Adapted from the <u>Ministry</u> <u>of Education website</u>

Secondary School Presentation



Interior Health

August 2023



Sabrina Shannon

September 2003

Sabrina ordered fries at the school cafeteria, after making sure that they were safe.



After lunch, Sabrina began to wheeze - thought she was having an asthma attack, she was sent to the office, by the time she got there, she was in serious respiratory trouble, and kept repeating "it's my asthma."

A teacher raced to Sabrina's locker to get her EpiPen in case it was anaphylaxis; school officials called 911. Sabrina collapsed, lost consciousness, suffered a cardiac arrest before the device could be administered and before the ambulance arrived.

https://youtu.be/JxxYRv2cCi8

(http://allergicliving.com/2010/07/02/sabrinas-law-sara-shannons-journey/)

Why are we here?

- Boards of Education must establish a training strategy according to the Ministry of Education <u>Anaphylaxis</u> <u>Protection Order</u> School Act, amended 2009
- Ministry of Education <u>BC Anaphylactic and Child Safety</u> <u>Framework</u> updated 2013
- Consensus Statement regarding standardized anaphylaxis training : <u>Anaphylaxis in Schools & Other Settings</u> 3rd Edition Revised, 2015



What is an Allergy?

Allergies occur when the immune system becomes unusually sensitive and overreacts to common substances that are normally harmless.

Examples are:

- Foods peanuts, tree nuts, sesame, milk, eggs, fish, crustaceans and mollusks (shellfish), soy, wheat, and mustard
- Insect bites bees, wasps, hornets and some ants
- Medications penicillin, sulfa drugs
- Exercise
- Latex gloves/medical devices

Reference: Food Allergy Canada(2021)



What is Anaphylaxis?

- Most serious type of allergic reaction
 - Can affect different parts of the body
 - Can happen quickly or can be delayed
 - Can be life-threatening
- Immediate treatment is necessary



Food Allergy Canada 2019

Most dangerous symptoms



Breathing difficulties

Drop in blood pressure

Food Allergy Canada 2019



Why are Teens at Higher Risk?

"Risk-taking behaviors in teenagers have been studied and are generally attributed to a reduced appreciation of potential dangers and a belief that consequences can be controlled."

"...social isolation [is] the hardest part of living with a food allergy"

http://www.jacionline.org/article/S0091-6749(06)00652-X/pdf

% of time teens report carrying their Epi



FIG 1. Percentage of respondents who "always carry" SIE during various activities.

8

Why are Teens at Higher Risk?

- Transition from elementary school
- Increased independence
- Increased risk taking, not wanting to appear different
 - Eating unsafe food and eating out
 - Not reading food labels
 - Not carrying auto injector, not wearing medic alert ID
 - Teenage Brain the last to mature
 - Not telling friends or others, wanting to fit in
 - Alcohol and drug use

Prevention = Having a Plan

- Ensure the medical alert list and epinephrine auto-injectors are current
- Be aware of students who have allergies
- Review emergency care plans for each student
- Epinephrine must be immediately available, carried by student
- Additional devices to be stored in a central unlocked location
- Know when and how to administer epinephrine
- Prepare for outdoor and off school grounds activities
- Sample awareness and avoidance strategies & <u>checklist</u>



What should I do?

- 1) Administer epinephrine auto-injector
- 2) Call 911
- 3) Administer second dose after 5-15 minutes <u>IF</u> symptoms do not improve or recur
- 4) Have ambulance transport student to hospital
- 5) Notify parent/guardian

Remember:

- Epinephrine is the drug to use for an allergic reaction
- Delay in receiving epinephrine is associated with fatalities
- Individuals must go to the closest emergency department



Effects of medications in anaphylaxis

| Body System | Epinephrine | Antihistamine |
|-------------|--|---------------|
| Breathing | Opens airways | |
| Circulation | Raises heart rate and blood pressure Increased heart contractions | |
| Immune | Stops ongoing reactions | |
| Skin | Reduces hives | Reduces hives |

12

Remember

- When in doubt, administer epinephrine, early use saves lives. Symptoms of anaphylaxis are unpredictable
- Antihistamines are not appropriate drugs to use during anaphylaxis and must not be given
- Asthma medication may be given after epinephrine
- Some symptoms of anaphylaxis can be confusing i.e. breathing difficulties
- Epinephrine addresses the life threatening symptoms of breathing difficulty and loss of blood pressure



What are auto-injectors?

A disposable, pre-filled automatic injection device that administers a single dose of epinephrine











Reference: EpiPen

14

Allerject Emerade



How big are the needles?



15

Using the EpiPen®



Hold firmly with ORANGE tip pointing downward.
 Remove BLUE safety cap by pulling straight up. Do not bend or twist.



- Place and push ORANGE tip firmly into mid-outer thigh until you hear a "click."
- × Hold on thigh for a slow count of 3.
- EpiPen video link (see how to use video)

Built-in needle protection

When EpiPen[®] is removed, the **ORANGE** needle cover automatically extends to cover the injection needle, ensuring the needle is never exposed.



16

Using Allerject®







STEP 1

STEP 2

STEP 3

- Pull Allerject[®] up from the outer case
- Pull red safety guard down and off of Allerject[®]
- Place black end of Allerject[®] against the middle of the outer thigh, push firmly until you hear a click and a hiss.
 Hold for 5 seconds.
- <u>Allerject</u>video Link

Using Emerade®



<u>Emerade video link</u>



Reference: Emerade

Body Positioning

- When giving epinephrine
 - have student sit or lie down
- After giving epinephrine
 - Lay on back, legs elevated
 - If student feels sick or vomits place in recovery position

Important: Do **not** have student sit up or stand suddenly







Food Allergy Canada 2019



Conclusion: Follow the three A's

Awareness

- Know the students affected by allergy
- Know the steps of the emergency plan
- Know the location of the epinephrine auto-injector
- Know how to use an epinephrine auto-injector

Avoidance

- Communication
- Avoid contact with allergens
- Regular cleaning
- Handwashing

Action

- Give the epinephrine auto-injector and call 911.
- Don't delay!



Teen Scenario...

What it could look like...



https://youtu.be/msM7zDrex4Q

*** play to 2:07...

Anaphylaxis Campaign 2015







Anaphylaxis in Schools

For teachers, administrators and other school personnel, our online course will help you understand the basics of anaphylaxis, ways to reduce risks in a school setting, and the recommended emergency treatment.

Duration: About 30 minutes

Version: July 2020





[22]

Resources

For more information contact your Public Health Nurse and see:

- <u>BC Anaphylactic and Child Safety Framework</u>
- <u>http://foodallergycanada.ca/</u> (Food Allergy Canada)
- <u>http://www.whyriskit.ca/</u>(Why Risk It- Teens)
- <u>http://www.epipen.ca/</u> EpiPen[®]
- <u>https://www.allerject.ca/</u> Allerject[®]
- <u>https://www.emerade.ca/</u> Emerade[®]
- <u>https://www.medicalert.ca/</u> Medic Alert
- <u>www.bchealthguide.org/healthfiles</u> Health files
- <u>Anaphylaxis</u> BC Ministry of Education
- <u>https://www.allergyaware.ca/courses/</u> Allergy Aware
- Anaphylaxis in Schools & Other Settings 3rd edition
- <u>Teens and Young Adults</u> resources





References

Food Allergy Canada (2019) http://foodallergycanada.ca/

Anaphylaxis in Schools & Other Settings (Third edition) by the Canadian Society of Allergy and Clinical Immunology.

Risk-Taking and coping strategies of adolescents and young adults with food allergies <u>http://www.jacionline.org/article/S0091-</u> <u>6749(06)00652-X/pdf</u>

Article about Sabrina's Law

http://allergicliving.com/2010/07/02/sabrinas-law-sara-shannonsjourney/

IH public website

http://www.interiorhealth.ca/YourHealth/SchoolHealth/SchoolMedical Conditions/Pages/AllergiesAnaphylaxis.aspx





Acknowledgments

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Images and/or product shots from:

Pfizer Canada Inc. (EpiPen[®]), kaleo Inc. (Allerject[®]), Bausch Health (Emerade[®])Food Allergy Canada or purchased by Interior Health





Any Questions?



