

# Implementing Infographics into CPR and First Aid Education to Effect (Hopefully?) Students' Achievement and Attitude Towards Helping Behaviors

**David C. Berry, PhD, MHA, AT, ATC, ATRIC**

Professor and Professional Athletic Training  
Program Director

Saginaw Valley State University, University Center,  
MI

[dcberry@svsu.edu](mailto:dcberry@svsu.edu)



# Conflict of Interest

- FINANCIAL DISCLOSURE:
  - American Red Cross Travel Grant.
- UNLABELED/UNAPPROVED USES DISCLOSURE:
  - No relevant financial relationship (s) exist.
- AFFILIATIONS
  - American Red Cross Scientific Advisory Board
  - ILCOR First Aid Task Force Member
- Statements, opinions and recommendations contained in this program mine unless indicated.
- Participants must use discretion and clinical reasoning when using the information contained in this presentation.



# Context



# Context



# Objective

Explore the use of infographics as learning tools, examine standard infographic types and investigate what comprises a powerful infographic for learning and how this medium can influence cardiopulmonary (CPR) and first aid education as an educational tool.

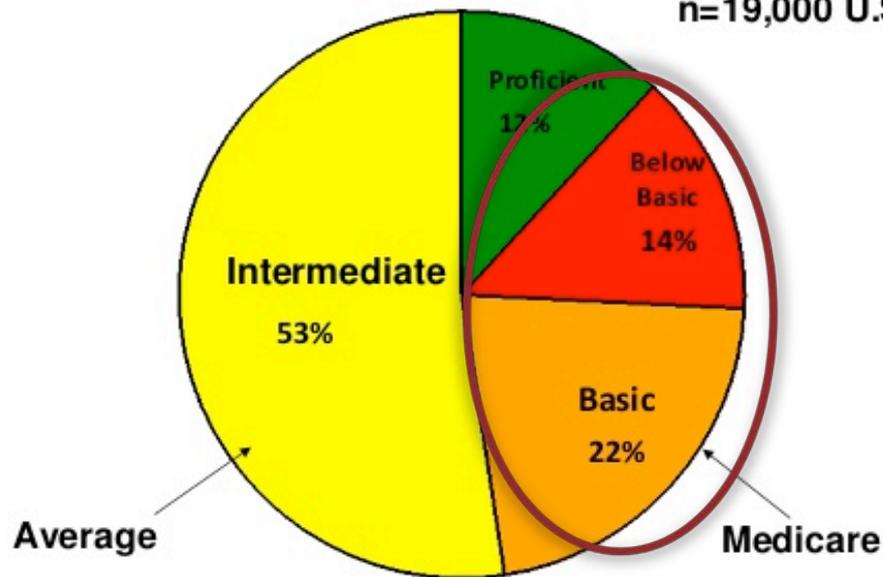




# Background

## Health Literacy Assessment

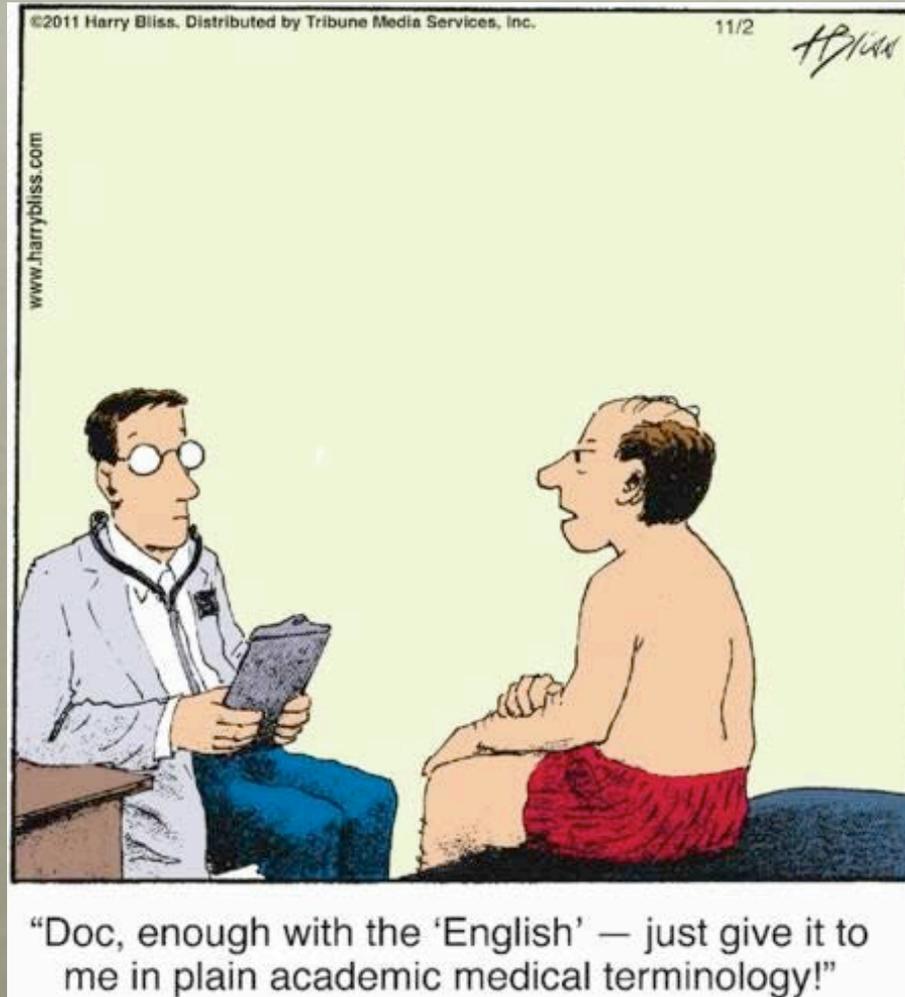
n=19,000 U.S. Adults



National Assessment of Adult Literacy (NAAL): National Center for Educational Statistics, U.S. Dept. of Education, 2003.

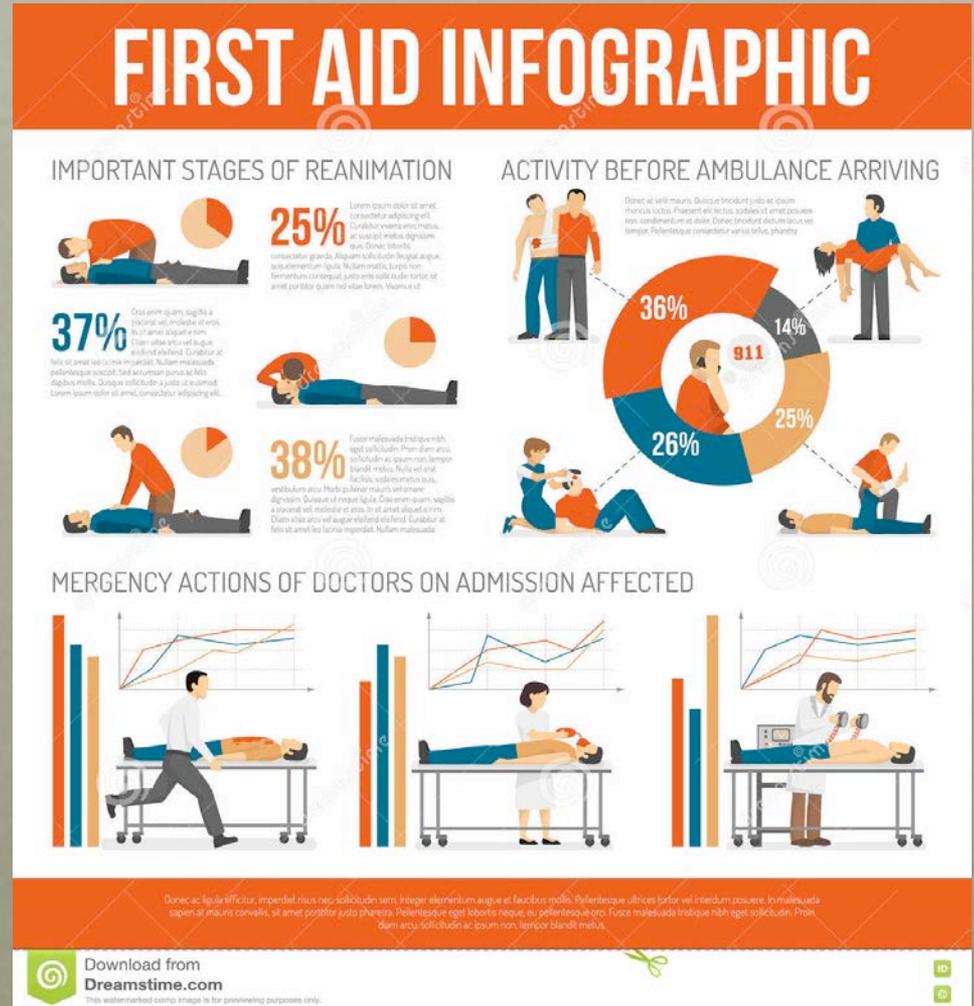
COOPERATIVE  
EXTENSION

# Background



# Infographics

**Prominent** visual representations of information intended to illustrate information **efficiently** and **effectively** using various visuals such as texts, pictures, drawings, diagrams, graphs, etc.





# Infographics

## HOW PREPARED ARE CANADIANS IN First - Aid



What We Can Learn & How We Can Improve

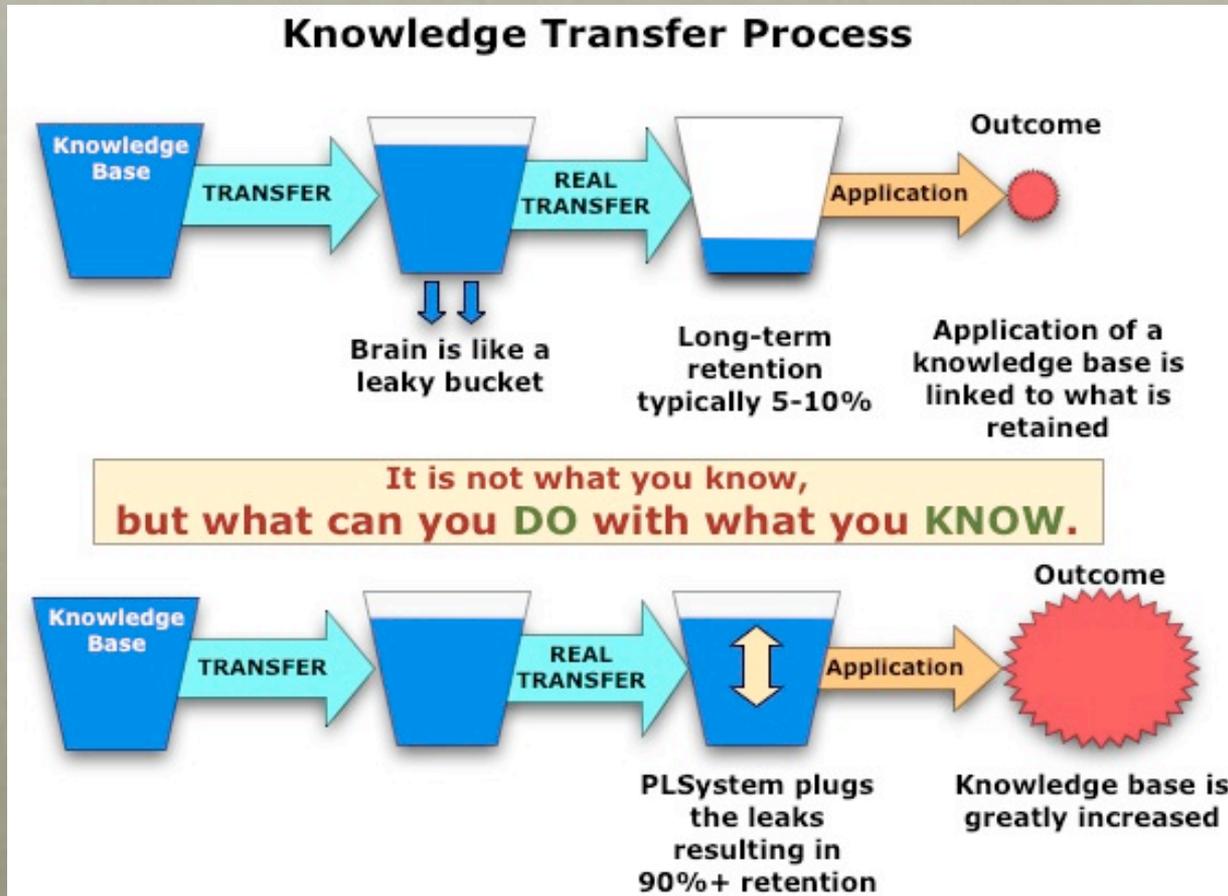


68 percent of Canadians say they can recognize the signs of a life-threatening health emergency, like choking or cardiac arrest, but fewer than half believe they have the skills to provide life-saving basic first aid.

Rex K. Infographics as teaching tools. Available at:

<https://www.insynctraining.com/external/BYTE/09062016/Geeky%20Girl%20Karin%20Rex%20Infographics%20BYTE%20Handout.pdf>

# Infographics



# So... what does the evidence show?

- Infographics and CPR; n=0
- Infographics and first aid; n=0
- Infographics and bleeding; n=0
- Infographics and tourniquets; n=0
- Infographics and shock; n=0
- Infographics and burns; n=0
- Infographics and asthma; n=0
- Infographics and diabetes; n=0



# So... what does the evidence show?

## Objective

Ahmed et al analyzed the content of *concussion-related* images and its accompanying meta-data on image-sharing social media platforms.



# So... what does the evidence show?

## Methods

Retrieved 300 images from Pinterest, Instagram and Flickr by using a standardized search strategy.

Images were screened and duplicate images were removed.



# So... what does the evidence show?

## Methods

**Table 1**  
Coding scheme, rationale, and categories generated.

Coding aspect	Rationale for inclusion	Categories generated
Type of image	To identify whether individuals are posting images of themselves, other individuals, or of other scenes.	Infographic/non-image; Image taken of another person(s) or a scene; Self-depiction ("selfie").
Primary content of image	To identify what was being posted in the images shared.	Injured individual (s); Un-injured individual (s); Object/product; Medical intervention taking place (e.g. neck collar, stretcher, hospital); Other.
Purpose of image	To identify why individuals were electing to share concussion-related images online.	Sharing a concussion-related incident; Dispensing concussion education; Display concussion-related advocacies/policies; Advertising a product; Display concussion management; Provide concussion-related news; Promote concussion-related research.
Information quality	To attempt to identify whether the overall message from the image reflected or contradicted best-practice concussion guidelines (SCAT3).	Reflecting best-practice concussion guidelines (SCAT3); Contrary to best-practice concussion guidelines (SCAT3); Not applicable.



# So... what does the evidence show?

## Results

176 images were included for analysis; 70 from *Pinterest*, 63 from *Flickr*, and 43 from *Instagram*.

Most were of another *person or a scene* (64%), with the primary content *depicting injured individuals* (39%).

Primary purposes of images were to *share a concussion-related incident* (33%) and to *dispense education* (19%).

Images where it could be evaluated, the majority (91%) were found to reflect the Sports Concussion Assessment Tool 3 (SCAT3) guidelines.



# So... what does the evidence show?

## Conclusion

The ability to rapidly disseminate rich information through photos, images, and infographics to a wide-reaching audience suggests that **image-sharing social media platforms could be used as an effective communication** tool for sports concussion.

Public health strategies could direct educative content to targeted populations via the use of image-sharing platforms.



# So... what does the evidence show?

## Objective

Wilkinson examined the presence of health behavior theory (HBT) constructs in pins found on Pinterest and assessed the relationship between various pin characteristics and the likelihood of inclusion of HBT.



# So... what does the evidence show?

## Methods

Content analysis focused on pins collected from Pinterest identified with the search terms "*nutrition infographic*" and "*healthy eating infographic*."

Coding rubric included HBT constructs, pin characteristics, and visual communication tools. Each construct was coded as **present** or **not present** (yes=1, no=0).



# So... what does the evidence show?

<b>Text<sup>h</sup></b>	
Text heavy (>50%)	109 (46.2)
Text light (<50%)	127 (53.8)
<b>Color<sup>i</sup></b>	
Vibrant	155 (65.7)
Muted	78 (33.1)
Black and white	1 (0.4)
<b>Person depicted</b>	
No person depicted	157 (66.2)
Cartoon	66 (27.9)
Photograph	14 (5.9)
<b>Food Depicted</b>	
No food depicted	15 (6.4)
Cartoon	126 (53.4)
Photograph	95 (40.3)
References <sup>j</sup>	100 (43.7)
Professional recommendation <sup>k</sup>	82 (34.8)



# So... what does the evidence show?

## Conclusion

Findings suggest that current Pinterest infographics targeting healthy eating *contain few HBT elements*.

Health professionals and organizations should create and disseminate infographics that *contain more elements of HBT* to better influence healthy eating behavior.

This may be accomplished by creating pins that use both text and images of people and food in order to portray elements of HBT and convey nutritional information.



# So...is an infographic the right medium to teach CPR and first aid concepts?

- Is the concept visual?
- Does it have a visual slant or a systems dynamic that can be conveyed in a visual way?
- Is the concept data-driven?
- Can a series of ideas and facts be used to tell an effective story?
- Is the topic focused enough for a single infographic?
- Have you chosen a topic that can be told in one image series or on a single page?

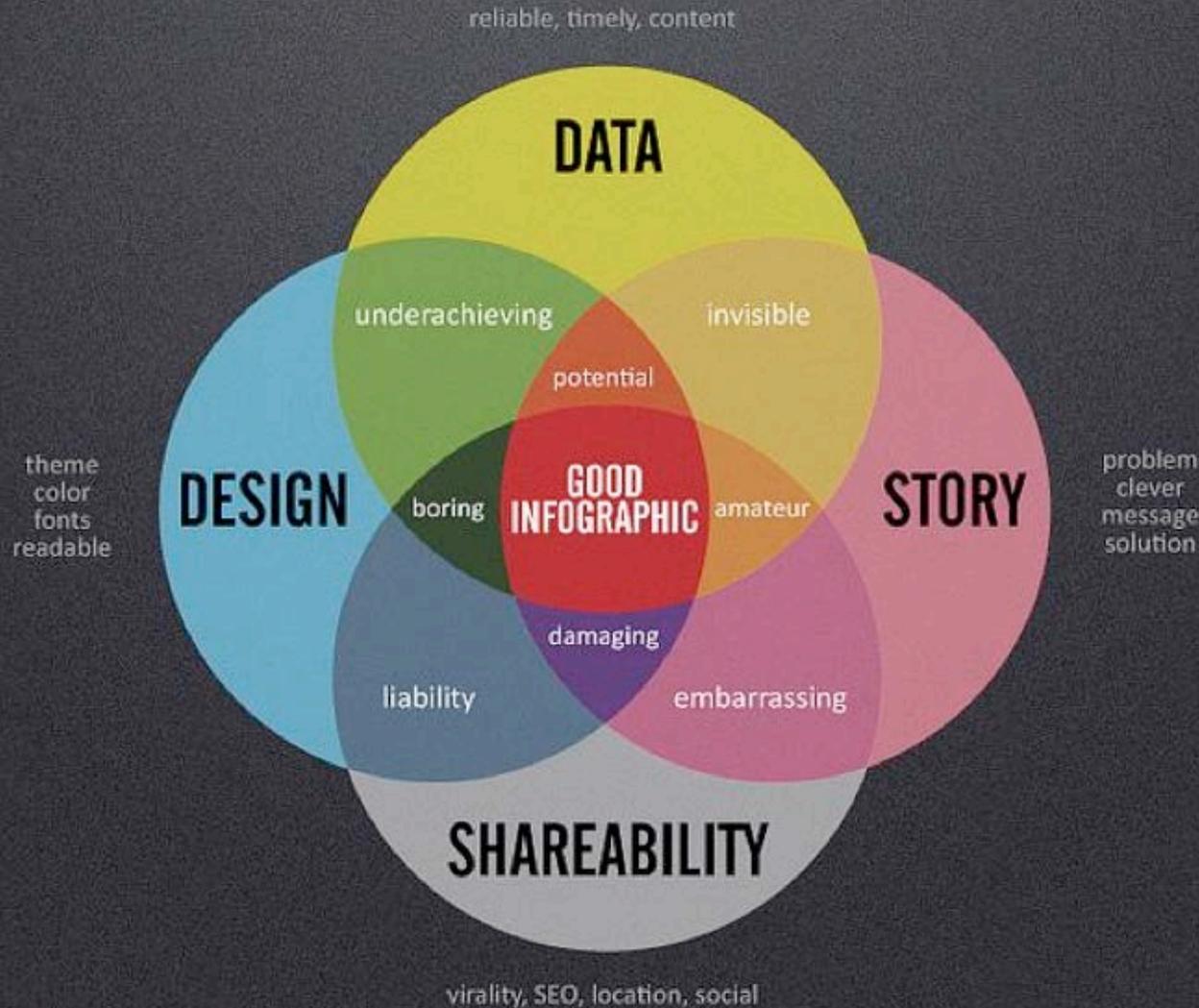


# So...what are the different types of infographics?

- Statistical infographics
- Timeline infographics
- Informational Infographics
- Process Information
- Gameboard metaphor
- Personal preference



# What Makes a Good Infographic?



Ching A. (n.d.) The Ultimate Guide to Link Building with Infographics. (<https://piktochart.com/blog/the-ultimate-guide-to-link-building-with-infographics/>)

Daniel Zeevi  
**DASHBURST**



# The Data

Infographics stand or fall on **SOLID DATA!**

*“As a reader, there’s nothing worse than looking at an infographic with a nice collection of facts and figures then scrolling to the bottom and finding out that the data was from 10 years ago.”*

**PANAHOON TV**

**Tag-init**  
Common Diseases

## HEAT STROKE

**TREATMENT**

- Remove unnecessary clothing, apply cool water to the skin and fan the person.
- Move the person to a shady spot or indoors and have him/her lie down with legs elevated.
- Apply ice packs to the armpits, wrists, ankles and groin.
- If able to drink liquids, have him/her sip cold water.

**HEAT STROKE** is a **medical emergency!**  
Bring the patient immediately to the hospital after instituting emergency measures.

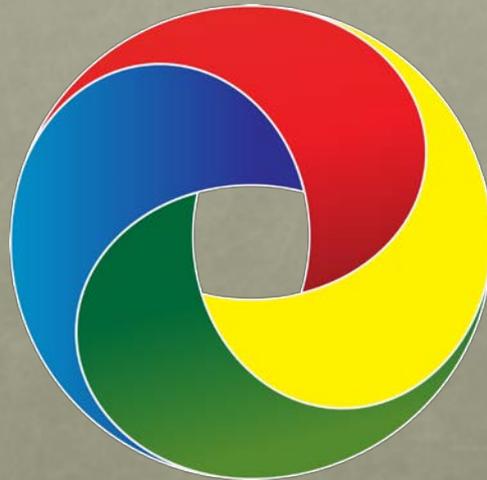
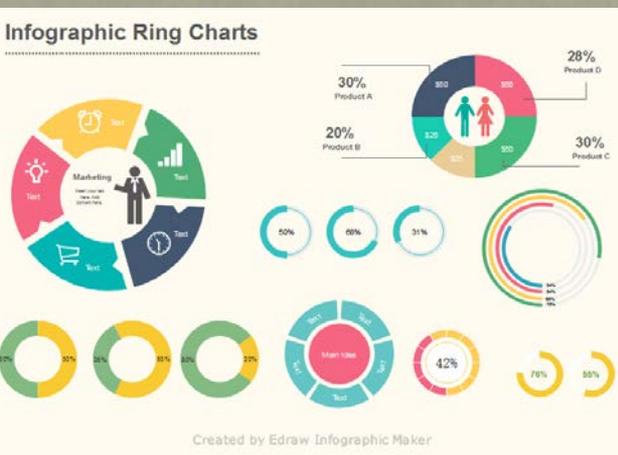
www.panahon.tv

Source: DOH



# The Graphics

- Turns all that data into something people want to view – the ‘**graphic**’ part of the infographic.
- Charts and graphs (called data visualization)
- Icons and vector art
- Clean photos and illustrations



# The Graphics

- Should work together to help highlight the main points of the data.
- Select the first image with care – it's like a visual headline for your infographic and could be a major factor in whether people look at the whole graphic and whether they share it.
- Make sure the flow of **images tells a story**.
- Keep the design **simple**, but harmonious.
- Think about what **colors** look good **together**, consider a color **palette** resource.
- Guide the reader among the different sections using colors, shapes, lines and arrows.



# WHAT TO KNOW ABOUT DENTAL INJURIES



Athletes who don't wear mouthguards are  
**1.6 - 1.9  
TIMES**  
more likely to sustain an oral or dental injury.

Treatment of dental and  
oral injuries can cost upwards of  
**\$ 15,000**  
over an individual's lifetime.

**APPROXIMATELY  
39%**  
of dental injuries in  
the United States are  
sports related.

The National Federation of State High School Associations  
requires fitted mouthguards for



*Mouthguards are only mandatory for wrestling if the athlete wears  
braces or an orthodontic device.*

**THE NATIONAL COLLEGIATE ATHLETIC  
ASSOCIATION REQUIRES FITTED MOUTHGUARDS  
FOR FIELD HOCKEY, FOOTBALL, ICE HOCKEY  
AND LACROSSE.**

**WEARING A MOUTHGUARD WILL NOT AFFECT  
AN ATHLETE'S ABILITY TO BREATHE.**

**! ATHLETES SHOULD WEAR A MOUTHGUARD**  
when participating in sports, even if it's not required.

## DENTAL INJURIES FALL INTO THREE CATEGORIES:



**A PROPERLY FITTED MOUTHGUARD CAN PROTECT**  
by splinting the teeth and dissipating energy.

**IF YOU SUSPECT A  
DENTAL  
OR ORAL  
INJURY**

**REPORT ANY  
DENTAL INJURIES  
TO YOUR ATHLETIC TRAINER,  
TEAM PHYSICIAN OR HEALTH  
CARE PROVIDER IMMEDIATELY.**

**A TOOTH COMPLETELY REMOVED FROM THE SOCKET**  
should be re-planted within 5-10 minutes or submerged in a  
storage medium, such as low-fat milk, until it can be replanted  
by a medical expert.

## MOUTHGUARD CARE TIPS

**CLEAN YOUR  
MOUTHGUARD**  
with lukewarm  
water and a mild  
antimicrobial  
agent before and  
after use.

**STORE YOUR  
MOUTHGUARD**  
in a clean,  
rigid, ventilated  
plastic container.

**DON'T  
EXPOSE YOUR  
MOUTHGUARD  
TO HEAT**  
sources or direct  
sunlight for long  
periods of time.

**EXAMINE YOUR  
MOUTHGUARD  
DAILY**  
for fit and any  
damage, such as tears  
or loss of resiliency.

**REPLACE  
YOUR  
MOUTHGUARD**  
if it is damaged or  
becomes loose.



# The Writing

- Data and images alone, **DON'T** tell the full story yet. There may not be a lot of words on an infographic, but every one **COUNTS**.
- The right words need to be selected:
  - Create headings and subheadings for infographic sections
  - Highlight interesting facts
  - Call out and caption data

**Do You Know Hands-Only CPR?**

If you see someone collapse, check the person's breathing. Someone who is not breathing and is unresponsive has gone into cardiac arrest. Hands-Only or compression only CPR can help save a life by keeping a person's blood pumping to the heart and brain until help arrives. **Do you know the two simple steps?**

**“**Knowing Hands-Only CPR is critically important for anyone over the age of 13. Most cardiac arrests occur in the home. You never know when these skills will be needed.”  
— Monique Anderson, MD, Duke cardiologist

**STEP 1:** Call 9-1-1. If you are with someone else, have that person call while you begin compressions.

**TIP: BE SPECIFIC**  
If you call 911 from a mobile phone, it's important to know your exact address, since your mobile number is not associated with a fixed location.

**STEP 2:** Push hard and fast in the center of the chest. The American Heart Association recommends making two-inch-deep compressions, pressing to the beat of the Bee Gees' song "Stayin' Alive."

**TIP: KEEP PUSHING: UNTIL HELP ARRIVES**  
Continue pushing hard and fast in the center of the chest until help arrives. If the person speaks, moves or breathes normally, you can stop.

**TIP: DON'T BE AFRAID TO HELP**  
Performing Hands-Only CPR can double a person's chance of surviving sudden cardiac arrest.

**WANT CPR ASSISTANCE AT YOUR FINGERTIPS?** Download the free Duke CPR by Duke Medicine app through the Apple Store. This app walks users through the steps for performing Hands-Only CPR. For more information about CPR training classes at Duke, call 919-219-8362.



# Sharing Your Infographic

When writing, or even if you just upload the infographic alone, a key point is to include the embed code that makes it easy for people to post the infographic on their own site.

This is how you build links back to your original post or your site.



<http://socialmarketingwriting.com/tips-sharing-infographic-facebook-twitter-pinterest-linkedin/>



Infographics don't format well on Facebook, which is unfortunate because it's so widely used. Here are a few tips to get your infographic noticed.



**UPLOAD**  
a screenshot of the most compelling part of your infographic

**WIDEN**  
your reach by mentioning or tagging any people or companies involved

**INCLUDE**  
a shortlink to the full infographic to drive traffic to your site

## TWITTER

Because Twitter is text-based, you obviously will have to tweet a link to your infographic. Here's how to cut through the clutter.

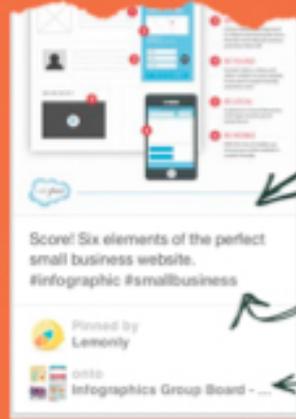


**LINK**  
Make your link a shortlink so you can track clicks and cut down on characters

**SIGNAL**  
that the link is an infographic by including either "[#infographic]" or "[INFOGRAPHIC]"

## PINTEREST

While Pinterest is purely visual, there are some tips to help your infographic get the repins it deserves.



**DESCRIBE**

what the infographic is about, but don't be boring. Add some character to gain even more repins and clicks

**TAG IT**

Like Twitter, use hashtags in your description

**WIDEN**

your graphic's reach by joining group boards

LinkedIn can be a very powerful tool to help reach targeted audiences in specific occupations.



**ADD SOME TEXT**

with the link to your infographic that demonstrates its value and how the reader will benefit from looking at the graphic.

# Sharing Your Infographic

- Submitting the infographic to an infographic directory
  - Wow Internet [lists](#) 43 free ones. You'll need that embed code and a short description. (Quicksprout [recommends](#) 150-300 words).
- Writing an [optimized press release](#) with a link back to your infographic blog post. Not only will this get the word out, but it's good for Search engine optimization (SEO), building links from Press Release Web (PRWeb) and others, and anywhere that republishes your release.
- Sharing the infographic via social media, using relevant hashtags to make it easier to find (including #infographic, of course). When sharing, don't forget **Pinterest** and **Reddit**, both of which have huge collections of infographics.
- Offer it for publication to authoritative blogs and sites in your niche (or upload it to a site like [MyBlogGuest](#) which has an infographics guest posting section).



# Sharing Your Infographic

- Extract key pieces of data and use them for other posts or social media updates.
- Contact the research sources cited in your infographic and let them know about it – they will probably be glad to share and this will bring you authoritative inbound links.
- Submit it to image directories, suggests [Quicksprout](#), for more link juice.



# Tracking and Follow-Up

- Set up tracking for the infographic landing page using analytic software and keep a check on where the traffic is coming from and who's referring people to your site.
- If you're not getting the results you expect, then check that it passes the quality test. See how it measures up against Kissmetrics' list of [19 Warning Signs that your Infographic Stinks](https://blog.kissmetrics.com/infographic-warning-signs/).

Neo Mammalian Studios, Duistermaa H. (n.d.). 19 Warning Signs Your Infographic Stinks. <https://blog.kissmetrics.com/infographic-warning-signs/>



# Principles of Infographic Design

## *Target Audience*

Providing context and removing technical jargon, ensure the work is accessible to the widest possible audience.



# Principles of Infographic Design

*Use a compelling title to attract readers.*

- Consider the “*breaking news headline*” of the research.
- Often the most impactful finding of the study, and is frequently shorter than the full article headline.

## CARDIAC ARREST VS. HEART ATTACK

People often use these terms interchangeably, but they are not the same.

### WHAT IS CARDIAC ARREST?

**CARDIAC ARREST** occurs when the heart malfunctions and stops beating unexpectedly.

Cardiac arrest is triggered by an electrical malfunction in the heart that causes an irregular heartbeat (arrhythmia). With its pumping action disrupted, the heart cannot pump blood to the brain, lungs and other organs.



Cardiac arrest is an “**ELECTRICAL**” problem.

### WHAT HAPPENS

Seconds later, a person becomes unresponsive, is not breathing or is only gasping. **Death occurs within minutes if the victim does not receive treatment.**

### WHAT TO DO

**CALL 9-1-1**  Cardiac arrest can be reversible in some victims if it's treated within a few minutes. First, call 9-1-1 and start CPR right away. Then, if an Automated External Defibrillator (AED) is available, use it as soon as possible. If two people are available to help, one should begin CPR immediately while the other calls 9-1-1 and finds an AED.

### CARDIAC ARREST is a LEADING CAUSE OF DEATH.

Nearly **360,000** out-of-hospital cardiac arrests occur annually in the United States



### WHAT IS A HEART ATTACK?

A **HEART ATTACK** occurs when blood flow to the heart is blocked.

A blocked artery prevents oxygen-rich blood from reaching a section of the heart. If the blocked artery is not reopened quickly, the part of the heart normally nourished by that artery begins to die.



A heart attack is a “**CIRCULATION**” problem.

### WHAT HAPPENS

Symptoms of a heart attack may be immediate and may include intense discomfort in the chest or other areas of the upper body, shortness of breath, cold sweats, and/or nausea/vomiting. More often, though, symptoms start slowly and persist for hours, days or weeks before a heart attack. Unlike with cardiac arrest, the heart usually does not stop beating during a heart attack. **The longer the person goes without treatment, the greater the damage.**



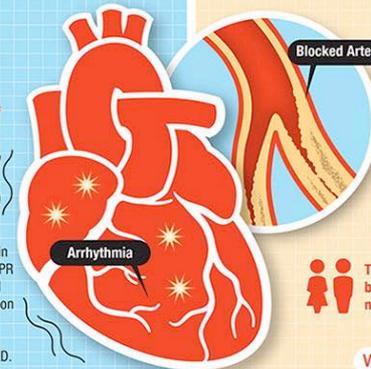
The heart attack symptoms in women can be different than men (shortness of breath, nausea/vomiting, and back or jaw pain).

### WHAT TO DO

**CALL 9-1-1** Even if you're not sure it's a heart attack, call 9-1-1 or your emergency response number. Every minute matters! It's best to call EMS to get to the emergency room right away. Emergency medical services staff can begin treatment when they arrive — up to an hour sooner than if someone gets to the hospital by car. EMS staff are also trained to revive someone whose heart has stopped. Patients with chest pain who arrive by ambulance usually receive faster treatment at the hospital, too.

### WHAT IS THE LINK?

Most heart attacks do not lead to cardiac arrest. But when cardiac arrest occurs, heart attack is a common cause. Other conditions may also disrupt the heart's rhythm and lead to cardiac arrest.



**CPR & First Aid**

Learn more about CPR or to find a course, go to [heart.org/cpr](http://heart.org/cpr)

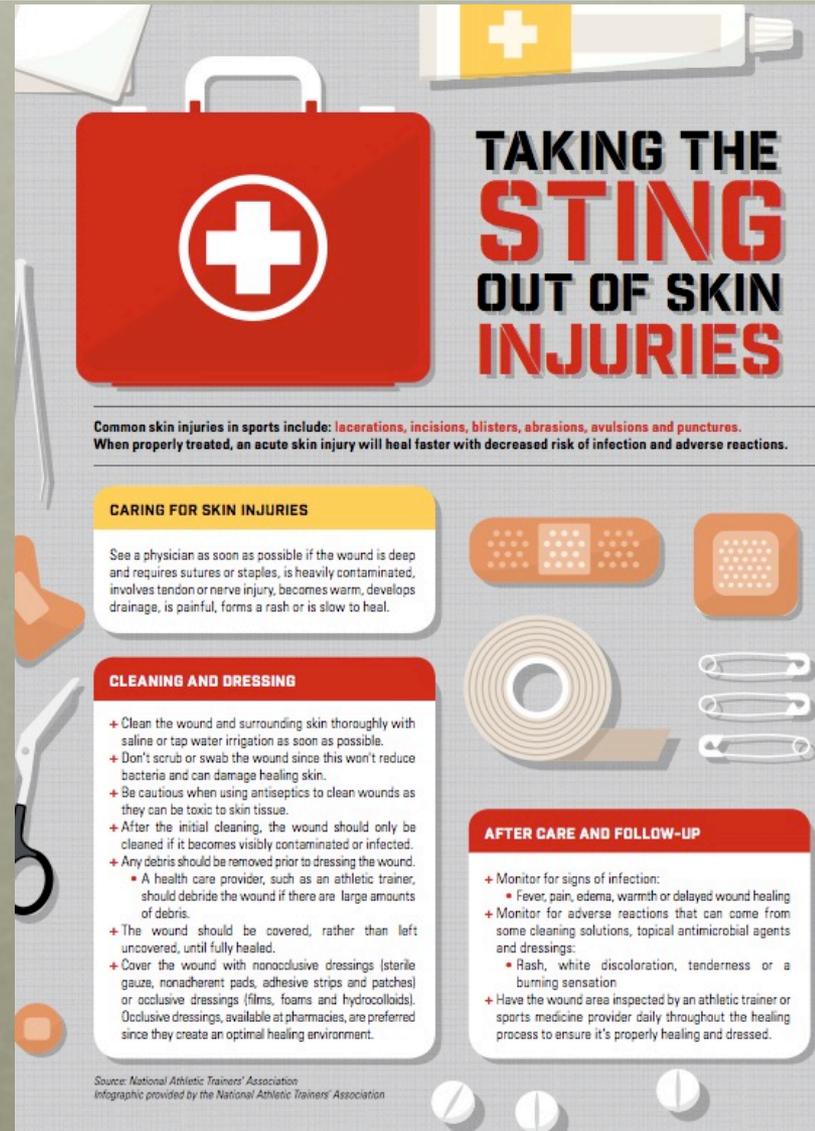


# Principles of Infographic Design

- A good title does 3 things.
  - Grabs people's attention.
  - Conveys core concept of infographic.
  - Includes priority keywords for optimization purposes.

Murray IR. Maximising the impact of your work using infographics. BJR. 2017;6(11):619-620.

DeMers J. (2013). The Definitive Guide to Writing and Promoting a Viral Infographic. SEJ. <https://www.searchenginejournal.com/the-definitive-guide-to-writing-and-promoting-a-viral-infographic/64733/>



# Principles of Infographic Design

## *Provide a Narrative*

Effective infographics frequently use lines and arrows to guide readers through the information on a graphic.



**STOP THE BLEED**

No matter how rapid the arrival of professional emergency responders, bystanders will always be first on the scene. A person who is bleeding can die from blood loss within five minutes, so it's important to quickly stop the blood loss.

Remember to be aware of your surroundings and move yourself and the injured person to safety, if necessary.

**Call 911.**

Bystanders can take simple steps to keep the injured alive until appropriate medical care is available. Here are three actions that you can take to help save a life:

- 1. Apply Pressure with Hands**  
EXPOSE to find where the bleeding is coming from and apply **FIRM, STEADY PRESSURE** to the bleeding site with both hands if possible.
- 2. Apply Dressing and Press**  
EXPOSE to find where the bleeding is coming from and apply **FIRM, STEADY PRESSURE** to the bleeding site with bandages or clothing.
- 3. Apply Tourniquet(s)**  
If the bleeding doesn't stop, place a tourniquet 2-3 inches closer to the torso from the bleeding. The tourniquet may be applied and secured over clothing.  
If the bleeding doesn't stop, place a second tourniquet closer to the torso from first tourniquet.

**PULL** the strap through the buckle, **TWIST** the rod tightly, **CLIP and SECURE** the rod with the clasp or the Velcro strap.

**2nd** **1st**

The "Stop the Bleed" campaign was initiated by a federal interagency workshop convened by the National Security Council Staff, The White House. The purpose of the campaign is to build national resilience by better preparing the public to save lives by taking immediate action to stop life-threatening bleeding following everyday emergencies and man-made and natural disasters. Advances made by military medicine and research in hemorrhage control during the wars in Afghanistan and Iraq have informed the work of this initiative which exemplifies translation of knowledge back to the homeland to the benefit of the general public. The Department of the Defense owns the "Stop the Bleed" logo and phrase - trademark pending.

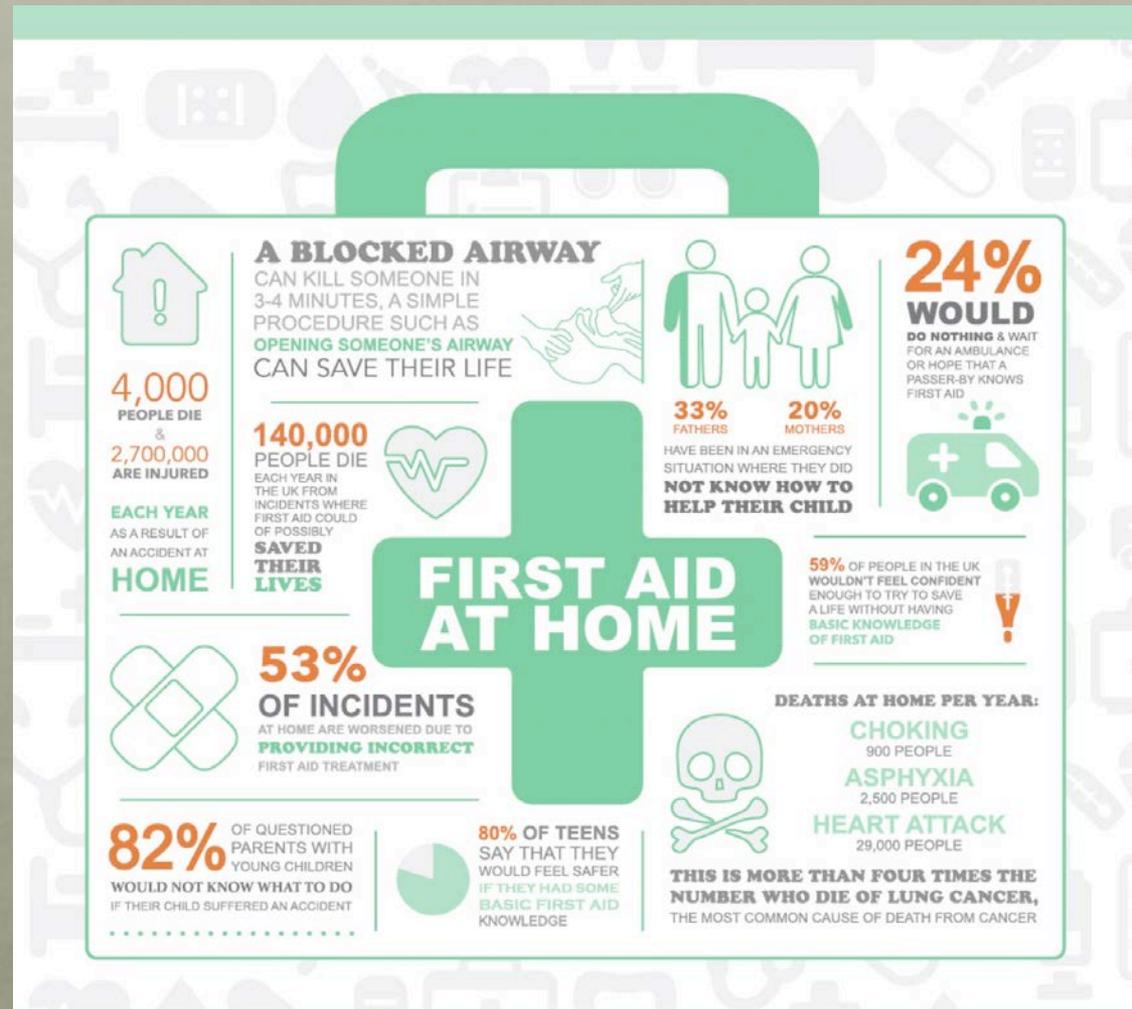
Homeland Security  
Office of Health Affairs



# Principles of Infographic Design

## *Provide a Narrative*

Having a clear start and end ensures that the readers process the information in the order you intend and make sure that no information is missing.



# Principles of Infographic Design

## *Provide a Narrative*

“**Nodes**” of information may relate to specific experiments or chapters in the research story.

### External Bleeding

**1. BARRIER**

- Put your safety first and ensure that you are not in danger.
- If available, wear protective examination gloves.
- If you do not have gloves, you should avoid direct contact with casualty's blood and use an improvised barrier.
- Create a barrier between yourself and the potential source of infection. This can be done by using gloves, or anything that may be available e.g. plastic bags.

REMEMBER TO CALL FOR AN AMBULANCE, DIAL 999/112

**2. LOCATE AND EXAMINE**

- Reassure the casualty.
- Assess the wound and source of the loss of blood.
- If necessary remove clothing from the casualty to confirm the source of blood loss.
- Check for foreign objects in the wound e.g. glass. If present it must stay in place and not be removed (see Dressing section).

**3. EXTERNAL DIRECT PRESSURE**

- Do not waste precious seconds by attempting to open and apply dressings at this stage.
- With your gloved hand apply external direct pressure to the wound.
- If a foreign object is present, you will have to apply pressure around the object.
- If appropriate, allow the casualty to apply external direct pressure with their free hands.
- If you have not done so already, ensure your casualty is sitting or lying down.

**4. ELEVATION**

- Whenever possible, the injured body part should be raised, if there are no embedded objects.
- Ideally, elevation particularly with regard to limbs should be above the heart.
- If dealing with the legs, the casualty should lie down with both legs elevated.
- The elevated limb may require support.

**5. DRESSING**

- Select a suitable sterile dressing from your first aid box.
- If the dressing is applied to a limb, check the circulation to the hand or foot to ensure the dressing has not been tied too tightly.
- Apply a dressing directly to the wound and bandage it firmly in place.
- Whilst keeping the injury elevated watch for any signs of blood seeping through the dressing.
- If blood seeps through the dressing apply a 2nd dressing on top of the first dressing. If blood seeps through the second dressing, remove both and apply a new dressing.
- If there is a foreign object in the wound leave it in place and build the dressing around the object. Do not apply pressure directly. Call 999 for major bleeds.

**NB - Do not use a tourniquet to prevent blood loss.**

**6. BLOOD AND BODY FLUID CLEAN-UP**

The following precautions should be carried out at all times where a first aider comes into contact with blood or bodily fluids.

- Intact skin is a good barrier to infection, however the first aider should make sure all cuts or open areas are covered.
- If you have accidentally come into contact with blood wash the area with soap and water, seek medical advice.
- If blood has splashed in your eyes or in an open wound / needlestick injury / punctured skin rinse thoroughly with water or eyewash, seek medical advice.
- Should you have any concerns discuss these with your Doctor or Occupational Health Department.



# Principles of Infographic Design

## *Provide a Narrative*

“**No text test**” can be used to establish whether the key messages are conveyed when the text is removed.



wiki How to Treat Severe Bleeding During First Aid



# Principles of Infographic Design

*Emphasize key messages.*

**Key messages** can be prioritized by increasing the size of the relevant component as well as increasing text size and using striking colors.



# Principles of Infographic Design

*Emphasize key messages.*

Like traditional abstracts, infographics are used to provide an overview of research, but are not intended to be a substitute for reading a full research paper.

## First aid for burns

### chemical burn

**Remove the chemical causing the burn** while protecting yourself. For dry chemicals, brush off any remaining material. Wear gloves or use a towel or other suitable object, such as a brush.

**Remove contaminated clothing or jewelry** to prevent further burning.

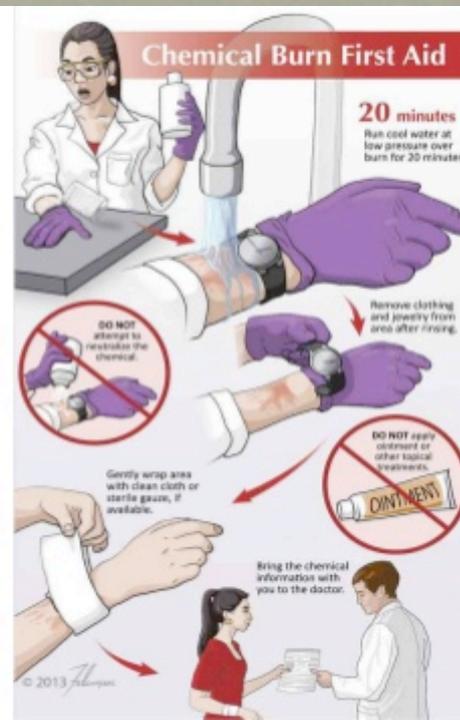
**Rinse the burn immediately.** Run a gentle, steady stream of cool tap water over the burn for 10 or more minutes. A shower may be an effective way to do this. Always protect your eyes.

**Loosely apply a bandage or gauze.**

**If needed, take an over-the-counter pain reliever,** such as ibuprofen (Advil, Motrin IB, others), naproxen sodium (Aleve) or acetaminophen (Tylenol, others).

**Don't try to neutralize the burn with acid or alkali. This could cause a chemical reaction that worsens the burn.**

**Don't put antibiotic ointment on the burn.**



# Principles of Infographic Design

## *Balance Images, Charts and Text.*

It is important to balance data visualization's, images and words.

Try to limit text to striking titles, brief annotations and bullet points.

In general, text-light, image-dense infographics are most successful.



Lyra KT, Isotani S, Reis RC, et al. Infographics or Graphics and Text: Which Material is Best for Robust Learning? [abstract]. Proceedings of the IEEE International Conference on Advanced Learning Technologies (ICALT), 2016.

Stones C, Gent M. 7 G.R.A.P.H.I.C. Principles of public health infographic design [http://www.improvementacademy.org/documents/Projects/air\\_quality/The%207%20Graphic%20Principals%20of%20Public%20Health%20Infographic%20Design.pdf](http://www.improvementacademy.org/documents/Projects/air_quality/The%207%20Graphic%20Principals%20of%20Public%20Health%20Infographic%20Design.pdf). (date last accessed 23 October 2017).

Did you know...

Epinephrine is a drug form of adrenaline that opens the airways, improves blood pressure and accelerates the heartrate.

# Going into shock

Ah, summer. One minute you're outside enjoying a barbecue with friends, the next you're fending off bees. For most people, a bee sting is merely a painful annoyance. For those with severe allergies, however, one sting is all it takes to send them into a potentially fatal anaphylactic shock.

**What is it?**

Anaphylaxis is a severe allergic reaction that can occur within seconds of exposure.

**Consequences**

If anaphylaxis isn't treated right away, it can lead to unconsciousness or even death. It requires an immediate trip to the emergency department and an injection of epinephrine.

**Common triggers**

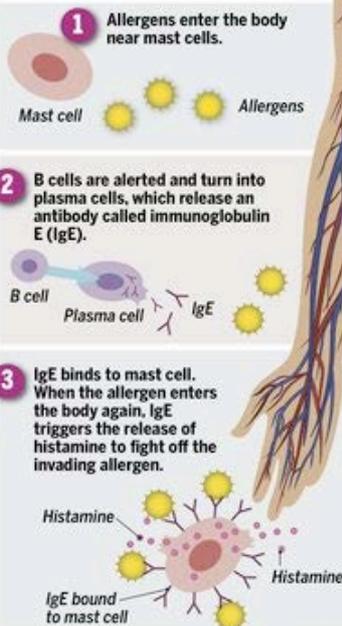
Peanuts, tree nuts, sesame seeds, soy, milk, eggs, seafood, mustard, wheat and sulphites. Other known triggers are insect stings, certain medicines, latex, and exercise.

**Allergic reactions**

Anaphylaxis is the result of your body's immune system severely overreacting to a harmless substance.

Substances that provoke allergic reactions are known as allergens.

When a person is exposed to that allergen, it mistakenly thinks the substance is harmful:



**Anaphylaxis: Signs and symptoms**

May begin with severe itching of the eyes or face and, within minutes, progress to more serious symptoms.

**Central nervous system:**

- Lightheadedness
- Confusion
- Headache
- Loss of consciousness
- Anxiety

Swelling of the conjunctiva (inside of eyelids and covering whites of eyes)

Runny nose

Swelling of lips, tongue or throat

**Respiratory:**

- Shortness of breath
- Wheezing or stridor (high-pitched sound when breathing)
- Hoarseness
- Pain when swallowing
- Coughing

**Heart and vasculature:**

- Fast or slow heart rate
- Low blood pressure

**Skin:**

- Hives
- Flushing
- Itching

**Gastrointestinal**

- Crampy abdominal pain
- Diarrhea
- Vomiting

**Pelvic pain**

- Loss of bladder control

**The most dangerous symptoms (can lead to death if untreated):**

**Trouble breathing (caused by swelling of the airways)**

**A drop in blood pressure (causes dizziness, lightheadedness, feeling faint or weak, or passing out)**

**If you have symptoms of anaphylaxis, seek emergency medical attention immediately**

**Emergency steps**

Give epinephrine (e.g. EpiPen) at the first signs of an allergic reaction.

Call 911 and tell them that someone is having an anaphylactic reaction.

If the reaction continues or gets worse, give a second dose

of epinephrine in 5-15 minutes.

Get the patient to the nearest medical centre immediately (ideally by ambulance), even if symptoms are mild or have stopped. The reaction could get worse or come back after using epinephrine.

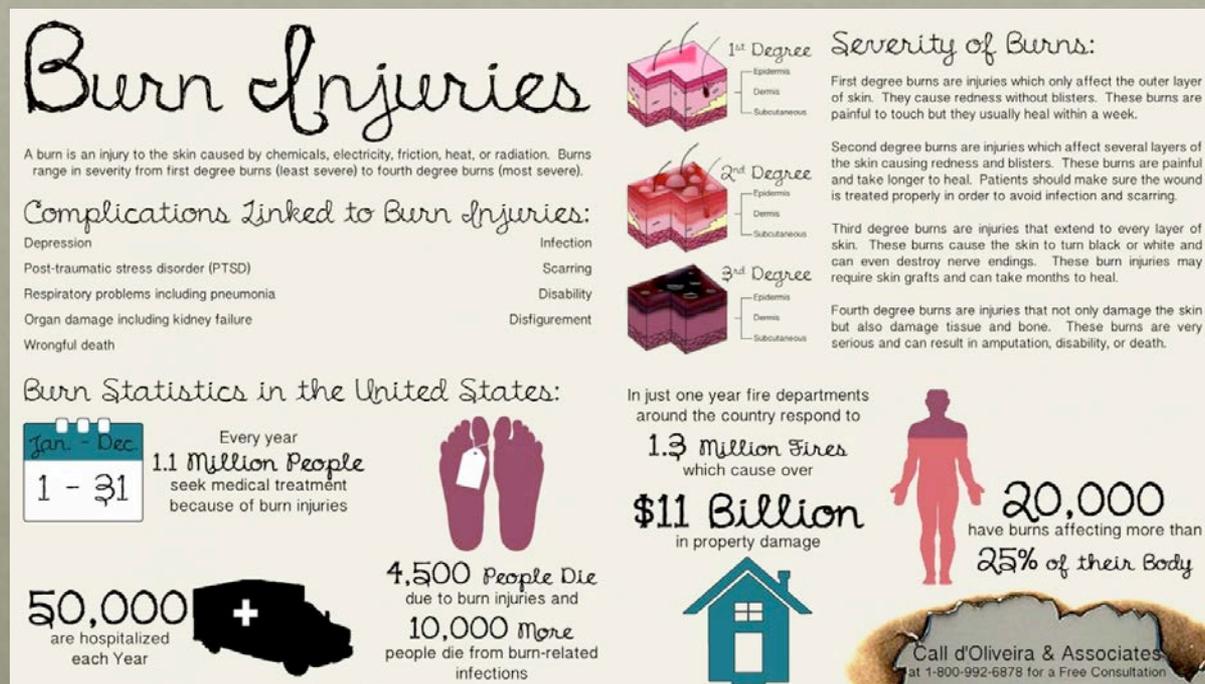
Sources: WebMD; Anaphylaxis Canada; health.ca; Fotolia  
SUSAN BATSFORD, GRAPHICS EDITOR, TWITTER @SBATSI; INFOGRAPHIC BY MEGAN DINNEN/QMI AGENCY



# Principles of Infographic Design

*Limit the Number of Colors and Fonts.*

Use three to five complementary color's and limit the number of font types to a maximum of three.



# Conclusion

- Infographics can be a powerful educational tool to influence CPR and first aid education as a educational tool by
  - (1) communicating a consistent message
  - (2) presenting a lot of data or information in a way that is compact and easy to comprehend
  - (3) analyzing data in order to discover cause-and-effect relationships
  - (4) periodically monitor the route of specific parameters



# QUESTIONS??????



# Thank you!!!

For more information- please contact David Berry, PhD, AT, ATC

[dcberry@svsu.edu](mailto:dcberry@svsu.edu)

989-964-4504 (O)

