Overall, he said, 39 percent of the girls who now are healthy 2½- to 3-year-olds and 33 percent of the boys are likely to develop diabetes, he said.

For Latino children, the odds are closer to one in two: 53 percent of the girls and 45 percent of the boys. The numbers are

V Narayan et al: JAMA 8 Oct 2003

We have changed how much we walk or bike

- Percent of children who walk or bike to school:

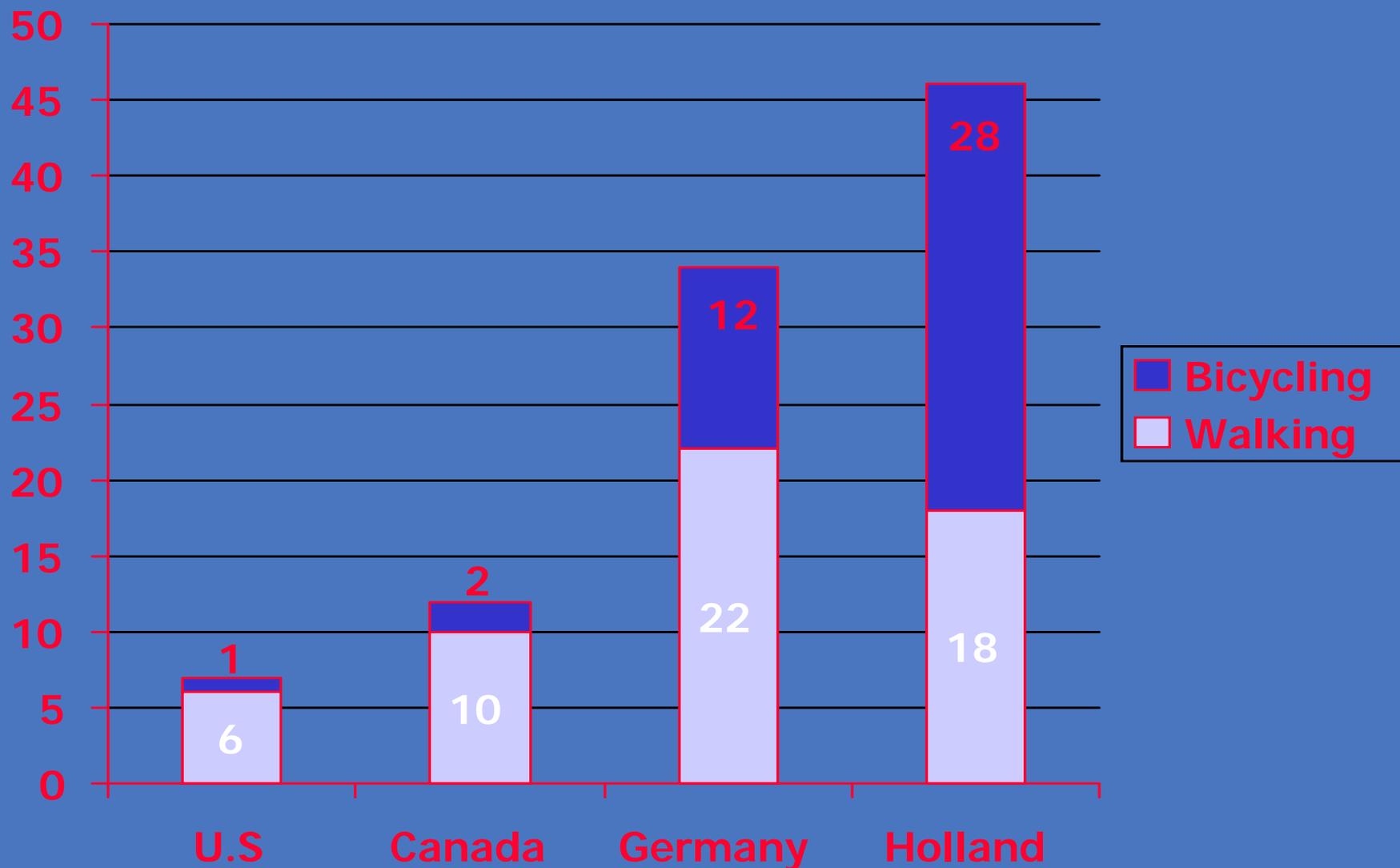
- 1974: **66%**

- 2000: **13%**

(CDC, 2000)



Percentage of Trips in Urban Areas Made by Walking and Bicycling: North America and Europe 1995



Environmental consequences of obesity

- Mean weight gain of Americans in 1990s: 10 pounds
- Airline distance flown in 2000 in US: 515 billion passenger-miles
- Jet fuel to transport added weight in 2000: 350 million gallons
- Cost of extra fuel: \$1.1 billion (Oct 2005 prices)
- CO₂ emissions from extra fuel: 3.8 million tons

Obesity, diabetes, and pollution

- Recent identification of 'obesogens', hormone disrupting substances that can trigger increased fat production
- Recent study suggests a dose-response relationship between exposure to persistent organic pollutants (POPs) and diabetes