



Information Session:

VACCINATION: FACTS & MYTHS

Part III

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SAFETY OF VACCINES



Vaccines...



Vaccines are actually very safe...The vast majority of adverse events associated with vaccines are minor and transient, like a sore arm or mild fever. These side effects can often be controlled by acetaminophen taken before or after vaccination, but sometimes can not be completely avoided as they represent a normal response to the vaccine.

More serious adverse events occur rarely, in the order of 1/1000 to 1/1 million doses, and some are so rare that risk cannot be accurately assessed.

*Canadian Immunization Guide – 5th Edition, 1998

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Must meet high standards to ensure consistently repeatable, safe and effective vaccine production and distribution

From growing of pathogen to shipping vaccine:

- ❖ facilities, processes and products inspected by third-party agencies**
- ❖ pertinent documents reviewed by government regulatory bodies**
- ❖ comprehensive paper trail follows every product**

A young girl with dark hair, wearing a blue denim jacket, is smiling and looking towards the camera. In the background, a woman with dark hair is blurred, looking towards the girl. The overall scene is brightly lit and appears to be indoors.

SOME MYTHS ABOUT IMMUNIZATION OF CHILDREN AND ADULTS

Some myths about immunization



Myth: Vaccinations, especially pertussis, have harmful side effects that can result in seizures, sudden infant death syndrome (SIDS), cancer and Crohn's disease.

Fact: Damage to the brains of children who die of natural pertussis disease is a result of lack of oxygen and bleeding into the nervous tissues due to severe coughing spells and not bacterial toxins.

Risk of convulsions is much higher after being infected naturally with measles or pertussis.

Studies have failed to confirm an association between receiving DTP (diphtheria-tetanus-pertussis) vaccine and SIDS.

Measles vaccinees are not at increased risk of developing Crohn's disease. Studies have also failed to confirm that measles virus is present in samples of tissue from patients who have Crohn's.

Some myths about immunization



Myth: Vaccines contain preservatives such as thimerosal, aluminum, mercury as well as other toxic chemicals.

Fact: Formaldehyde is used to inactivate live bacteria, toxins, and viruses that are used in the production of vaccines such as pertussis, tetanus, diphtheria, and polio, but almost all of the chemical is removed in the final purification process.

Vaccines can contain trace amounts of antibiotics and individuals with known hypersensitivity to these vaccine components should avoid being vaccinated.

Antacids contain 200-400 mg of aluminum hydroxide per tablet. This is 200 to 400 times what is found in vaccines.

Vaccines containing inactivated poliovirus do not contain thimerosal.

Some myths about immunization



Myth: Vaccine-preventable diseases have been eliminated in Canada as a result of better hygiene, and sanitation as well as nutrition. There is no longer a reason to vaccinate my child.

Fact: Most children still get chickenpox just as they did twenty years or fifty years ago. If diseases are disappearing, the incidence of chickenpox should be on the decrease.

Countries where immunization rates have dropped have experienced outbreaks of vaccine-preventable diseases like pertussis.

Haemophilus influenzae type b (Hib) vaccine, originally introduced in 1988, has virtually eliminated bacterial meningitis due to Hib at a time when there have been no significant changes in hygiene or sanitation in North America. One needs to differentiate Hib from other causes of bacterial meningitis (meningococcal, pneumococcal, viral, etc.)

Some myths about immunization



Myth: The majority of people who get the disease have been vaccinated proving that vaccines do not work.

Fact: Vaccines are not 100% effective and not all vaccinated individuals will develop immunity.

Routine childhood vaccinations are effective 85-90%.

5-10% of children are not protected after a single dose of measles vaccine.

Studies show that infants who did not respond to the first dose of measles vaccine had a 99% response to the second dose.

Some myths about immunization



Myth: There is a relationship between MMR and autism.

Fact: To date, there is no conclusive evidence that any vaccine increases the risk of developing autism or any other behaviour disorder.

Several epidemiological studies show no causal association between the measles/ mumps/ rubella (MMR) vaccine (or other measles-containing vaccines) and autism. In January 1990, the Institute of Medicine (IOM) concluded that there was no evidence to indicate a causal relationship between autism and the DTP vaccine or the pertussis component of the DTP vaccine.

In 2001, the IOM concluded that there is no causal relationship, at a population level, between the MMR vaccine and Autism Spectrum Disorder.

Perpetuating myths...

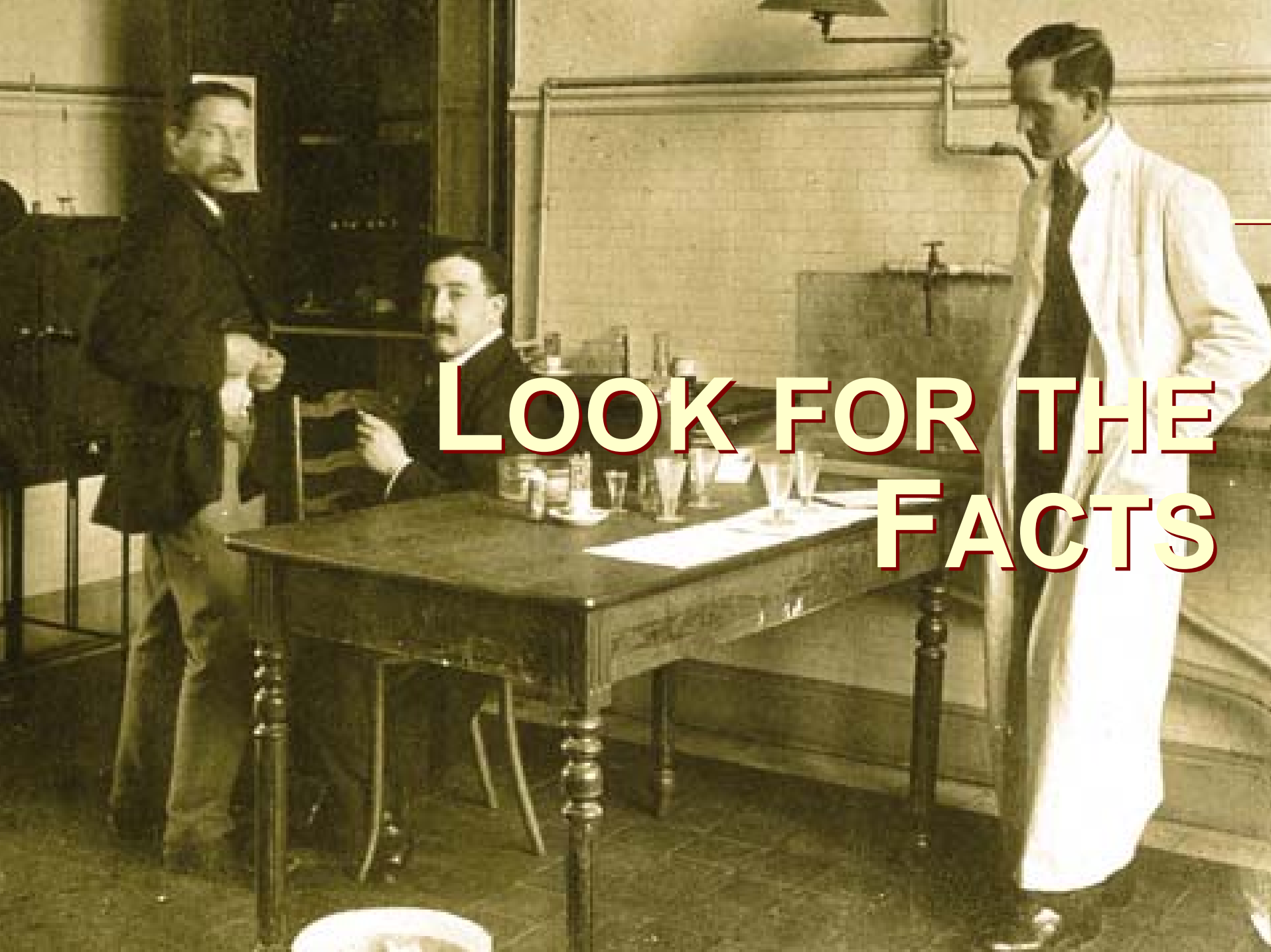


In study of anti-vaccine Web sites, researchers found most common claims:

- ❖ **vaccines cause idiopathic illness (100% of sites)**
- ❖ **vaccines erode immunity (95%)**
- ❖ **adverse vaccine reactions are underreported (95%)**
- ❖ **vaccination policy is motivated by profit (91%)**

The most common design attributes:

- ❖ **links to other anti-vaccination sites (100% of sites)**
- ❖ **information for legally avoiding immunizations (64%)**
- ❖ **use of stories of children allegedly killed or harmed by vaccines (55%)**



**LOOK FOR THE
FACTS**

Look for the facts!



Canadian parents rate immunization as the most important factor in keeping children healthy, over healthy diet and exercise

Look for the facts!



Good Web-based information will have these characteristics:

- ❖ **peer-reviewed scientific information**
- ❖ **balanced, objective & sound reporting of health benefits of vaccines over time**
- ❖ **balanced, objective and sound reporting of potential risks/adverse effects**

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