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Jaundice it is not a disease, it is a symptom of several possible underlying illnesses

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Abstract

Jaundice is a clinical syndrome yellow colorized of the skin or whites of the eyes, arising from excess of the pigment bilirubin and typically caused by obstruction of the bile duct, by liver disease, or by excessive breakdown of red blood cells. **Jaundice** may indicate a serious **problem** with the function of your red blood cells, liver, gallbladder, or pancreas.

Keywords: Introduction, Description, Types, Treatment, and Conclusion

Introduction

Jaundice is a term used to describe a yellowish tinge to the skin and the whites of the eye. Body fluids may also be yellow. About 60 percent of all infants born in the United States have jaundice. However, jaundice can happen to people of all ages and is normally the result of an underlying condition. Jaundice normally indicates a problem with the liver or bile duct.

Fast facts on jaundice:-

Jaundice is caused by a buildup of bilirubin, a waste material, in the blood.

- An inflamed liver or obstructed bile duct can lead to jaundice, as well as other underlying conditions.

- Symptoms include a yellow tinge to the skin and whites of the eyes, dark urine, and itchiness.
- Diagnosis of jaundice can involve a range of tests.

Jaundice is treated by managing the underlying cause.

Causes:-

Jaundice is a yellowing of the skin and the whites of eyes that happens when the body does not process bilirubin properly. This may be due to a problem in the liver.

It is also known as icterus.

Bilirubin is a yellow-colored waste material that remains in the bloodstream after iron is removed from the blood.

The liver filters waste out from the blood. When bilirubin reaches the liver, other chemicals attach to it. A substance called conjugated bilirubin results.

The liver produces bile, a digestive juice. Conjugated bilirubin enters the bile, then it leaves the body. It is this type of bilirubin that gives feces its brown color.

If there is too much bilirubin, it can leak into the surrounding tissues. This is known as hyperbilirubinemia, and it causes the yellow color in the skin and eyes.

Risk factors:- Jaundice most often happens as a result of an underlying disorder that either causes the production of too much bilirubin or prevents the liver from getting rid of it. Both of these result in bilirubin being deposited in tissues. Underlying conditions that may cause jaundice include:

- **Acute inflammation of the liver:** This may impair the ability of the liver to conjugate and secrete bilirubin, resulting in a buildup.
- **Inflammation of the bile duct:** This can prevent the secretion of bile and removal of bilirubin, causing jaundice.
- **Obstruction of the bile duct:** This prevents the liver from disposing of bilirubin.
- **Hemolytic anemia:** The production of bilirubin increases when large quantities of red blood cells are broken down.
- **Gilbert's syndrome:** This is an inherited condition that impairs the ability of enzymes to process the excretion of bile.
- **Cholestasis:** This interrupts the flow of bile from the liver. The bile containing conjugated bilirubin remains in the liver instead of being excreted.

Rarer conditions that may cause jaundice include:

- **Crigler-Najjar syndrome:** This is an inherited condition that impairs the specific enzyme responsible for processing bilirubin.
- **Dubin-Johnson syndrome:** This is an inherited form of chronic jaundice that prevents

conjugated bilirubin from being secreted from the cells of the liver.

Pseudojaundice: This is a harmless form of jaundice. The yellowing of the skin results from an excess of beta-carotene, not from an excess of bilirubin. Pseudojaundice usually arises from eating large quantities of carrot, pumpkin, or melon.

Treatment: Treatment will depend on the underlying cause.

Jaundice treatment targets the cause rather than the jaundice symptoms.

The following treatments are used:

- Anemia-induced jaundice may be treated by boosting the amount of iron in the blood by either taking iron supplements or eating more iron-rich foods. Iron supplements are available for purchase online.
- Hepatitis-induced jaundice requires antiviral or steroid medications.
- Doctors can treat obstruction-induced jaundice by surgically removing the obstruction.

If the jaundice has been caused by use of a medication, treatment for involves changing to an alternative medication.

Prevention:-

Jaundice is related to liver function. It is essential that people maintain the health of this vital organ by eating a balanced diet, exercising regularly, and not consuming more than the recommended amounts of alcohol

Symptoms:-

An excess of bilirubin can cause the yellow tinge in the eyes and skin.

Common symptoms of jaundice include:

- a yellow tinge to the skin and the whites of the eyes, normally starting at the head and spreading down the body
- pale stools
- dark urine
- itchiness

Accompanying symptoms of jaundice resulting from low bilirubin levels include:

- fatigue
- abdominal pain
- weight loss
- vomiting
- fever
- pale stools
- dark urine

Complications:-

The itching that accompanies jaundice can sometimes be so intense that patients have been known to scratch their skin raw, experience insomnia, or, in extreme cases, even have thoughts of suicide.

When complications happen, this is usually because of the underlying problem, not the jaundice itself.

For example, if an obstructed bile duct leads to jaundice, uncontrolled bleeding may result. This is because the blockage leads a shortage of vitamins needed for clotting.

Types:-

There are three main types of jaundice:

- Hepatocellular jaundice occurs as a result of liver disease or injury.
- Hemolytic jaundice occurs as a result of hemolysis, or an accelerated breakdown of red blood cells, leading to an increase in production of bilirubin.
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Obstructive jaundice occurs as a result of an obstruction in the bile duct. This prevents bilirubin from leaving the live.

Newborns:-

Jaundice is a common health issue in newborn infants. Around 60 percent of newborns experience jaundice, and this increases to 80 percent of premature infants born before 37 weeks of pregnancy.

They will normally show signs within 72 hours of birth.

Red blood cells in the body of an infant are frequently broken down and replaced. This causes the production of more bilirubin. Also, the livers of infants are less developed and, therefore, less effective at filtering bilirubin from the body.

Symptoms will usually resolve without treatment within 2 weeks. However, infants with extremely high bilirubin levels will require treatment with either a blood transfusion or phototherapy.

In these cases, treatment is vital as jaundice in newborns can lead to kernicterus, a very rare type of permanent brain damage.

Levels:-

The level of bilirubin is defined in a blood test called a bilirubin test. This measures unconjugated, or indirect, bilirubin levels. These are responsible for the onset of jaundice.

Bilirubin levels are measured in milligrams per decilitre (mg/dL). Adults and older children should have a level of between 0.3 and 0.6 mg/dL. Around 97 percent of infants born after 9 months of pregnancy have levels lower than 13 mg/dL. If they show higher levels than this, they are usually referred for further investigation.

These ranges may differ between laboratories. How far above the normal range a person's levels are will set out a course of treatment.

Diagnosis

Doctors will most likely use the history of the patient and a physical exam to diagnose jaundice and confirm bilirubin levels. They will pay close attention to the abdomen, feel for tumors, and check the firmness of the liver.

A firm liver indicates cirrhosis, or scarring of the liver. A rock-hard liver suggests cancer.

Several tests can confirm jaundice. The first is a liver function test to find out whether or not the liver is functioning properly.

If a doctor cannot find the cause, a doctor may request blood tests to check bilirubin levels and the composition of the blood. These include:

- **Bilirubin tests:** A high level of unconjugated bilirubin compared to levels of conjugated bilirubin suggest hemolytic jaundice.
- **Full blood count (FBC), or complete blood count (CBC):** This measures levels of red blood cells, white blood cells, and platelets.
- **Hepatitis A, B, and C tests:** This tests for a range of liver infections.

The doctor will examine the structure of the liver if they suspect an obstruction. In these cases, they will use imaging tests, including MRI, CT, and ultrasound scans.

They may also carry out an endoscopic retrograde cholangiopancreatography (ERCP). This is a procedure combining endoscopy and X-ray imaging.

A liver biopsy can check for inflammation, cirrhosis, cancer, and fatty liver. This test involves inserting a needle into the liver to obtain a tissue sample. The sample is then examined under a microscope.

Diet for jaundice: What to eat for a healthy liver:- jaundice is a buildup of bilirubin in the blood. Bilirubin is a yellow pigment released during the breakdown of red blood cells. Too much of this pigment causes the skin, eyes, and gums to turn yellow.

The liver typically filters bilirubin out of the blood, so jaundice is usually related to liver disease or failure.

A majority of jaundice cases occur in newborns, young children, and immune-compromised adolescents and adults.

In most cases, a bilirubin blood levels of 2 to 3 milligrams per deciliter (mg/dL) or higher will cause visible symptoms.

How does diet play a role in jaundice recovery?

A person's diet plays a significant role in jaundice recovery and prevention.

During digestion, the liver produces bile that helps the intestine break down fats.

The liver is also responsible for processing or metabolizing most digested nutrients, toxins, and medications.

All foods and drinks require the liver to do a certain amount of work. But different nutrients and chemicals are digested and metabolized differently, making some more liver-friendly than others.

The amount of work the liver has to do increases when foods are difficult to digest. This is especially true for large amounts of refined sugars, salt, and saturated fats.

Toxins, such as alcohol and some medications, can also damage liver cells during metabolism.

People with jaundice are usually advised to eat foods and drinks that help improve digestion and metabolism, protect the liver from further damage, and detoxify the liver. What to eat :-

A doctor will provide an individualized treatment plan, including dietary suggestions, to a person recovering from jaundice.

These suggestions will vary depending on the severity of the case and any underlying medical conditions. But there are certain foods and drinks most people with jaundice are advised to add to their diet.

Foods and drinks to consume during jaundice recovery include: Water

Staying hydrated is one of the best ways to help the liver recover from jaundice. Water not only helps ease digestion, but it also helps the liver and kidneys flush out toxins.

Most people should drink at least 64 ounces or just under 2 liters of water daily.

If people find the taste bland, they can try adding a teaspoon or more of fresh lemon, lime, or grapefruit juice to water for an extra dose of antioxidants.

Fresh fruits and vegetables

Fresh fruits and vegetables contain powerful antioxidants and fiber that can help limit liver damage during metabolism and ease digestion.

All fruits and vegetables contain some level of liver-friendly nutrients, but some varieties are especially beneficial for liver conditions. These include:

- whole cranberries, blueberries, and grapes
- citrus fruits, especially lemons, limes, and grapefruits
- papayas and melons
- pumpkins, sweet potatoes, and yams
- avocados and olives
- tomatoes
- carrots, beets, and turnips
- cruciferous vegetables, such as broccoli, cauliflower, and Brussels sprouts
- ginger and garlic
- spinach and collard greens

For optimal health benefits, people should eat whole fruits and vegetables and avoid high-calorie, low-fiber products, such as fruit juices and blends.

It is also advised to limit or avoid highly processed and refined sugars, such as high fructose corn syrup (HFCS).

Coffee and herbal tea

Coffee and herbal teas contain high doses of antioxidants, as well as caffeine, which can help stimulate digestion.

In moderation, coffee has been shown to help reduce the risk of liver conditions, including cancer and fibrosis (scarring), and slow their progression.

Whole grains:- Whole grain foods contain high amounts of liver-friendly nutrients, including healthy fats, fiber, antioxidants, and minerals.

A 2013 study confirmed that subjects who ate oats, which are rich in beta-glucan, improved liver function after 12 weeks of consumption.

Nuts and legumes

Most nuts and legumes are rich in antioxidants, including vitamin E and phenolic acid.

Whole nuts and legumes are also usually rich in fiber and healthy fats. Studies show that walnuts and other tree nuts are beneficial to liver function when consumed regularly.

Lean proteins

Lean proteins, including tofu, legumes, and fish, put less stress on the liver than red meat. Oily species of fish, such as salmon and mackerel, contain omega-3 and zinc, which help metabolize fatty acids, alcohols, carbohydrates, and proteins.

Foods to avoid----

Foods and drinks to avoid or limit during jaundice recovery include:

Alcohol

Alcohol is toxic to most internal bodily tissues, including the liver. Excessive alcohol use can cause chronic inflammation, reduce liver function, and lead to fibrosis.

Most people with jaundice or other liver conditions should try to avoid alcohol completely.

Refined carbohydrates

Soda, baked goods, white bread, and pasta all contain high amounts of refined sugar.

Too much sugar has been linked to a number of health conditions that impair liver function, including type 2 diabetes and obesity.

Packaged, canned, and smoked foods

Many packaged, canned, or smoked foods, especially deli meats and canned vegetables, contain high levels of preservatives.

These preservatives are usually forms of salt, such as nitrates and sulfates. Salt dehydrates the body, making digestion and metabolism more difficult, and putting stress on the liver.

Food Saturated and trans fats

Fried, oily, and fast foods contain high amounts of saturated and trans fats that are difficult to digest, particularly those prepared with partially hydrogenated vegetable oils.

Some dairy products, including cheeses, whole milk, and full-fat yogurts, also contain high levels of saturated fat.

Researchers are not entirely sure why, but studies indicate that people who consume large amounts of saturated and trans fat undergo liver changes and an increase in insulin resistance. Insulin helps control blood sugar levels and helps digest sugar. Large intakes of saturated and trans fats have also been linked to obesity and malnutrition, which are both risk factors for liver conditions, including jaundice.

It is recommended to limit saturated fat intake to 5 to 6 percent of total calories, and try to limit or avoid trans fats altogether.

Raw or undercooked fish or shellfish

Raw or undercooked fish and shellfish may contain toxins that can damage the liver and other digestive organs.

There is also a risk that they contain viruses, bacteria, and parasites that can infect the liver.

Beef and pork

Rich meats, such as beef and pork, contain high levels of animal amino acids and fats that can be difficult to digest and put a strain on a damaged liver.

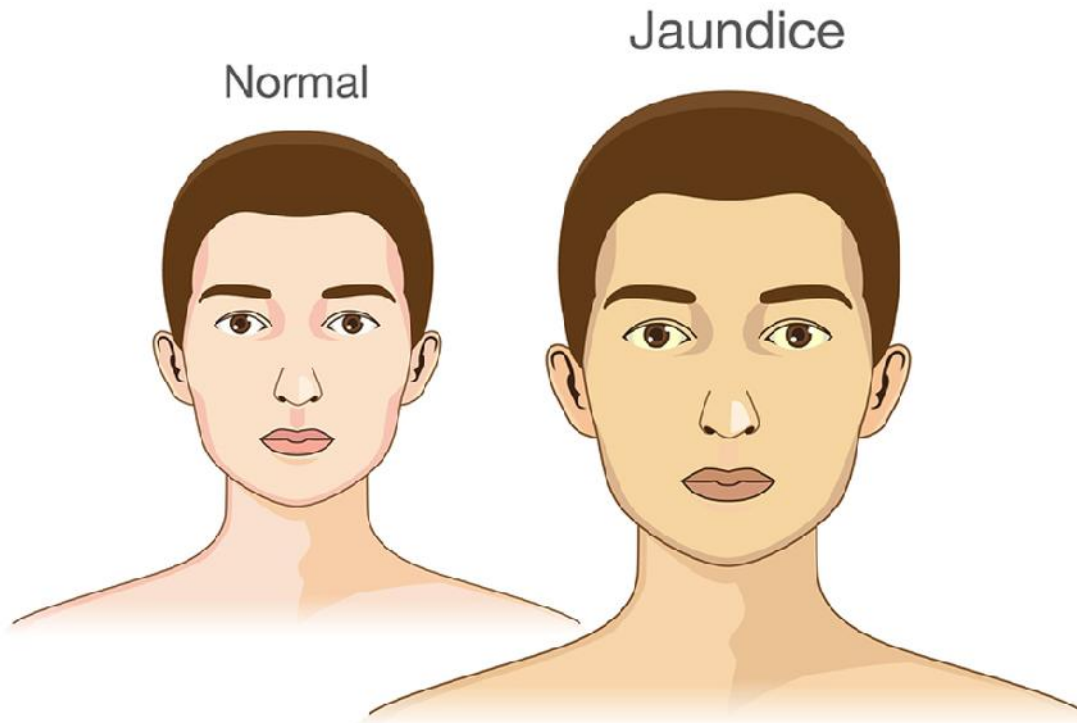
Most studies suggest lean meats, such as poultry and fish, as well as plant-based proteins, such as legumes and tofu, are more liver-friendly protein sources.

items with 1.5 grams (g) salt per 100 g (or 0.6 g sodium) or higher are considered high in salt. Who benefits from liver-friendly foods? People in a high-risk category for jaundice are often advised to eat certain liver-healthy foods to help reduce their chances of developing the condition.

People who may benefit from liver-healthy foods and supplements include:

- pregnant women and breast-feeding mothers
- newborns and very young children
- immune-compromised individuals
- people with liver conditions, such as hepatitis, bile duct obstructions (gallstones or tumors), and alcoholic or fatty liver disease
- people taking certain prescription drugs, especially non-steroidal anti-inflammatories (NSAIDs), prescription pain medication, steroids, immune and hormone regulating drugs
- people with hereditary conditions, especially Gilbert syndrome and Dublin-Johnson syndrome.

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World Hepatitis Day:-

World Hepatitis Day, observed on July 28 every year, aims to raise global awareness of hepatitis — a group of infectious diseases known as Hepatitis A, B, C, D, and E — and encourage prevention, diagnosis and treatment. **Why get vaccinated?:-** Hepatitis B is a serious disease that affects the liver. It is caused by the hepatitis B virus. Hepatitis B can cause mild illness lasting a few weeks, or it can lead to a serious, lifelong illness.

Hepatitis B virus infection can be either acute or chronic.

Acute hepatitis B virus infection is a short-term illness that occurs within the first 6 months after someone is exposed to the hepatitis B virus. This can lead to:

- fever, fatigue, loss of appetite, nausea, and/or vomiting

- jaundice (yellow skin or eyes, dark urine, clay-colored bowel movements)
- pain in muscles, joints, and stomach

Chronic hepatitis B virus infection is a long-term illness that occurs when the hepatitis B virus remains in a person's body. Most people who go on to develop chronic hepatitis B do not have symptoms, but it is still very serious and can lead to:

- liver damage (cirrhosis)
- liver cancer
- death

Chronically-infected people can spread hepatitis B virus to others, even if they do not feel or look sick themselves. Up to 1.4 million people in the United States may have chronic hepatitis B infection. About 90% of infants who get hepatitis B become chronically infected and about 1 out of 4 of them dies.

Hepatitis B is spread when blood, semen, or other body fluid infected with the Hepatitis B virus enters the body of a person who is not infected. People can become infected with the virus through:

- Birth (a baby whose mother is infected can be infected at or after birth)
- Sharing items such as razors or toothbrushes with an infected person
- Contact with the blood or open sores of an infected person
- Sex with an infected partner
- Sharing needles, syringes, or other drug-injection equipment
- Exposure to blood from needlesticks or other sharp instruments

Each year about 2,000 people in the United States die from hepatitis B-related liver disease.

Hepatitis B vaccine can prevent hepatitis B and its consequences, including liver cancer and cirrhosis.

Hepatitis B vaccine

Hepatitis B vaccine is made from parts of the hepatitis B virus. It cannot cause hepatitis B infection. The vaccine is usually given as 2, 3, or 4 shots over 1 to 6 months.

Infants should get their first dose of hepatitis B vaccine at birth and will usually complete the series at 6 months of age.

All **children and adolescents** younger than 19 years of age who have not yet gotten the vaccine should also be vaccinated.

Hepatitis B vaccine is recommended for unvaccinated **adults** who are at risk for hepatitis B virus infection, including:

- People whose sex partners have hepatitis B
- Sexually active persons who are not in a long-term monogamous relationship
- Persons seeking evaluation or treatment for a sexually transmitted disease

- Men who have sexual contact with other men
- People who share needles, syringes, or other drug-injection equipment
- People who have household contact with someone infected with the hepatitis B virus
- Health care and public safety workers at risk for exposure to blood or body fluids
- Residents and staff of facilities for developmentally disabled persons
- Persons in correctional facilities
- Victims of sexual assault or abuse
- Travelers to regions with increased rates of hepatitis B
- People with chronic liver disease, kidney disease, HIV infection, or diabetes
- Anyone who wants to be protected from hepatitis B

There are no known risks to getting hepatitis B vaccine at the same time as other vaccines.

Some people should not get this vaccine

Tell the person who is giving the vaccine:

- **If the person getting the vaccine has any severe, life-threatening allergies.**

- If you ever had a life-threatening allergic reaction after a dose of hepatitis B vaccine, or have a severe allergy to any part of this vaccine, you may be advised not to get vaccinated. Ask your health care provider if you want information about vaccine components.

- **If the person getting the vaccine is not feeling well.**

If you have a mild illness, such as a cold, you can probably get the vaccine today. If you are moderately or severely ill, you should probably wait until you recover. Your doctor can advise you.

Risks of a vaccine reaction

With any medicine, including vaccines, there is a chance of side effects. These are usually mild and go away on their own, but serious reactions are also possible.

Most people who get hepatitis B vaccine do not have any problems with it.

Minor problems following hepatitis B vaccine include:

- soreness where the shot was given
- temperature of 99.9°F or higher

If these problems occur, they usually begin soon after the shot and last 1 or 2 days.

Your doctor can tell you more about these reactions.

Other problems that could happen after this vaccine:

- People sometimes faint after a medical procedure, including vaccination. Sitting or lying down for about 15 minutes can help prevent fainting and injuries caused by a fall. Tell your provider if you feel dizzy, or have vision changes or ringing in the ears.
- Some people get shoulder pain that can be more severe and longer-lasting than the more routine soreness that can follow injections. This happens very rarely.
- Any medication can cause a severe allergic reaction. Such reactions from a vaccine are very rare, estimated at about 1 in a million doses, and would happen within a few minutes to a few hours after the vaccination.

As with any medicine, there is a very remote chance of a vaccine causing a serious injury or death.

The safety of vaccines is always being monitored. For more information, visit the [vaccine safety](#) site. What if there is a serious problem?

What should I look for?

- Look for anything that concerns you, such as signs of a severe allergic reaction, very high fever, or unusual behavior. Signs of a **severe allergic reaction** can include hives, swelling of the face and throat, difficulty breathing, a fast heartbeat, dizziness, and weakness. These would usually start a few minutes to a few hours after the vaccination.

What should I do?

- If you think it is a **severe allergic reaction** or other emergency that can't wait, call 9-1-1 and get to the nearest hospital. Otherwise, call your clinic. Afterward, the reaction should be reported to the Vaccine Adverse Event Reporting System (VAERS). Your doctor should file this report, or you can do it yourself through the

VAERS does not give medical advice.

The National Vaccine Injury Compensation Program

The National Vaccine Injury Compensation Program (VICP) is a federal program that was created to compensate people who may have been injured by certain vaccines.

Persons who believe they may have been injured by a vaccine can learn about the program and about filing a claim by calling **1-800-338-2382** or visiting the [VICP website](#). There is a time limit to file a claim for compensation.

How can I learn more?

- Ask your healthcare provider. He or she can give you the vaccine package insert or suggest other sources of information.

Call your local or state health department.

Conclusions:- **Why Immunize?:-** Why immunize our children? Sometimes we are confused by the messages in the media. First we are assured that, thanks to vaccines, some diseases are almost gone from the U.S. But we are also warned to immunize our children, ourselves as adults, and the elderly.

Diseases are becoming rare due to vaccinations.

It's true, some diseases (like polio and diphtheria) are becoming very rare in the U.S. Of course, they are becoming rare largely because we have been vaccinating against them. But it is still reasonable to ask whether it's really worthwhile to keep vaccinating.

It's much like bailing out a boat with a slow leak. When we started bailing, the boat was filled with water. But we have been bailing fast and hard, and now it is almost dry. We could say, "Good. The boat is dry now, so we can throw away the bucket and relax." But the leak hasn't stopped. Before long we'd notice a little water seeping in, and soon it might be back up to the same level as when we started.

Keep immunizing until disease is eliminated.

Unless we can "stop the leak" (eliminate the disease), it is important to keep immunizing. Even if there are only a few cases of disease today, if we take away the protection given by vaccination, more and more people will become infected and will spread disease to others. Soon we will undo the progress we have made over the years.

Japan reduced pertussis vaccinations, and an epidemic occurred.

In 1974, Japan had a successful pertussis (whooping cough) vaccination program, with nearly 80% of Japanese children vaccinated. That year only 393 cases of pertussis were reported in the entire country, and there were no deaths from pertussis. But then rumors began to spread that pertussis vaccination was no longer needed and that the vaccine was not safe, and by 1976 only 10% of infants were getting vaccinated. In 1979 Japan suffered a major pertussis epidemic, with more than 13,000 cases of whooping cough and 41 deaths. In 1981 the government began vaccinating with acellular pertussis vaccine, and the number of pertussis cases dropped again.

What if we stopped vaccinating?

So what would happen if we stopped vaccinating here? Diseases that are almost unknown would stage a comeback. Before long we would see epidemics of diseases that are nearly under control today. More children would get sick and more would die.

We vaccinate to protect our future.

We don't vaccinate just to protect our children. We also vaccinate to protect our grandchildren and their grandchildren. With one disease, smallpox, we "stopped the leak" in the boat by eradicating the disease. Our children don't have to get smallpox shots anymore because the disease no longer exists. Smallpox is now only a memory, and if we keep vaccinating against other diseases, the same will someday be true for them too. Vaccinations are one of the best ways to put an end to the serious effects of certain diseases.

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