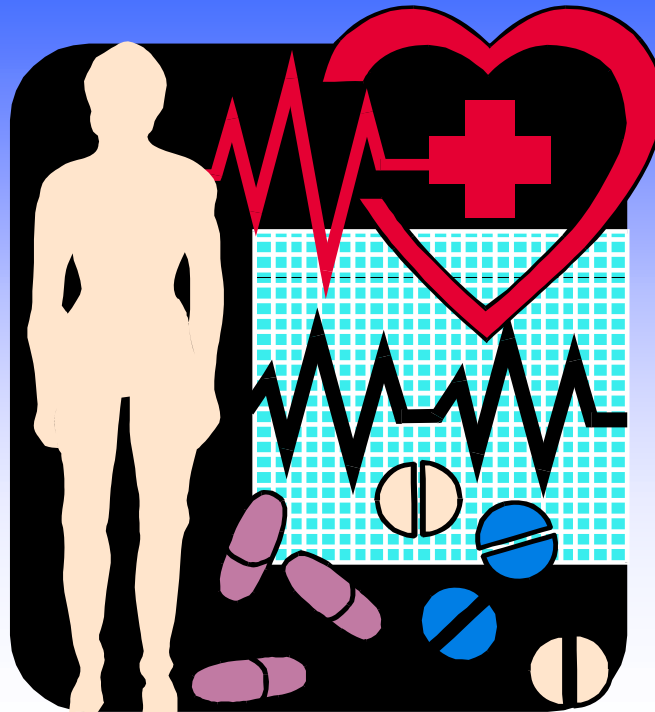


OCCUPATIONAL HEALTH

WORK RELATED ILL-HEALTH



HSES Training Centre

COURSE CONTENTS

- I. Relevant Legislation & Best Practices
- II. Health Hazards
- III. Ergonomics
- IV. Personal Hygiene
- V. Balance Lifestyle
- VI. Stress Awareness



RELEVANT LEGISLATIONS & BEST PRACTICES

- ❑ No Harm to Resources
- ❑ Clear affirmation that accident & harm to people will be unacceptable in the project.
- ❑ NSH target is zero occupational health incidents.
- ❑ Improve on Current Best Industry Practice.
- ❑ NSH will continuously seek Health & Safety excellence through regular monitoring and improvement.

HEALTH HAZARDS

1. Routes of Entry
2. Acute or Chronic
3. Local or Systemic
4. Carcinogens, Mutagens, Teratogens
5. Radiation
6. Industrial Dermatitis
7. Noise Induced Deafness
8. Biological Hazards
9. Heat Stress

Routes of Entry

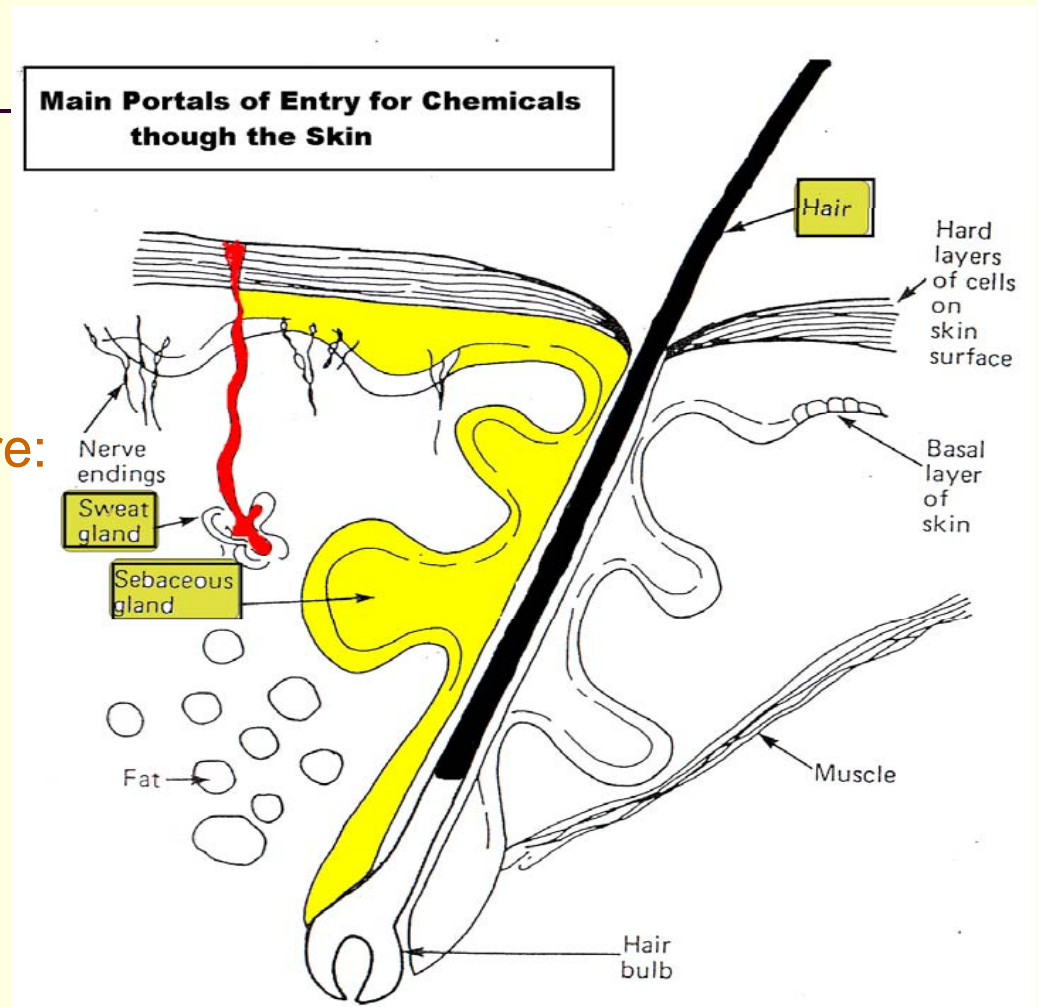
- a) **Inhalation** is the most common route of entry into the body system.

- b) **Absorption** Contaminants being absorb through the skin pores or splashes into eyes.

Routes of Entry

The main portals of entry for chemicals through the skin are:

- Sebaceous glands.
- Sweat glands.
- Hair follicles



Routes of Entry

- c) Ingestion** - Contaminants being ingested or swallowed accidentally.

- d) Injection** - Contaminants enter through cut skin or wound cause by flying objects or impaling and accidental injection.

SPIDER BITE



Acute or Chronic

Acute:

- Surface immediately after short exposure
- Normally short exposure time and large dosage
- Take from a few minutes to a few hours for symptoms to show

Acute or Chronic

Chronic:

- Surfaces only after repeated exposure
- Normally long exposure time and small dosage
- Take months or years to develop symptoms.

Localized or Systemic

Localized:

Damage will be sighted on the point/site of contact.

Example: Burns cause redness/blisters on skin

Localized or Systemic

Systemic:

Systemic poisons targets specific organs (Liver, brain, kidney) Examples are:

Hepatotoxins cause liver damage (Carbon Tetrachloride)

Nephrotoxins cause kidney damage (Uranium)

Neurotoxin cause nerve system damage (Mercury)

Carcinogens, Mutagens & Teratogens

Carcinogens can cause cancer

Examples are: **Asbestos, arsenic, vinyl chloride**

Mutagens can cause permanent damage to DNA

Example: **Chloroprene**

Teratogens: can cause physical defects in the development of the fetus when a pregnant woman is exposed to it.

Example are: **Lead, mercury**

Radiation

Ionising. Protective measures must be taken to restrict exposure of individuals to this type of radiation. The use of exposure monitoring badges will be necessary.

Non-ionising. The exposure of individuals to non-ionising radiation should be permitted only within safe limits. Particular attention should be paid to the use of lasers

Industrial Dermatitis

Industrial Dermatitis simply means an inflammation of the skin.

Contact Dermatitis results from Irritant or Allergic reaction of the skin

coming into
certain substances
work.

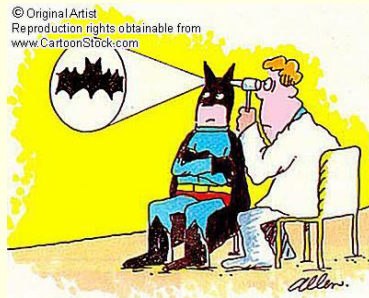
contact with
at

Noise Induced Deafness

Exposure to excessive noise level at work can cause deafness.

The hearing loss is often temporary at the beginning but continuous prolonged exposure to such noise over the years can produce permanent deafness.

This is known as noise-induced deafness (NID)..



Types of Hearing Protection



Biological Hazards

Bio means “ life”, “living”.

Hazard means “ a source of danger ”.

Biohazards are dangers come from living organisms and includes Bacteria, Fungi, Viruses, Parasites, Insects, Plants, Birds, Animals and Humans.

Infectious Diseases remains a major cause of death and debility and are responsible for worsening the living conditions of millions of people around the world.

Heat Stress

Factors Affecting Heat Stress include:

- Air movement
- Radiant heat (hot vessels & sun)
- Clothing
- Humidity (above 60 %)
- Work rate (Mild/ Moderate/Heavy)



**If not controlled
HEAT STRESS
MAY OCCUR!!!**

Heat Stress

Effects of heat stress on your body

- **Heat Rash** (prickly heat)
- **Heat Cramps** (painful spasms of muscles)
- **Heat Exhaustion** (feeling weak)
- **Heat Stroke** (life threatening!)

Heat Stress

Heat Rash (prickly heat) Occur in hot & humid environments, where sweat is not easily removed from the skin surface by evaporation.

Heat Cramps are painful spasms of the muscles that occur when workers drink large amounts of water but fail to replace their electrolyte losses.

Occur when unacclimatized worker carry out intense physical activity.

Cramps may occur during or after working hours, usually in the lower extremities, abdomen

Heat Stress

Heat Exhaustion salt & water (electrolytes) loss due
excessive sweating, symptoms:

- Weak, fatigued, tired
- Headache, dizziness
- Intense thirst
- Nauseous
- Cramps, usually abdominal

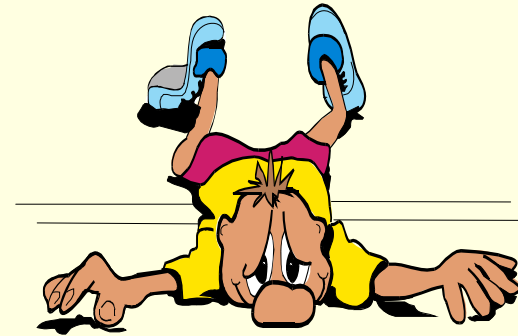


- Cold clammy pale skin
- Rapid shallow breathing
- Rapid weak pulse
- Disoriented
- Fainting

Heat Stress

Heat Stroke occurs when the body's heat regulating Mechanism fail. Too dehydrated to sweat anymore. mortality rate as high as 70%. The signs are:

- Hot red skin (Over 40°C)
- No sweating
- Very rapid weak pulse
- Slow shallow breathing
- Confused
- Tremors, seizures
- Delirium
- Coma



Risk Factors

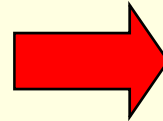
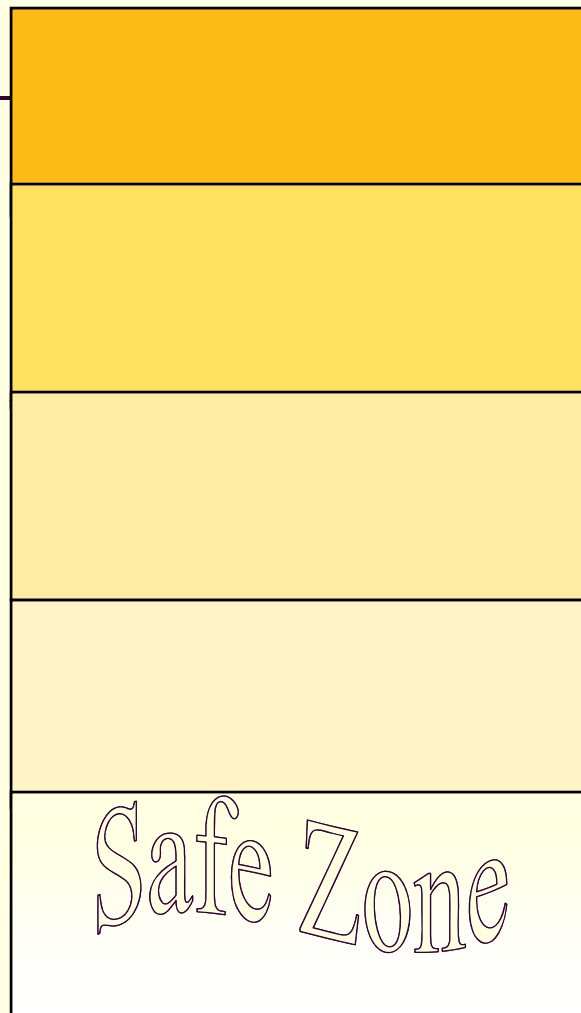
- **Dehydration**
- **Lack of acclimatization**
- **Physically unfit**
- **Lack of sleep**
- **Alcohol consumption, tea, coffee**
- **Medical condition (cold, flue)**
- **Some medications & drugs**
- **Education**

Prevention

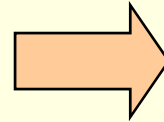
- ❑ **Drink as much as you need**
- ❑ **Rotate work (from hot to cool areas)**
- ❑ **Report to your Supervisor or Nurse at first sign of any problem**
- ❑ **Rest 10-15 minutes for every hour of work or 5 7 minutes every 30 minutes in extremely hot weather**

Remember! An “Ounce of Prevention” is Better than a Pound of Cure!!

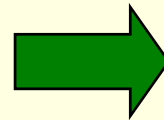
The color of urine tells you how dehydrated you are!



Extremely Dehydrated
Drink Water Immediately



Mildly Dehydrated
Drink More Water



Not Dehydrated

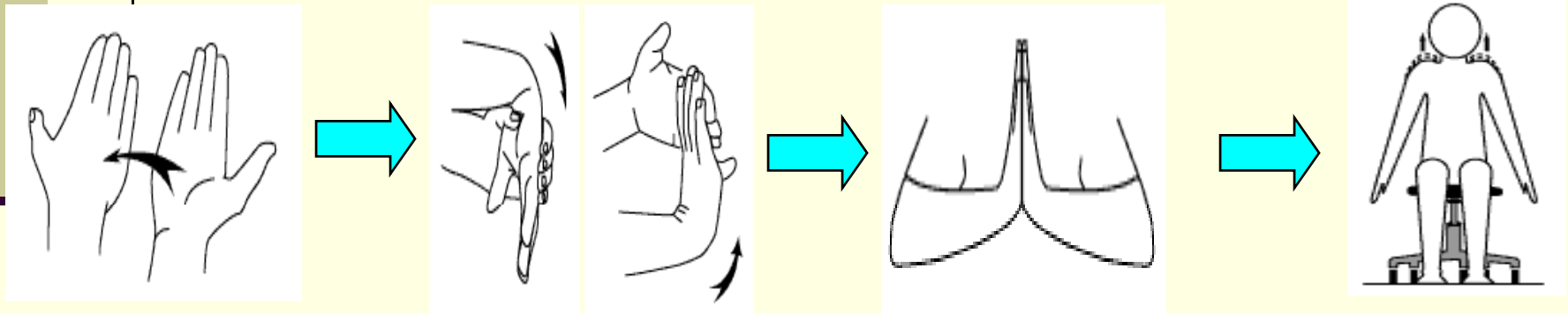
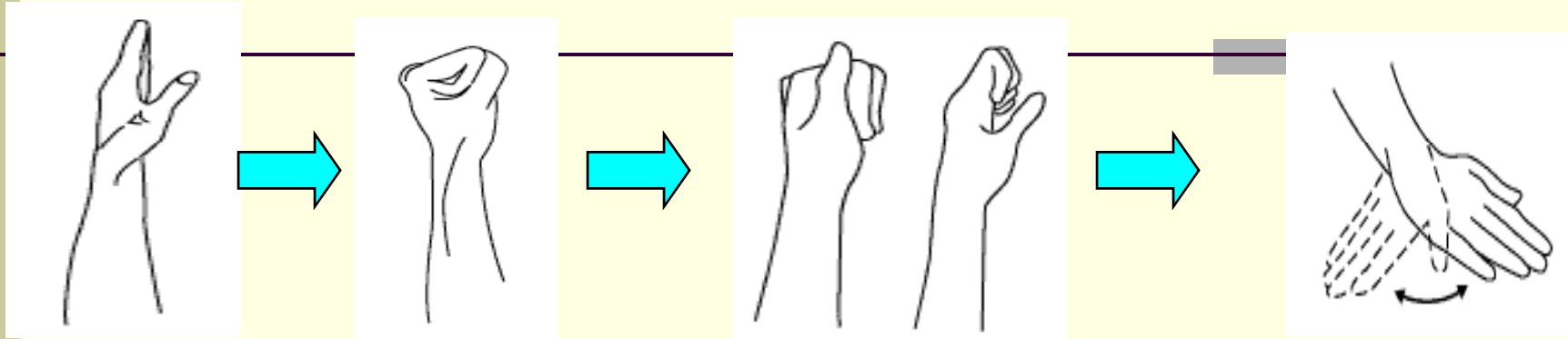
Ergonomics

What can be done to minimize this strain?

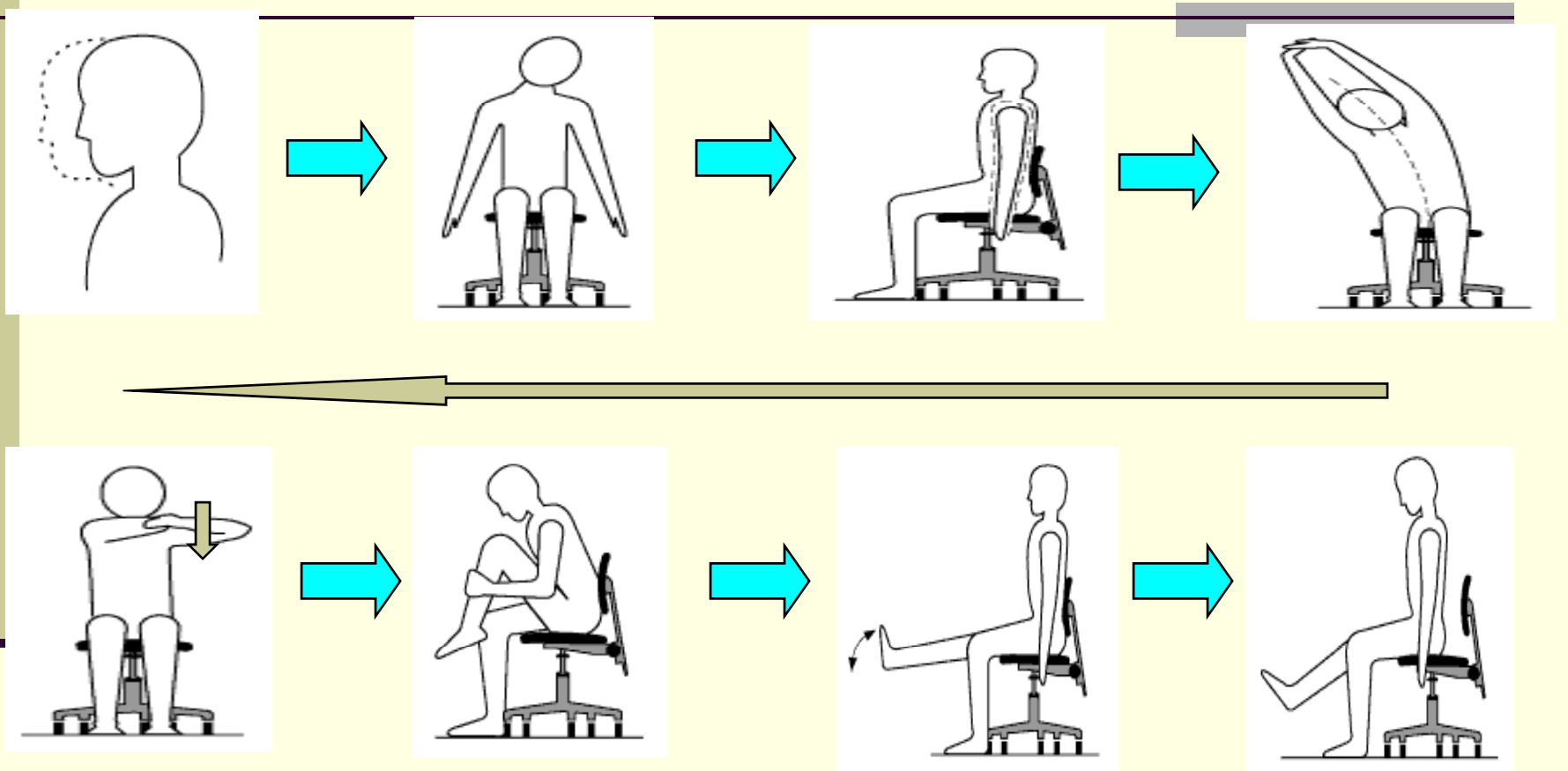
It is recommended that a person break for 5-10 minutes for every hour spent at a workstation.

- Vary the work tasks, by carrying out other duties or tasks that involve moving around or changing body position.
- Stand up and move around.
- Look away from the screen occasionally and focus your eyes on an object far away.
- Take regular rest breaks to ease muscle aches, eye strain and stress.
- Relax your muscles, stretch and change position.

Ergonomics (Exercises)



Ergonomics (Exercises)



Personal Hygiene

Personal Hygiene is the first step to good grooming and good health.

Good Grooming Practices:

- Shampoo with hair conditioner
- Use skin lotion with UV protection, skin moisturizers
- Protect your hands by using appropriate gloves
- Cut fingernails, toenails weekly and clean them
- Feet → Wash, clean, wipe & let dry thoroughly before putting your socks on to avoid athlete's foot.

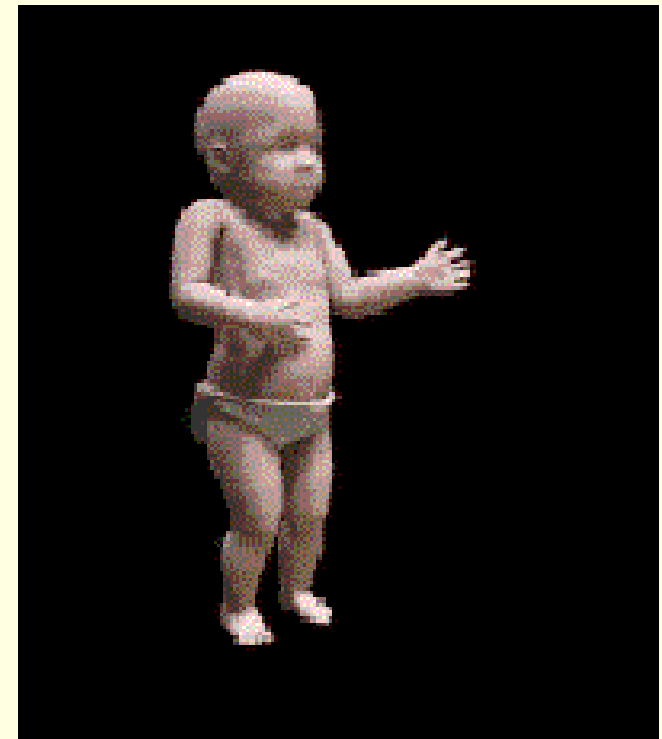
BALANCE LIFESTYLE

Lifestyle is a way of life that reflects person's attitudes and values.

BALANCE LIFESTYLE

Health Promoting Behaviors?

- Maintain Healthy Body Weight
- Eat Nutritious Foods
- Regular Physical Activity/Exercise
- Enough Sleep
- Stress Management
- Abstinence from Tobacco & Alcohol
- Positive Attitude



Remember !

You can't Live Life to the Full, if

You have the Wealth

but

Poor in Health!!!

STRESS AWARENESS

Stress is a body condition that occurs in response to actual or anticipated difficulties in life.

Causes of Stress are called Stressors and can be caused by:

- Biological
- Environmental
- Life Situations
- Behaviours
- Cognitive activities

STRESS AWARENESS

Awareness is the key to managing stress.

Common Signs of Stress:

- Headaches
- Upset stomach
- Increased heart rate
- Hypertension
- Muscle tension
- Mental depression
- Anxiety
- Lack of energy
- Poor concentration
- Sadness
- Forgetfulness

STRESS AWARENESS

Typical Reactions to Stress:

- Social withdrawal
- Increase use of tobacco, alcohol or drugs
- Feelings of helplessness about the situation.
- Irritable
- Change in eating habits
- Difficulty sleeping
- Easily Angered

Stress Related Illnesses:

- Duodenal Ulcers
- Hypertension
- Arrhythmias
- Heart attacks
- Colds
- Flu
- Nervous breakdown

Ways to Manage Stress:

- Think positively and surround yourself with others who do so.
- Accept that you can't control everything and be flexible.
- Make a list of things to do each day and set reasonable priorities. (Get organised!)
- Divide big tasks into smaller ones.
- Eat balance nutritious foods.
- Regular exercise to boost energy and improve your mood.

Ways to Manage Stress:

- Make time to relax. Listen to music, meditate, read or do something you like.
- Avoid alcohol, tobacco and drugs which acts as a pacifier to stress and aggravates stress.
- Use mistakes to learn.
- Talk about things with a friend so that frustrations don't build up.
- Appreciate nature.
- Laugh and have fun.
- Let yourself cry.

Stress Relievers:

- Deep Breathing
- Stretching exercises

- Aerobic exercises
- Mind Over Matter (Meditation)
- Shadow boxing / Sandbag boxing (with picture of your boss pasted on the bag.)

Next time if you feel **“STRESSED”**...

Remember it is just **“DESSERTS”** read backwards!

Stress Relievers:

IF ALL ELSE FAILS TRY THIS!

