**Time Sheet**

**“Better Latex Than Never – Shock Jock Medical Radio”**

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**[0:00-0:23] Introduction:**

**Host (Jenna):** For those just tuning in, welcome to Shock Jock Medical Radio. I am your host, Jennarae. I have 2 very special guests with me today, Dr. Kate and Dr. Mya, two medical doctors who specialize in allergic reactions! This week’s segment is called Better Latex Than Never and we will be opening our line to callers, so if you have a medical concern, give us a call at 1-800-ALLERGY

**[0:23-0:24]** \*Ring tone sounds\*

**[0:24-0:33] Host (Jenna):** And we have our first caller on the line! Hi there, Can you start by telling us your name, a little about yourself and what concerns you have today?

**[0:33-0:52] Cindy (Andrea):** Hi Jennarae, thank you for answering, I am a big fan! My name is Cindy and I was born and raised in Kamloops B.C, I am 40 years old and I have been a nurse for 15 years. I am calling because I need some medical help. Recently on my shifts I have been getting a red itchy rash on my hands. I don’t know why this is happening and it’s really stressing me out.

**[0:53-0:59] Host (Jenna):** Hi Cindy, nice to meet you, I am so sorry to hear about that! Dr’s what are you thinking?

**[0:59-1:08] Dr. Kate:** Hi Dr. Kate here, I would like to hear more about what is provoking your symptoms, can you tell us more about when the rashes started and any other concerns associated with them?

**[1:08-1:24] Cindy (Andrea):** Yeah, it's been really annoying me! Basically, during my shifts and sometimes after I will have these big blotches on my hands that are usually tender and itchy. And recently my mouth and throat have started to get itchy after certain meals but I cannot pinpoint the cause.

**[1:24-1:28] Dr. Mya:** Hi Cindy, Dr. Mya here. When did this start happening?

**[1:28-1:34] Cindy (Andrea):** Over the past few months I have been noticing the rash but the numbness in my mouth started happening more recently

**[1:34-1:41] Dr. Kate:** We definitely need more information but this is starting to sound like some sort of allergy or sensitivity. Do you have a history of allergies?

**[1:41-1:49] Cindy (Andrea):** That is what I thought at first but I have no allergies, so I don’t know why I would just randomly have an allergy to something all of the sudden.

**[1:49-2:03] Dr. Mya:** An interesting fact about allergies is… they can form overtime through repeated exposure and occupational risks such as being an OR nurse like yourself. This could have put you at an increased risk of developing a sensitivity to latex! (Nucera et al., 2020)

**[2:03-2:05] Cindy (Andrea):** Oh really! I didn't know that

**[2:05-2:13] Dr. Mya:** Yeah! So tell us a little more about your work as a nurse. I want to gain a better picture of any environmental factors that could cause your symptoms.

**[2:13-2:27] Cindy (Andrea):** I have been working as an OR nurse for 15 years. I do both circulating nurse and scrub nurse roles. I mainly work with the vascular team so some surgeries are relatively short and others can be many, many hours.

**[2:27-2:34] Dr. Kate:** Do you know what type of gloves your team is using in the OR? Do they have any latex free options or only one option for gloves?

**[2:34-2:40] Cindy (Andrea):** I think they’re just the normal latex gloves, I use the powdered gloves because they're easier to get on.

**[2:40-3:05] Dr. Kate:** I’m concerned that you may be getting an allergy from the latex from repeated exposure.There is a protein found in the “rubber tree” which can be the main source of sensitization (Hamilton, 2023). When latex gloves are used by healthcare workers the frequent exposures can lead to allergic reactions. Our biggest concern with allergies is the possibility of anaphylaxis which is a severe allergic reaction that is life threatening. **(**Ngamchokwathana & Chaiear, 2023).

**[3:05-3:13] Cindy (Andrea):** Wow I didn’t think about that at all! Could you tell me a little more about why and how this is happening? I would love to understand it a bit more.

**[3:13-4:04] Dr. Kate:** Latex allergies can be broken up into two different categories, hypersensitivity 1 and hypersensitivity 4 reactions. Hypersensitivity 4 reactions generally occur 24-72 hours after exposure giving it the name of a delayed reaction. There are no antibodies involved, instead it is cell mediated, meaning specific cells are activated after exposure (Haq et al., 2022). These cells are known as T-cells and cause mediators to be released leading to damage to the tissues (Abbas et al., 2023). Generally, they are less severe and present themselves as contact dermatitis at the site meaning inflammation and irritation where the body was exposed (CDC, 2023). This would explain the rashes you are having on your hands (Nucera et al., 2020). A true latex allergy would be considered a hypersensitivity type 1 reaction and I will pass it over to Dr. Mya to further explain this reaction. (Salame et al., 2024).

**[4:05-5:06] Dr. Mya:** Thank you Dr. Kate. Some people may have a more severe reaction to latex which can be classified as hypersensitivity I or “Anaphylaxis” (Henry et al., 2020). Although anaphylaxis is rare, it can happen to people who may have been previously sensitized by the latex proteins (Henry et al., 2020). Now I will explain how this reaction occurs in the body with hypersensitivity 1… During our first exposure, an antigen presenting cell, also known as a APC, will engulf the allergen. The APC will then present an allergen’s antigen on the ACP’s surface. Major Histocompatibility Complex II is triggered, which then the APC calls for help from the helper T cells. Helper T cells are activated using the two-step verification method. Once the T cell is fully activated they activate B cells. B cells then proliferate and begin to synthesize antibodies. The specific antibody associated with allergies are called Immunoglobulin E also known as IgE. This IgE is specific to the allergen and will bind to any antigens if they are present again. Once activated IgE binds to mast cells (Ngamchokwathana & Chaiear, 2023) **whole paragraph**

**[5:06-5:37] Dr. Kate:** Mast cells and basophils release proinflammatory mediators like histamine. Histamine causes vasodilation and increased capillary permeability, meaning the blood vessels increase in size and allow more material to pass through them to increase the blood flow. When this occurs people will notice redness, swelling, and increased body temperature as the body is fighting the pathogens. In more severe allergic reactions it may cause bronchoconstriction or tightening to the respiratory tract and increased mucus production (Abbas et al., 2023) **whole paragraph**.

**[5:38-5:49] Cindy (Andrea):** That's so interesting and really complex! So much is happening all at once. I’m starting to agree that this could be a latex allergy, but I don’t understand why I am getting numbness and tingling in my mouth?

**[5:50-6:31] Dr. Kate:** Another interesting fact about latex allergies is something called a cross-sensitivity reaction between latex and certain foods also known as “the latex-fruit syndrome.” This means that some foods have similar antigens as whatever we are allergic to, in this case, latex. For latex allergies it is commonly associated with other foods, specifically Kiwis, chestnuts, avocados, and bananas. Due to the similar chemical makeup of these foods and latex it causes our bodies to have similar reactions as you would get on your hands from touching latex, in your case it could be the cause of the numbness and tingling you have been experiencing in your mouth after eating certain foods groups (Gromek et al., 2024) **whole paragraph.**

**[6:31-6:41] Cindy (Andrea):** That's kind of weird but also cool! Thank you for telling me about that. Does this mean I should get rid of everything latex and remove all of that food right when I get home?

**[6:41- 7:22] Dr. Mya:** Not quite yet! It is still important to talk to your doctor or healthcare provider. They can complete some tests and get you properly diagnosed. The most common tests are skin prick tests and/or a blood test. A skin prick test is done by a doctor to determine possible allergens according to symptoms and important information reported to your doctor. The doctor would then poke your skin with different allergens to determine a cause. After about 15 minutes, there should be a localized reaction to the allergen. This test is very specific and shows the severity of the reaction. The next test you may do is a blood test. Your Dr. will send you to get a sample of your blood and analyze it for levels of IgE (Ngamchokwathana & Chaiear, 2023) [**whole paragraph]**. Any IgE level above 10 indicates an allergy (Reber et al., 2017).

**[7:22-7:58] Dr. Kate:** Once you receive an official diagnosis and have determined what is causing your symptoms you can begin adjusting aspects of your work and diet to help prevent further reactions. I would suggest talking to your manager about having non-latex glove alternatives. Not only will this be good for you, but it may decrease the risk of developing a latex allergy for the rest of your team. For general irritation and exposures antihistamines such as Benadryl can be bought over the counter without a prescription. I also suggest getting an allergies alert bracelet and updating your allergies with your physicians to prevent future exposures (Abbas et al., 2023) [**whole paragraph]**.

**[7:59-8:06] Cindy (Andrea):** Wow that's really helpful! I am definitely going to talk to my doctor about this! Thank you so much for all of your support.

**[8:06-8:07] Dr. Mya:** Anytime!

**[8:07-8:24] Host (Jenna):** Thank you so much for calling Cindy, I hope this helped and I hope you can get all of this sorted! Thank you, listeners, for tuning in to Shock Jock Radio, I am your host Jennarae with my 2 wonderful guests Dr. Kate and Dr. Mya. Stay safe and stay healthy.

**[8:24-8:31] \*“Thank You” appears on screen\***

**Case Study**

 In 2024, Cindy, a 40-year-old female, was receiving support and education for a newly diagnosed latex allergy. Prior to this diagnosis, she had no formal allergy diagnosis and no other history of allergy symptoms.

 Cindy has been working as an operating room nurse for 15 years. Over the past few years, she has been experiencing on-and-off rashes on her hands and forearms and occasionally experiences numbness and tingling after eating certain foods. Cindy does not have any current history of allergies. Unsure why this was occurring, Cindy called into her local healthcare radio show to ask for help.

 Throughout a shift, Cindy regularly wears latex gloves for long periods of the day. During and after her shifts, she exhibits loonie-sized red patches and blisters on her hands. Cindy reports localized pruritus in her hands and forearms. To treat the redness, she uses an over-the-counter topical Benadryl cream. She also notices that after she eats certain foods, she experiences urticaria in her mouth and throat. The urticaria symptoms occur sporadically and Cindy was unable to determine the cause.

 Cindy discussed getting an allergy test with her doctor. She saw an allergist to complete a Skin Prick Test and Blood Test to identify any allergens causing her reaction. The allergist went through Cindy’s health and social history, the symptoms she was experiencing, and any patterns that Cindy noticed about the responses. The allergens in the Skin Prick were selected by the allergist based on Cindy’s symptoms, social history, and health history. Some of the allergens included Latex and Latex cross reactivity foods such as Kiwi, avocados, bananas, chestnuts, and other foods associated with latex allergies.

 After seeing the allergist, Cindy was diagnosed with a latex allergy and a cross-reactivity latex reaction associated with kiwis, bananas, chestnuts, and avocados. This diagnosis was made after having a positive reaction to these allergens during the skin prick test and exhibiting high levels of IgE during her blood test.

 Once diagnosed, Cindy was provided education on her new diagnosis and how to reduce her risk of allergic reactions. It is recommended that she talk to her manager about having latex glove alternatives and providing latex-free medical equipment. Cindy is encouraged to use antihistamines in the case of a reaction. She was provided a list of her allergies and she can use it as a reminder to avoid certain foods. Since implementing these actions, Cindy has not experienced any allergy symptoms.