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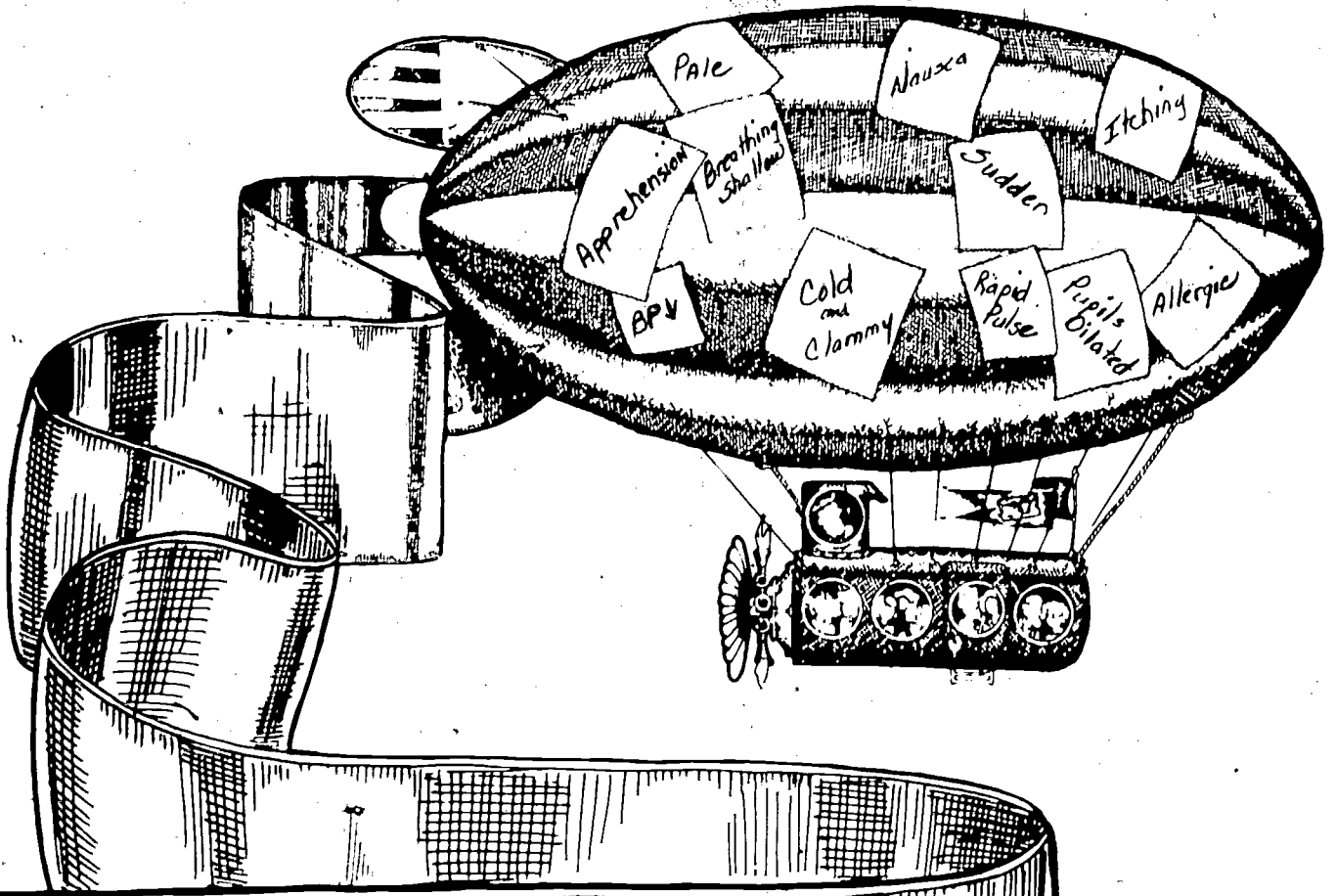
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ABSTRACT

This learning activity package on shock and anaphylactic shock is one of a series of 12 titles developed for use in health occupations education programs. Materials in the package include objectives, a list of materials needed, information sheets, reviews (self evaluations) of portions of the content, and answers to reviews. These topics are covered: causes of shock, signs and symptoms of shock, treatment objectives, sudden or anaphylactic shock, causes of anaphylactic shock, and signs and symptoms of anaphylactic shock. (YLB)

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# SHOCK & ANAPHYLACTIC SHOCK

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Wilson Riles, Superintendent of Public Instruction  
Sacramento, 1982

# **SHOCK & ANAPHYLACTIC SHOCK**

PREPARED BY  
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1982

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**OBJECTIVES:**

AFTER YOU COMPLETE THIS LAP, YOU WILL BE ABLE TO DO THE FOLLOWING:

1. NAME THE THREE MAJOR CAUSES OF SHOCK.
2. LIST THE EIGHT SIGNS AND SYMPTOMS OF SHOCK.
3. LIST THE FOUR MAJOR CAUSES OF ANAPHYLACTIC SHOCK.
4. NAME SIX SIGNS AND SYMPTOMS OF ANAPHYLACTIC SHOCK.
5. NAME ONE DRUG USED IN THE TREATMENT OF ANAPHYLACTIC SHOCK.

**MATERIALS NEEDED:**

1. PENCIL OR PEN
2. WORK SHEET\*

\*BEFORE BEGINNING THE LAP, PICK UP THE WORK SHEET FROM THE INSTRUCTOR.

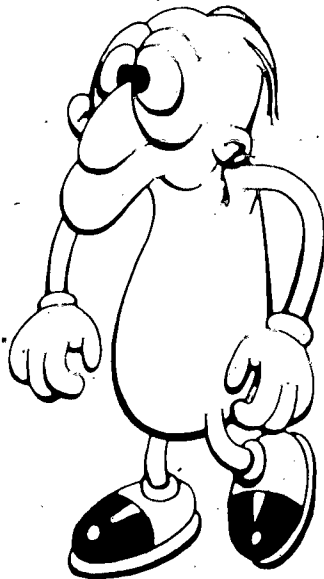
You have discovered your specialty:

**CARING FOR PEOPLE**

# SHOCK

2

## What is it?



SHOCK IS A TERM WHICH IS USED TO DESCRIBE A CONDITION THAT MAY FOLLOW VIOLENCE AND MILD OR SERIOUS INJURY.

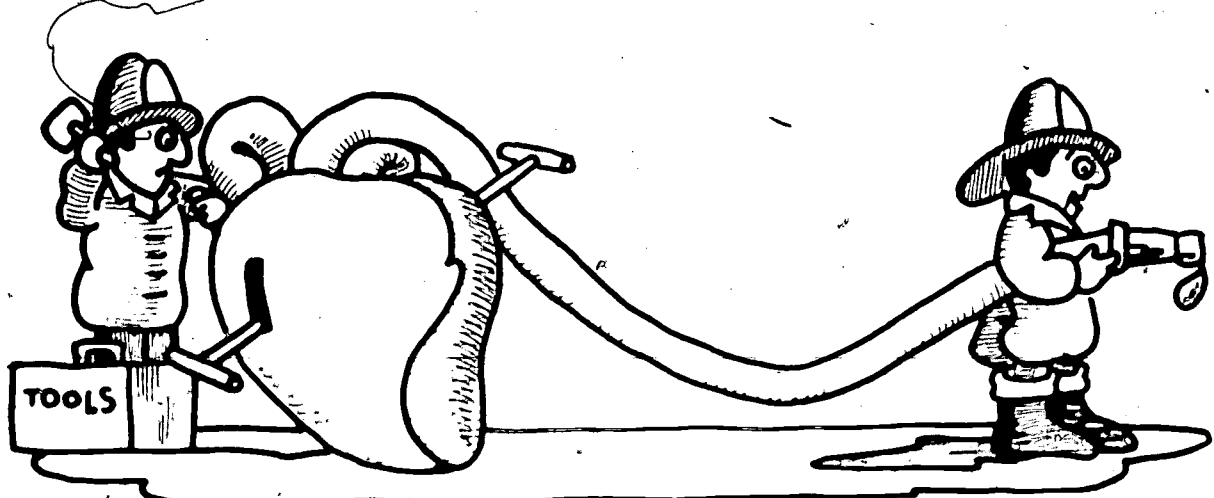
SHOCK IS A CONDITION OF GREATEST WEAKNESS OF THE BODY.

SHOCK IS A LACK OF BLOOD CIRCULATING THROUGH THE BODY.

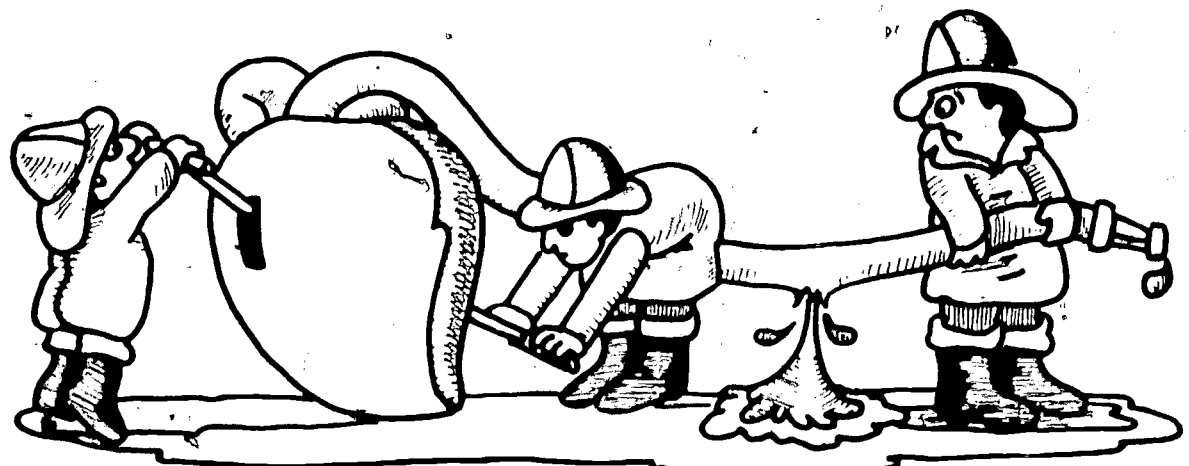
## SHOCK IS CAUSED BY THE FOLLOWING:

1. BLOOD VESSELS DILATING SO WIDELY (PERIPHERAL VASCULAR COLLAPSE) THAT THE BLOOD SUPPLY FAILS TO FILL THE CIRCULATORY SYSTEM COMPLETELY
2. LOSS OF BLOOD
3. THE HEART'S FAILURE TO CIRCULATE THE BLOOD PROPERLY

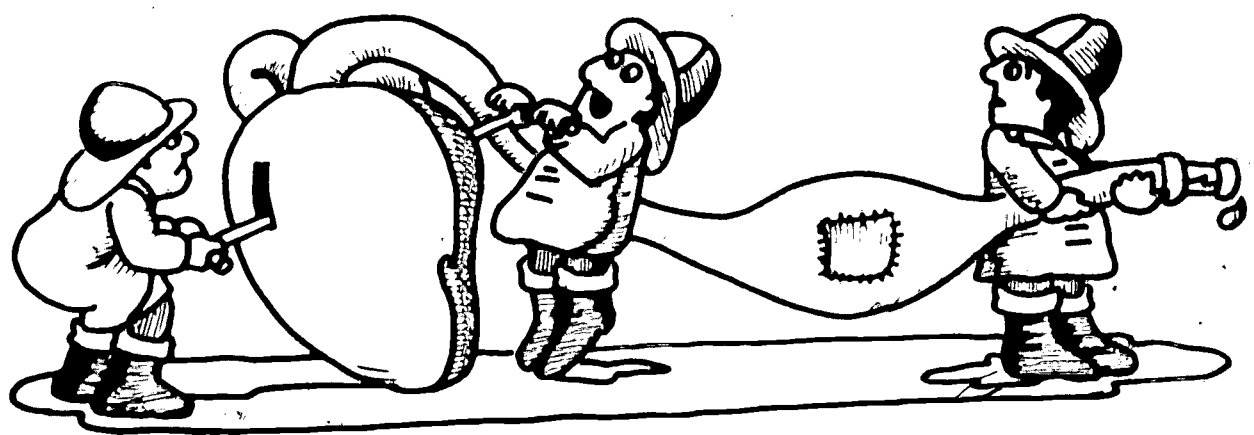
AGAIN THE CAUSES:



**PUMP FAILURE**



**FLUID LOSS**



**PERIPHERAL VASCULAR COLLAPSE**



WHAT HAPPENS TO THE BODY WHEN SHOCK OCCURS?

1. THE BODY HAS A WONDERFUL MECHANISM FOR CLOSING OFF BLOOD VESSELS TO THOSE AREAS WHICH DO NOT NEED BLOOD URGENTLY, SUCH AS SKIN AND MUSCLES, THUS SAVING BLOOD FOR IMPORTANT ORGANS LIKE THE HEART AND BRAIN.

2. IF A PERSON DEVELOPS SHOCK AND STAYS IN SHOCK, DEATH MAY RESULT, EVEN THOUGH THE INJURY THAT CAUSED SHOCK MAY NOT BE FATAL.

3. SHOCK SHOULD BE **ANTICIPATED.**

4. **PREVENTION** IS BEST REMEDY.



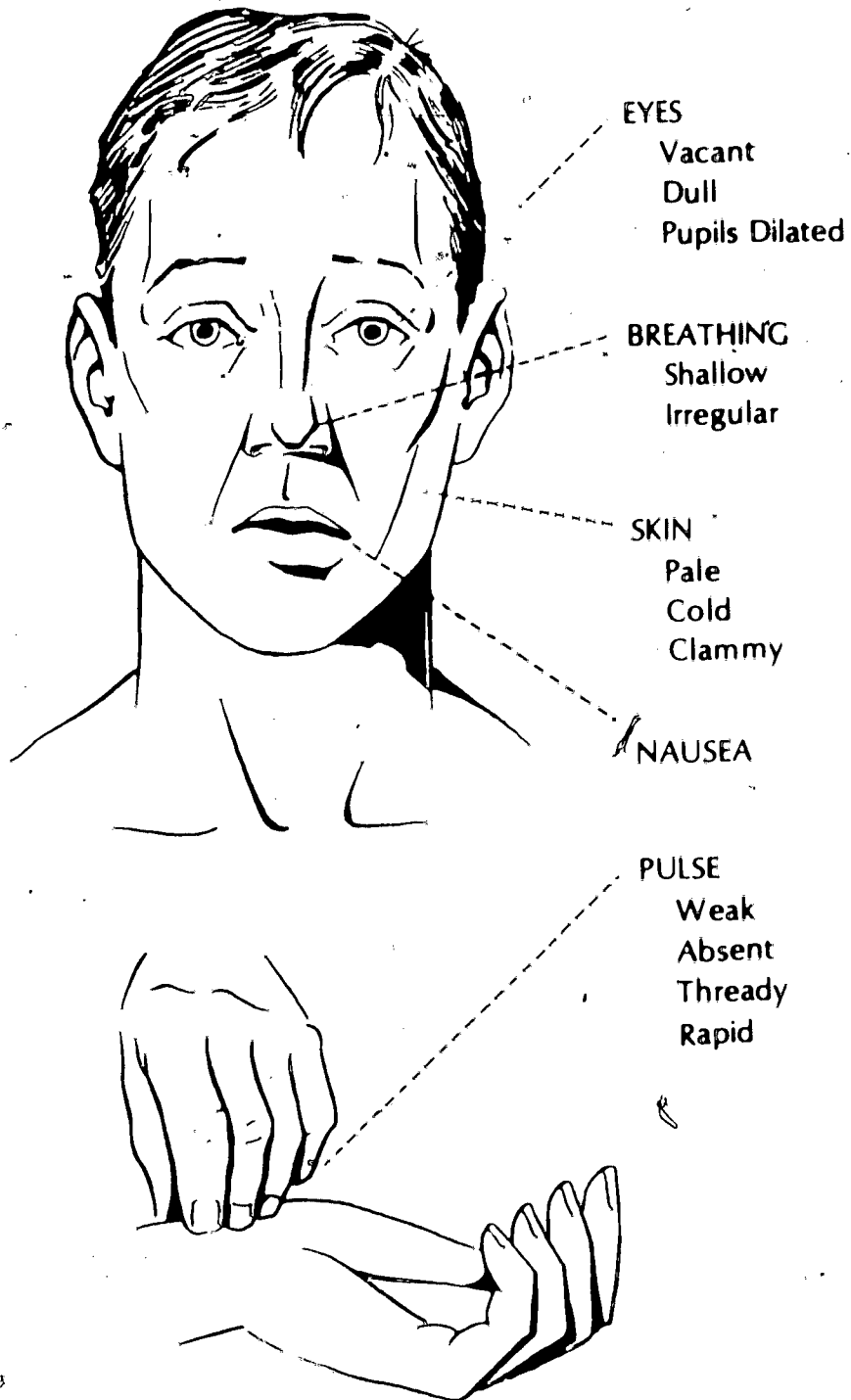
## SIGNS AND SYMPTOMS OF SHOCK ARE AS FOLLOWS:

1. RAPID, WEAK PULSE--HEART IS BEATING VERY FAST TO KEEP ENOUGH BLOOD PUMPING THROUGH THE BODY
2. COOL, PALE, CLAMMY SKIN--BLOOD IS BEING HELD INTERNALLY FOR THE VITAL ORGANS OF THE BODY
3. EXCESSIVE THIRST--FROM RAPID LOSS OF FLUID
4. RESTLESSNESS AND APPREHENSION, WHICH LATER DEVELOPS INTO MENTAL CONFUSION, APATHY, AND UNCONSCIOUSNESS--LACK OF OXYGEN DUE TO DECREASED CIRCULATION
5. SHALLOW AND IRREGULAR BREATHING--LACK OF OXYGEN DUE TO DECREASED CIRCULATION
6. VACANT, DULL EYES--A SIGN OF DECREASED CIRCULATION
7. NAUSEA AND VOMITING
8. PUPILS DILATED--A SIGN OF DECREASED CIRCULATION

SYMPTOMS OF SHOCK MAY  
INCLUDE SOME OR ALL  
OF THE ABOVE!!!

# REMINDER

LOOK FOR THESE SIGNS!



REVIEW I.

1. NAME THE THREE MAJOR CAUSES OF SHOCK.

2. SHOCK SHOULD BE

3. IS THE BEST REMEDY.

4. LIST THE SIGNS AND SYMPTOMS OF SHOCK.

- A.
- B.
- C.
- D.
- E.
- F.
- G.
- H.

# Don't get stuck...



CHECK THE ANSWERS ON THE NEXT PAGE.

ALL CORRECT?

YOU ARE DOING GREAT!!!!!!

CONTINUE ON

IF YOU MISSED SOME ANSWERS, REVIEW IS NECESSARY.

REVIEW I. ANSWER KEY:

1.
  - A. BLOOD VESSELS ARE DILATED SO THAT THE BLOOD SUPPLY FAILS TO FILL THE SYSTEM (PUMP FAILURE).
  - B. THERE IS BLOOD LOSS (FLUID LOSS).
  - C. THE HEART FAILS TO CIRCULATE THE BLOOD (PERIPHERAL VASCULAR COLLAPSE).
2. ANTICIPATED
3. PREVENTION
4.
  - A. RAPID, WEAK PULSE
  - B. COOL, PALE, CLAMMY SKIN
  - C. EXCESSIVE THIRST
  - D. APPREHENSION
  - E. SHALLOW, IRREGULAR BREATHING
  - F. NAUSEA AND VOMITING
  - G. VACANT, DULL EYES
  - H. PUPILS DILATED


- 0 TO IMPROVE CIRCULATION OF THE BLOOD
- 0 TO ENSURE AN ADEQUATE SUPPLY OF OXYGEN
- 0 TO MAINTAIN NORMAL BODY TEMPERATURE



Treatment for shock takes priority over all other emergency care measures except for the correction of breathing problems, the re-establishment of circulation, and the control of bleeding.

### CARE FOR THE WHOLE PATIENT

#### 1. ENSURE ADEQUATE BREATHING.



If the patient is breathing, maintain an adequate airway by properly positioning his or her head. If the patient is not breathing, establish an airway and restore breathing through some means of pulmonary resuscitation. If both respiration and circulation have stopped, institute cardiopulmonary resuscitation.

#### 2. CONTROL BLEEDING.

If the patient has external bleeding, apply direct pressure to the wound.

3. ADMINISTER OXYGEN AS DIRECTED BY IMMEDIATE SUPERVISOR.

REMEMBER THAT OXYGEN DECREASES AS A RESULT OF REDUCED CIRCULATION.

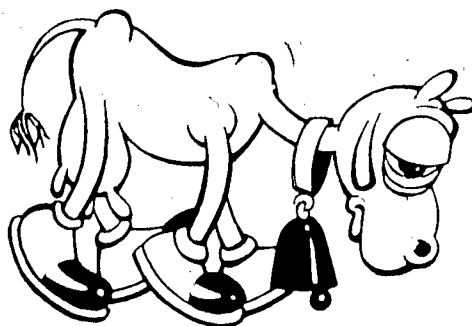
4. ELEVATE THE LOWER EXTREMITIES.

Since blood flow to the heart and brain may have been diminished, circulation can be improved by raising the legs slightly. It is NOT recommended that the entire body be tilted down at the head, since the abdominal organs pressing against the diaphragm may cause breathing difficulty. Exceptions to the rule of raising the feet are cases of head and chest injuries.

Whenever there is any doubt as to the best position, the patient may be laid flat without harmful effects.

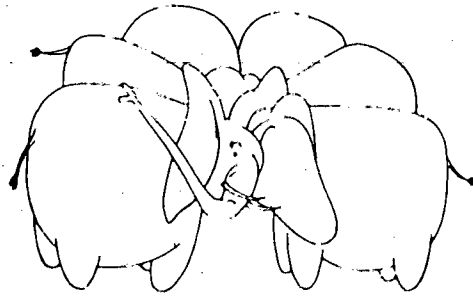
5. AVOID ROUGH HANDLING.

Handle the patient as gently and as little as possible. Body motion has a tendency to aggravate shock conditions.



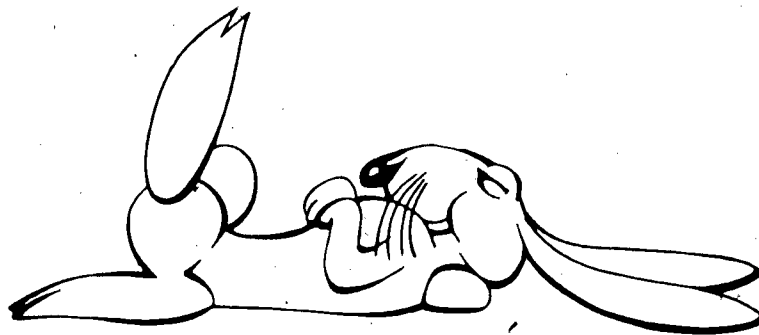
## 6. PREVENT THE LOSS OF BODY HEAT.

Keep the patient warm, but guard against overheating, which can aggravate shock. Remember to place a blanket under the patient as well as over him or her to prevent loss of heat.



## 7. KEEP THE PATIENT LYING DOWN.

This practice avoids overworking the circulatory system at a time when it should be at rest. However, some patients with heart disorders will have to be moved in a semisitting position.



## 8. GIVE NOTHING BY MOUTH.

The patient may choke on anything given orally.



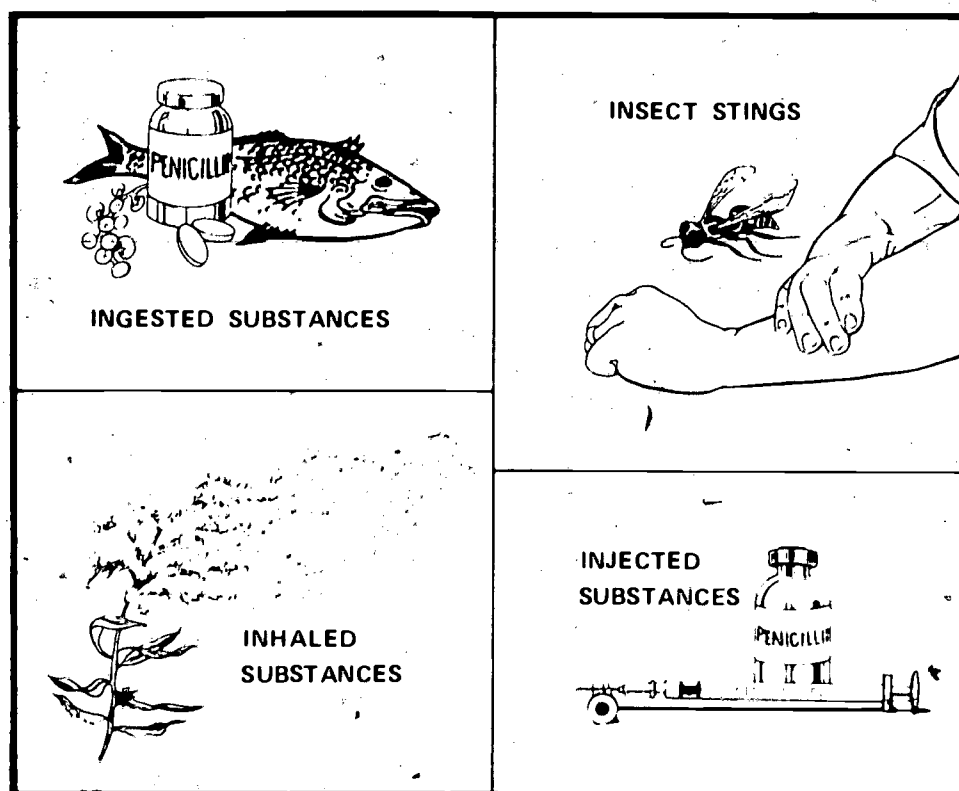
# SUDDEN SHOCK or ANAPHYLACTIC SHOCK

ANAPHYLACTIC SHOCK IS CONSIDERED A TRUE EMERGENCY. ANAPHYLACTIC REACTIONS OCCUR WHEN A PERSON COMES IN CONTACT WITH SOMETHING TO WHICH HE OR SHE IS VERY ALLERGIC.

LISTED BELOW ARE SOME OF THE SUBSTANCES THAT CAN CAUSE A VIOLENT ALLERGIC REACTION IN A SENSITIZED PERSON

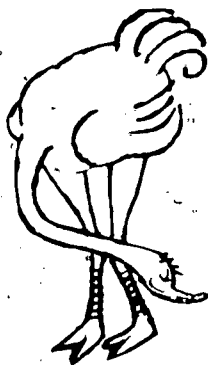
- 0 INSECT STINGS: BEES, YELLOW JACKETS, WASPS, AND HORNETS
- 0 INGESTED SUBSTANCES: CERTAIN FISH, SHELLFISH, BERRIES, AND ORAL DRUGS SUCH AS PENICILLIN
- 0 INHALED SUBSTANCES: DUST AND POLLEN
- 0 INJECTED SUBSTANCES: DRUGS SUCH AS PENICILLIN

## CAUSES OF ANAPHYLACTIC SHOCK



THE HEALTH PROFESSIONAL SHOULD BE AWARE THAT AN ANAPHYLACTIC REACTION MAY OCCUR WITHIN A FEW SECONDS AFTER EXPOSURE TO AN ALLERGIC SUBSTANCE. THUS, PROMPT RECOGNITION AND TREATMENT OF THE PROBLEM ARE OF VITAL IMPORTANCE.

YOU'RE ALMOST THERE...



## SIGNS AND SYMPTOMS OF ANAPHYLACTIC SHOCK

- o ITCHING OR BURNING SKIN, ESPECIALLY ABOUT THE CHEST AND FACE (FACE AND NECK MAY LOOK FLUSHED)
- o HIVES OVER AREAS OF THE BODY
- o SWELLING OF THE FACE AND TONGUE
- o CYANOSIS VISIBLE AT THE LIPS (BLUE COLOR)
- o TIGHTENING OR PAIN IN THE CHEST, WHEEZING, AND DIFFICULTY IN BREATHING
- o WEAK PULSE, DIZZINESS, AND FAINTNESS OR EVEN COMA

ANAPHYLACTIC SHOCK IS A TRUE EMERGENCY BECAUSE IT REQUIRES INJECTION OF MEDICATION TO COMBAT THE ALLERGIC REACTION. INITIAL EMERGENCY CARE SHOULD BE DIRECTED TOWARDS LIFE SUPPORT.

GET THE PATIENT TO A HOSPITAL IMMEDIATELY. PROVIDE LIFE-SUPPORT MEASURES AS REQUIRED. INCLUDE CPR, GIVE OXYGEN, AND TREAT FOR SHOCK.

THE TREATMENT IS THE SAME FOR SHOCK AS WELL AS ANAPHYLACTIC SHOCK WITH ONE EXCEPTION---MEDICATION HAS TO BE GIVEN IMMEDIATELY.

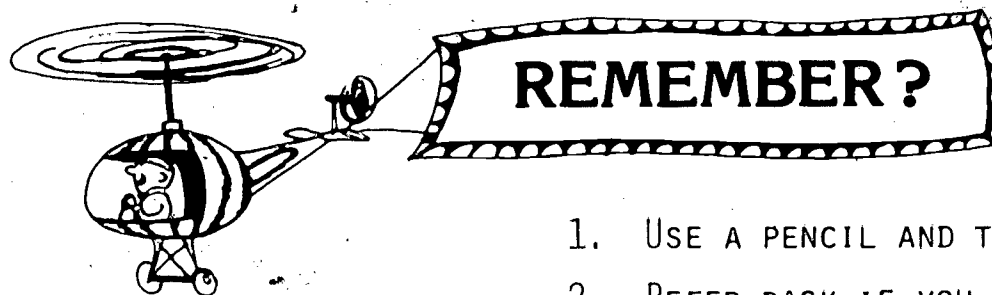
THE MEDICATIONS MOST OFTEN USED ARE:

ADRENALIN (EPINEPHRINE)  
BENADRYL (DIPHENHYDRAMINE)  
AMINOPHYLLINE

WHAT THEY DO:

1. ADRENALIN - INCREASES THE FORCE OF HEART CONTRACTION, THEREBY INCREASING CARDIAC OUTPUT. SMALL DOSES INCREASE THE BLOOD PRESSURE.
2. BENADRYL - THIS DRUG STOPS ITCHING AND REDUCES SWELLING OF THE MUCOUS MEMBRANE.
3. AMINOPHYLLINE - THIS DIURETIC/RELAXANT HELPS TO RELAX THE BRONCHIAL MUSCLES AND STIMULATE THE HEART MUSCLE.

## REVIEW II.



1. USE A PENCIL AND THE WORK SHEET.
2. REFER BACK IF YOU HAVE ANY QUESTIONS.

1. THE PRIMARY JOB IN TREATMENT OF SHOCK IS TO CARE FOR THE  
PATIENT.
2. IF THE PATIENT IS IN SHOCK, SHOULD HE OR SHE BE GIVEN ANYTHING  
TO DRINK?  
Yes                      No
3. ANAPHYLACTIC SHOCK OCCURS
4. WHAT ARE THE FOUR MAJOR CAUSES OF ANAPHYLACTIC SHOCK?  
A.  
B.  
C.  
D.
5. NAME SIX SIGNS AND SYMPTOMS OF ANAPHYLACTIC SHOCK.  
A.  
B.  
C.  
D.  
E.  
F.
6. NAME ONE OF THE DRUGS COMMONLY USED IN THE TREATMENT OF  
ANAPHYLACTIC SHOCK.  
A.

REVIEW II.

## ANSWER KEY:

1. WHOLE
2. No
3. SUDDENLY, WITHIN SECONDS, QUICKLY
4. MAJOR CAUSES OF ANAPHYLACTIC SHOCK ARE:

INSECT STINGS  
INGESTED SUBSTANCES  
INHALED SUBSTANCES  
INJECTED SUBSTANCES

5. SIGNS AND SYMPTOMS ARE:

ITCHING  
HIVES  
SWELLING (EDEMA)  
CYANOSIS (BLUE)  
TIGHTENING OF CHEST, DIFFICULTY  
BREATHING.  
WEAK OR NO PULSE

6. DRUGS USED:

ADRENALIN  
BENADRYL  
AMINOPHYLLINE

Well Done

SEE YOUR INSTRUCTOR FOR THE FINAL ACHIEVEMENT REVIEW.

AFTER YOU COMPLETE THIS SECTION AND PASS THE FINAL ACHIEVEMENT REVIEW, YOU WILL RECEIVE A CERTIFICATE FOR SHOCK AND ANAPHYLACTIC SHOCK.

YOU HAVE DONE

**Outstanding**

## **Learning Activity Packages Available from the Department of Education**

This learning activity package is one of a series of 12 titles relating to health careers that are available from the California State Department of Education. A student packet and an instructor's packet are published in each of the following subjects:

- Anaphylactic Shock
- Blood Pressure
- Confidentiality
- Grooming
- Handwashing
- Metric System
- Nutrition
- Oral Hygiene
- Patient Observation
- Surgical Scrub
- Syncope
- TPR (Temperature, Pulse, Respiration)

Student packets are available at \$1.75 each, plus tax, and instructors' packets at \$1.50 each, plus tax.

Orders should be directed to:

California State Department of Education  
P.O. Box 271  
Sacramento, CA 95802

Remittance or purchase order must accompany order. Purchase orders without checks are accepted only from government agencies in California. Sales tax should be added to all orders from California purchasers.

A complete list of approximately 500 publications available from the Department may be obtained by writing to the address listed above.



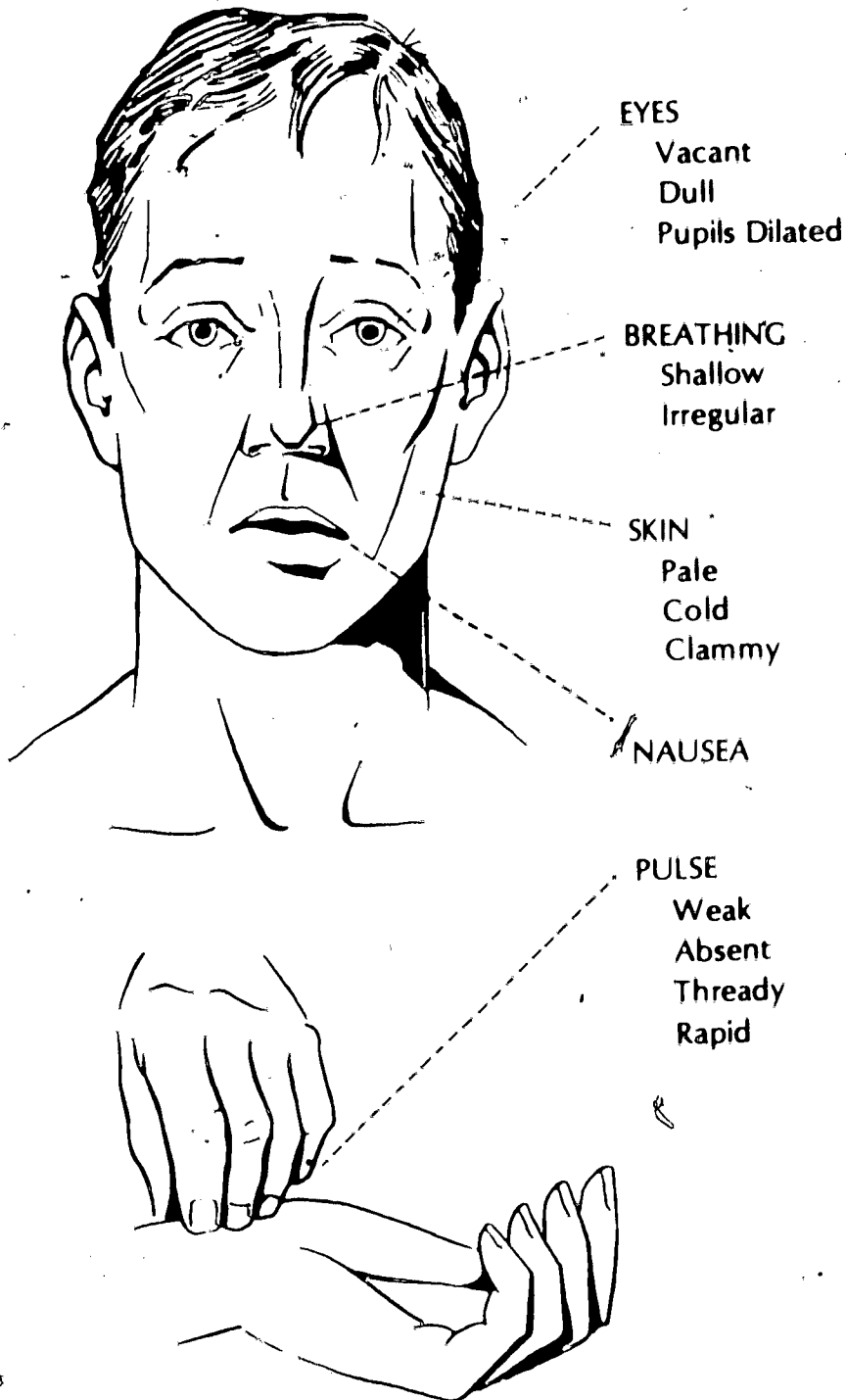
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C,  
D,  
E,  
F,  
G,  
H,

# Don't get stuck...



CHECK THE ANSWERS ON THE  
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CONTINUE ON

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