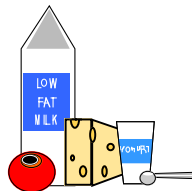


LEVEL 2-B

**WELLNESS  
TOPICS  
FOR  
PHYSICAL  
EDUCATION**



NAME: \_\_\_\_\_  
TEACHER: \_\_\_\_\_  
BLOCK: \_\_\_\_\_

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# **NUTRITION**

# NUTRITION

Nutrition is a second aspect of wellness that we are going to look at in detail.

**The Importance of Nutrition** – Nutrition is the relationship of the food you eat to your health and well being. The nutrition component of the behavior wheel (behavioral patterns) examines diet and the effects of diet on health, development, and performance. Nutrition involves the study of foods and the major nutrients. A healthful diet gives you energy to enjoy your favorite activities. It also enables you to grow and develop and have a healthful appearance.

**“You are What You Eat”** - Diet, or the kinds of foods you eat regularly, has a holistic effect on our health. Depending on one’s age and lifestyle, most people need between 1,600 and 2,800 calories a day. Dietitians recommend that those calories come from:

- six to eleven servings of bread, cereal, rice or pasta
- two to four servings of fruit
- three to five servings of vegetables
- two to three servings of milk, yogurt, or cheese
- two to four servings of meat, poultry, fish, dry beans, eggs, or nuts
- sparing use of, fats, oils, and sweets. (The above information is also depicted in a food guide pyramid-See page 5)

Even if you are careful to consume a variety of foods, you may still be overlooking an important part of a healthful diet - serving sizes. Serving sizes are one of the keys to maintain a healthy weight. Knowing what and how much you are eating is essential.

**Reading Labels** - In 1993, the Food and Drug Administration made it easier to figure out serving sizes by improving the nutrition labels that appear on many food packages. These labels list how many calories and how much fat, protein, sodium, and other nutrients are in the food. However, the information on the label is not based on the entire contents of the package. Instead, it is calculated for a typical portion or serving of food.

## ASSIGNMENT

Nutrition is the relationship between what two items?

The recommended amount of calories to be consumed in one day are?

Which foods should be used sparingly according to the food guide pyramid?

What information is retrieved from reading a food label?

**Nutrients in food** – Nutrients are chemical substances in foods that furnish body fuel for energy, provide materials needed for building and maintaining tissues, and supply substances that function in the regulation of body processes. Each day you need a combination of fifty nutrients for good health. There are six main kinds of nutrients in foods. These are proteins, carbohydrates, fats, vitamins, minerals, and water.

**The United States Recommended Dietary Allowance** -The US-RDA list suggests the daily amount of nutrients that should be included for a healthful diet.

**Proteins** - are chemical substances that are essential for growth, development, and repair of all body tissues? Proteins are major components of all living cells. Proteins are made of small units or building blocks called amino acids. Some foods containing protein are meat, cheese, eggs, milk, fish, and poultry.

**Carbohydrates** - are chemical substances that are the main source of energy for your body. There are two main types of carbohydrates – Starches and Sugars. Because of their chemical structures, starches are called complex carbohydrates and sugars are called simple carbohydrates. Complex “carbs”, in plant sources, consist of starch and cellulose. Grains and vegetables (e.g. potatoes) are main sources of starch. Simple sugars are found naturally in fruits, honey, milk, sugar cane, and sugar beets.

**Fats** - are chemical substances that provide additional energy and help your body store vitamins A, D, E, and K. There are two kinds of fats: Saturated and Unsaturated fats. Dairy products such as whole milk, cream, cheese, and butter contain saturated fats. Unsaturated fats are obtained from foods of vegetable, nut, or seed origin. Olive oil, corn oil, peanut oil, and sesame oil are fats that are unsaturated. Fish, chicken, duck, and turkey are foods that contain saturated fats.

**Vitamins** – are substances in foods that help chemical reactions take place in the body. Vitamins are divided into two types: Water Soluble and Fat Soluble Vitamins. Water-soluble vitamins are easily dissolved and can not be stored in the body. Fat soluble vitamins can be stored in the body. The liver is the main storage organ for vitamins. It is best to eat foods that supply the vitamins you need, however, some people decide to take vitamin pills to supplement their diet.

**Minerals** – Five percent of your body weight is made up of minerals. Minerals are nutrients that regulate many of the chemical reactions in your body. The seven minerals found in the largest amounts in your body are calcium, chloride, magnesium, phosphorus, potassium, sodium, and sulfur. Some food sources, such as leafy green vegetables, are excellent sources of both vitamins and the mineral's calcium and iron.

**Water** – Although water is not a food, it is considered a nutrient. Water makes up approximately 60% of the body and is involved in all body processes. As a basic part of blood, water carries nutrients to all body cells and waste products to the kidneys.

### ASSIGNMENT

Name the six nutrients found in food:

What do carbohydrates do for your body?

Name the two types of fats and the main difference between the two:

Proteins are chemical substances essential for what in the body?

# PYRAMID OF GOOD HEALTH

The Food Guide Pyramid tells us what to eat each day for good health. To “read” it, start at the bottom, the biggest section. You need the most daily servings of these foods. As you move up the pyramid, you need fewer daily servings in each category. The foods at the top should only be eaten sparingly.

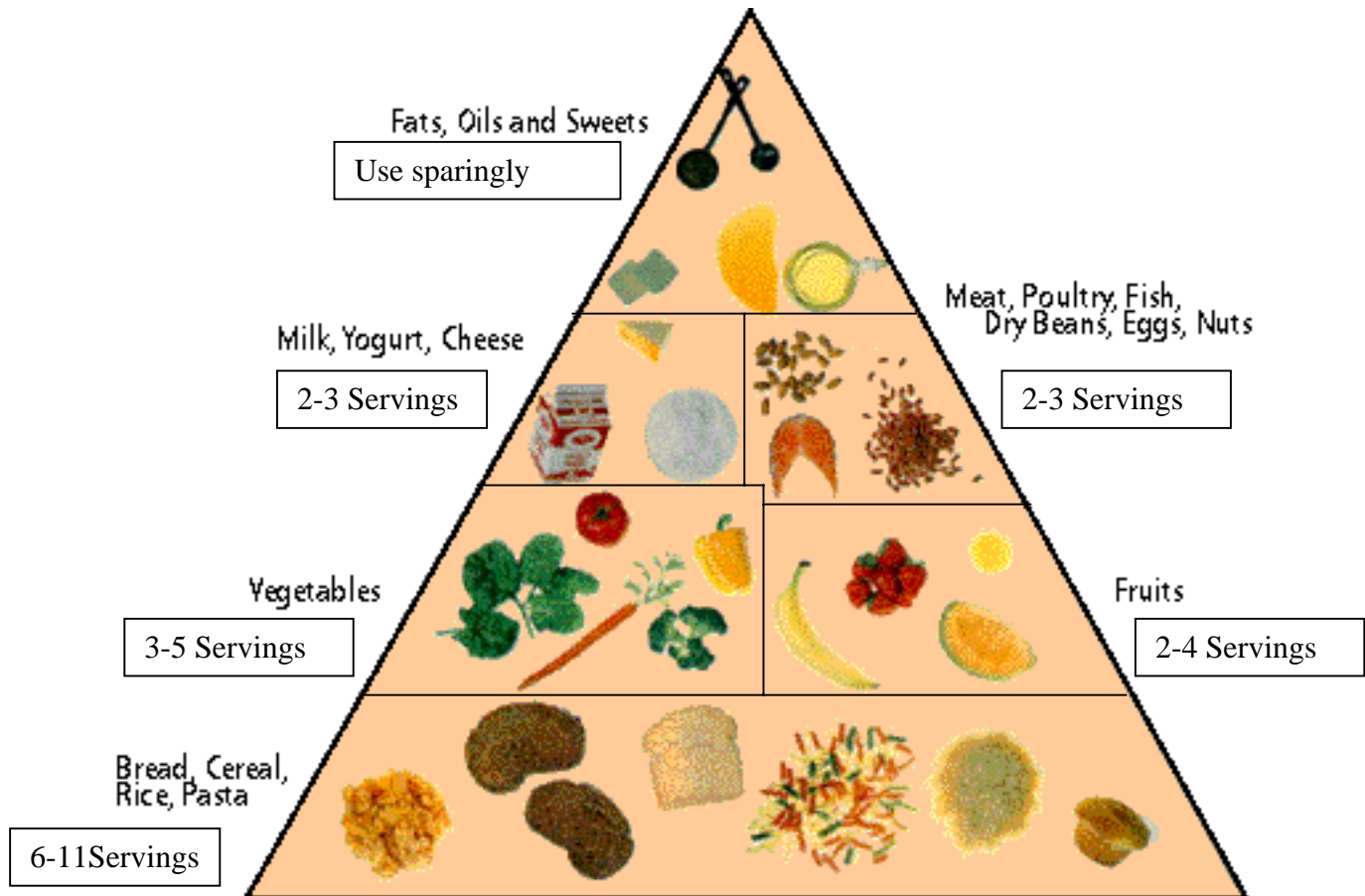


Table 13-1 desirable Weights for Men and Women

Metropolitan Life Insurance Company, New York

<b>M E N</b>	Height		Small	Medium	Large
	Feet	Inches	Frame	Frame	Frame
	5	2	128-134	131-141	138-150
	5	3	130-136	133-143	140-153
	5	4	132-138	135-145	142-156
	5	5	134-140	137-148	144-160
	5	6	136-142	139-151	146-164
	5	7	138-145	142-154	149-168
	5	8	140-148	145-157	152-172
	5	9	142-151	148-160	155-176
	5	10	144-154	151-163	158-180
	5	11	146-157	154-166	161-184
	6	0	149-160	157-170	164-188
	6	1	152-164	160-174	168-192
	6	2	155-168	164-178	172-197
	6	3	157-172	167-182	176-202
	6	4	162-176	171-187	181-207

<b>W O M E N</b>	Height		Small	Medium	Large
	Feet	Inches	Frame	Frame	Frame
	4	10	102-111	109-121	118-131
	4	11	103-113	111-123	120-134
	5	0	104-115	113-126	122-137
	5	1	106-118	115-129	125-140
	5	2	108-121	118-132	128-143
	5	3	111-124	121-135	131-147
	5	4	114-127	124-138	134-151
	5	5	117-130	127-141	137-156
	5	6	120-133	130-144	140-159
	5	7	123-136	133-147	143-163
	5	8	126-139	136-150	146-167
	5	9	129-142	139-153	149-170
	5	10	132-145	142-156	152-173
	5	11	135-148	145-159	155-176
	5	12	138-151	148-162	158-179

**DIET**-The food pyramid shows a range of servings for each food group. The following calorie level suggestions are based on recommendations of the National Academy of Sciences and on calorie intake:

- 1,600 calories is about right for many sedentary women and some older adults
- 2,200 calories is about right for most children, teenage girls, active women, and many sedentary men. Pregnant women and women who are breast-feeding may need more.
- 2,800 calories is about right for teenage boys, many active men, and very active women.

**Seven Dietary Goals** - The United States Department of Agriculture and the Department of Health and Human Services suggest the following seven goals in planning a healthy diet.

- **Eat a variety of foods** - A balanced diet is a daily diet that contains the correct number of servings from the food pyramid.
- **Maintain your desirable (ideal) weight** – Your ideal weight is the weight and body composition that is recommended for your age, sex, height, and body build.
- **Avoid eating too much fat, saturated fat, and cholesterol** – A heavy meat and fat diet is high in calories and may cause health problems and weight gain.
- **Eat foods with adequate starch and fiber** – Increasing carbohydrates and reducing fat will help you maintain your ideal body weight.
- **Avoid too much sugar** – Too much sugar in the diet may cause tooth decay. A high sugar diet increases the fatty acid levels in the blood and increases the likelihood of heart disease.
- **Avoid too much sodium** – Eating too much sodium is related to an increase in heart disease and high blood pressure.
- **Avoid alcohol** – Alcohol is high in calories and low in nutrients.

### ASSIGNMENT

Name four of the seven dietary goals:

What is included in a person's ideal weight?

What are some health problems associated with consuming too much sugar?

Why is it smart to avoid consuming alcohol?

# THRESHOLD OF TRAINING FOR FAT CONTROL

Both diet and exercise are important in maintaining an ideal amount of body fat. To keep from being too fat or too thin, both diet and exercise must be done properly. Because both diet and exercise are important to body fatness, they have a threshold of training.

## Fat Control Threshold of Training

	Diet	Exercise
<b>Intensity</b>	<ul style="list-style-type: none"><li>- To lose a pound of fat you must eat 3,500 calories less than normal</li><li>- To gain a pound of fat you must eat 3,500 calories more than normal</li><li>- To keep your weight the same you must keep the number of calories you eat the same</li></ul>	<ul style="list-style-type: none"><li>-To lose a pound of fat you must use 3,500 calories more than normal</li><li>-To gain a pound of fat you must use 3,500 calories less than normal</li><li>-To keep your weight the same you must keep your exercise level the same</li></ul>
<b>Frequency</b>	Eat 3 regular meals daily. Regular controlled eating is best for losing fat. Skipping meals and snacking is usually not effective for losing fat.	Exercise daily. Regular exercise is best for losing fat. Short or irregular exercise does little for controlling fatness.
<b>Duration</b>	Neither diet not exercise will result in quick fat loss. Doctors recommend that no more than 2 pounds of weight be lost in a week without the supervision of a doctor. Both diet and exercise can be used to safely lose 2 pounds per week.	

## REFERENCE

Choose To Lose Plan.



**Maintaining Ideal Weight and Body Composition** – For optimum health, it is important to know your ideal (desirable) weight and ideal body composition and to maintain them by correctly eating, exercising, and relaxing. To reach or maintain ideal weight or body composition, you need to understand the relationship between caloric intake, caloric expenditure or output, and body composition. Caloric intake is the total number of calories you eat each day. Caloric expenditure or output is the total number of calories you expend or use each day. Your body uses calories to maintain body functions such as respiration, circulation, and digestion. You expend even more calories when you move. The more vigorous the movement, the more calories you use. The body uses the food you eat to provide energy for daily activities. The number of calories you need depends on your age, sex, body-build, and the amount of physical activity you engage in. If you eat more than the number of calories you need, the excess calories are stored in fat cells. One pound of fat is equal to 3, 500 calories. (See page 5 – Table 13-1 for desirable weight for men and women)

**Obesity** – Obesity, is a result of compulsive overeating disorder. This major health concern has increased dramatically in the past 15-20 years, and has increased 39 percent in students ages 12-17. If your weight is 20-30 percent above your recommended weight and you are also over fat (in excess of your recommended percentage of body fat) you are considered obese. Being overweight or obese increases the likelihood of heart disease, high blood pressure, stroke, diabetes, accidents, and cancer. For those reasons, it is important to maintain ideal weight. If you are overweight or obese, you will need a plan to reduce your weight and percentage of body fat.

#### ASSIGNMENT

How does one maintain ideal weight and body composition?

What is the difference between caloric intake versus caloric expenditure?

What is obesity?

What health problems are related to obesity?

**Figure out how many calories you need each day:**

1. Convert your body weight to kilograms by dividing your weight by 2.2

Your weight \_\_\_\_\_  $\div$  2.2 = \_\_\_\_\_

2. Multiply that answer by 24 to get your basal metabolism (the daily required calories when the body is resting).

Answer from #1 above

X \_\_\_\_\_ 24

**Calculate how many grams of fat you need each day:**

1. Multiply your daily caloric requirements by 20% or 0.2 (the percentage of fat in your diet).

Answer from #2 above

X \_\_\_\_\_ 0.2

2. Divide this number by 9 (calories per gram of fat). This gives you the grams of fat you need per day.

Number from #1 directly above \_\_\_\_\_  $\div$  9 = \_\_\_\_\_

**Body Composition** – Body composition is the percentage of fat tissue and lean tissue in your body (Refer back to Health Related Fitness – Body Composition, page 25 in Book A). As you become physically fit, the ratio changes the percentage of fat tissue decreases and the percentage of lean tissue increases. The body uses fat tissue everyday. Fat is used as the body stores and uses nutrients. Everyone has stored fat beneath the skin and around the internal organs. Females have more stored in their bodies than males. The total percentage of body weight that is fat is usually 16-19 percent for males and 22-25 percent for females. Your heredity influences your body composition, the size of your bones, and your muscle structure. People generally inherit a tendency toward one of the following three body builds:

**Ectomorph** – A person who is long boned and has a lean body build.

**Morph** – A person who has a muscular build.

**Endomorph** – A person with a greater percentage of fat tissue and a flabby appearance.

It is a known fact that the type and frequency of exercise in which you engage influences body composition.

To improve body composition and prevent disease do the following:

- Exercise
- Eat more fruits, vegetables, bread, pasta, cereal, and beans
- Eat less fried foods, fatty meats, whole milk products, cheese, candy, chips, soft drinks, cookies/cakes, and pastries.
- Choose healthier foods – broiled/baked, non/lowfat, fruits/veggies

### ASSIGNMENT

What is included in one's body composition?

What happens to the ratio of fat tissue to lean tissue as you become fit?

What are the total percentages of body fat for males and females?

What is the difference between Ectomorph and Morph body types?

What body type are you?

**Eating Disorders** – The message that THIN IS IN is very prevalent. This message influences many adolescents to be overly concerned about their weight and their attractiveness. As a result, there has been a dramatic increase in eating disorders. Eating disorders such as Anorexia Nervosa and Bulimia affect five million Americans, most of them in their mid to late teens (13-18). The disorders affect females ten times more than males.

The two most common eating disorders are **Anorexia Nervosa** and **Bulimia**.

**Anorexia Nervosa** – is an emotional disorder in which a lack of self-esteem and an intense fear of being overweight result in starvation. The disturbance is psychological in nature and cannot be accounted for by a known physical disorder. In this condition, the individual turns to dieting and self-starvation as a way to solve emotional problems. One out of 200 adolescent females is anorexic. Anorexia begins in the mid to late teens. Anorexics are typically from middle to upper-middle class families. There is a higher prevalence among teens who are perfectionists and high achievers. They begin to diet and set unrealistic goals. Soon they begin to starve themselves and then do not eat at all. Anorexics sometimes try other means of dieting such as strenuous physical activity and taking laxatives or diuretics to try and lose even more weight through water loss. Anorexia Nervosa is sometimes viewed as dieting gone wild.

### **Symptoms**

- Dieting
- Refusal to eat enough to maintain a normal body weight
- An intense fear of gaining weight or becoming fat
- A distorted body image
- Depression
- Extended exercise
- Dry, roughened skin; bluish tinge in finger nails
- Compulsive neatness
- Cuts food into tiny pieces
- Likes to cook

### **Medical Problems**

- Weakness
- Muscle fatigue
- Absence of menstruation
- Decrease in blood pressure and body temperature
- Possible shrinkage of internal organs
- 5-10% of anorexics will die because of medical problems associated with malnutrition. A person with Anorexia Nervosa needs psychological and medical treatment. The goal of counseling would be to help individuals accept their body and sexuality. Anorexics need to build positive self-esteem.

### **ASSIGNMENT**

Name four symptoms of Anorexia Nervosa:

Besides not eating, what two other things do anorexics do to lose weight?

Anorexia Nervosa affects individuals in what age range the most?

Why is Anorexia Nervosa described as dieting gone wild?

**Bulimia** – is an emotional disorder in which an intense fear of being overweight and a lack of self-esteem result in secret binge eating followed by starvation, self-induced vomiting, and the use of laxatives or diuretics. Bulimia is not usually a means of dieting but rather of controlling weight. Whereas Anorexia Nervosa is described as dieting gone wild, Bulimia is described as eating gone wild. A primary characteristic of bulimic behavior is a recurrent pattern of binge eating (rapid consumption of thousands of calories in one to two hours). Binging usually follows stress at home, work, or school and is done in private. The binge-purge pattern may be followed by normal eating. During this time, the bulimic is usually depressed; consequently, they may abuse alcohol or drugs and contemplate suicide. Bulimia is usually a disease of females that has some severe physical and psychological problems.

### **Behavioral symptoms**

- Binge eating
- Self induced vomiting
- Diuretic/laxative abuse

### **Psychological symptoms**

- Depression
- Personality disorder
- Distorted body image
- Low self-esteem

### **Medical Problems**

- Loss of potassium in the body
- Abnormal heart rhythm and/or cardiac arrest
- Damage to the kidneys from the use of diuretics/laxatives
- Vomiting which causes tearing and bleeding of the gums, stomach, and esophagus
- The parotid gland swells resulting in a chipmunk appearance
- Stomach acid causes tooth decay
- Dry mouth
- Brittle hair

### **ASSIGNMENT**

What does a person with Bulimia fear?

Why is Bulimia described as eating gone wild?

What are two behavioral and two psychological symptoms of Bulimia?

Name four medical problems associated with Bulimia:

## LIFE-MANAGEMENT SKILLS YOU MAY WANT TO ADHERE TO

- Eat a balanced daily diet that includes the correct number of servings from the food pyramid
- Drink at least six to eight glasses of water a day
- Maintain your ideal body weight with a low percentage of body fat
- Avoid eating too much fat and cholesterol
- Eat foods with adequate starch and fiber
- Avoid eating or drinking foods and beverages that are high in sugar
- Avoid consuming alcohol
- Eat a healthful balanced breakfast
- Select healthful snacks that contain nutrients
- Reduce your risk of cancer by avoiding obesity; cutting down on total fat intake; eating more high-fiber foods, including foods rich in vitamins A and C; eating cruciferous vegetables; eating limited amounts of salt-cured, smoked, and nitrate-cured foods; and avoid alcohol

## CLASSIFYING EATING DISORDERS

Read each of the sentences below. If the sentence tells about anorexia nervosa, write AN in the space. If it tells about bulimia, write B. If the sentence applies to both conditions, write “both”.

- \_\_\_\_\_ 1. The person stops eating and may even starve him or herself to death.
- \_\_\_\_\_ 2. The person may go on a crash diet to make up for overeating.
- \_\_\_\_\_ 3. This eating disorder can cause damage to the teeth, mouth, and throat.
- \_\_\_\_\_ 4. People with this eating disorder can rarely cure themselves.
- \_\_\_\_\_ 5. The person eats large amounts of food.
- \_\_\_\_\_ 6. The name means “without appetite” and “of a nervous origin”.
- \_\_\_\_\_ 7. The person can get sick and even die if he/she does not get help.
- \_\_\_\_\_ 8. Most of the people who suffer from it are young women or teenage girls.
- \_\_\_\_\_ 9. The person may make himself or herself vomit food.
- \_\_\_\_\_ 10. The person may take laxatives to get rid of food.
- \_\_\_\_\_ 11. The person is taking the popularity of being thin to an extreme.
- \_\_\_\_\_ 12. People with this eating disorder have a strong need to be in control of their bodies.
- \_\_\_\_\_ 13. This eating disorder can cause the person to not get enough nutrients.
- \_\_\_\_\_ 14. People with this eating disorder see themselves as fat, even if they are wasting away from not eating.
- \_\_\_\_\_ 15. To be cured sufferers need professional help.
- \_\_\_\_\_ 16. This eating disorder can cause serious drying out of the body.

# **SUBSTANCE ABUSE CONTROL**

# NEED FOR SUBSTANCE ABUSE CONTROL

Substance abuse control is another one of the twelve aspects of wellness. In this section we will deal with alcohol, over the counter medications, and illegal drugs.

The American Drug and Alcohol Survey, which is administered every two years to students in grades 6<sup>th</sup>, 9<sup>th</sup>, and 11<sup>th</sup>, was last given here at Rush-Henrietta in the Spring of 1996. The results were published in the spring of 1997 with the following statistics being presented:

- The age of first usage of drugs or alcohol has dropped from 14, five years ago to 11.5 now.
- There has been a significant increase in the use of marijuana:
  - 46% of 11<sup>th</sup> graders reported having used marijuana within the 12 months preceding the survey
  - 30% of 11<sup>th</sup> graders reported having used marijuana within the 30 days preceding the survey
  - 14% of 11<sup>th</sup> graders reported having used hallucinogens within the 30 days preceding the survey
  - 50% of 11<sup>th</sup> graders and 35% of 8<sup>th</sup> graders reported using alcohol within 30 days preceding the survey
  - 29% of 11<sup>th</sup> graders and 9% of 8<sup>th</sup> graders reported being drunk within the 30 days preceding the survey

The survey also provided information on the circumstances of use. At all grade levels, student use of both drugs and alcohol was reported to take place most often at night with friends or at parties. The next most frequent incidence reported was at home when parents didn't know, followed by at home when parents knew (reported for alcohol only). Driving around with friends, and during school hours away from school, were the highest reported incidences.

## PEER PRESSURE

90% of students in a user peer group experienced friends asking them to use marijuana, while only 4% of students in a non-user peer group had this experience. Alternately, only 9% of students in a user peer group would tell friends to stop using marijuana, as opposed to 72% of students in a non-user peer group. The pattern of response was similar when asked about other drugs.

Obviously there is a need here to discuss marijuana, alcohol, and other substances.



# DRUGS: GENERAL INFORMATION

Drugs: Why people start?

The Bio-Psycho-Social theory:

## **Biological**

genetics  
health  
neurochemistry

## **Psychological**

feelings  
depression  
stress  
anxiety  
anger

## **Social**

opportunity  
peers  
family  
neighborhood  
media  
culture

**Drug** – any chemical substance taken into the body that causes changes in the mind and or body of the user

### **How drugs are taken into the body:**

- by mouth
- inhaled
- injected
- rubbed in the skin or mucous membrane

**Drug Use** – drugs are used properly when they are taken to prevent, treat, or cure illness

**Drug Misuse** – drugs are misused when prescription, over the counter, or illegal drugs are used improperly; deliberately or unintentionally for any of the following reasons:

- by the wrong person
- at the wrong time
- in the wrong amount
- for the wrong reason

**Drug Abuse** – drug abuse is the use of a drug for other than medical purposes, which results in the impaired physical, mental, emotional, and or social well-being of the user

The effects of a drug depends on many variables including:

- dose (amount taken)
- time (how often it is taken)
- other drugs present in one's body (synergism)
- weight
- set (personality, mood, and expectations of the user)
- setting (environment)

## ASSIGNMENT

Describe how drugs are taken into the body:

How is drug abuse different than drug use?

Name some variables that can change the effects of drugs:

How can over the counter drugs be abused?

Describe how using another person's medication can be dangerous:

# ALCOHOL

Alcohol of ethyl alcohol is the product of the fermentation of sugar from various sources. Mead was the first documented alcoholic beverage introduced in 6,000 BC. This beverage was fermented honey and in essence saved the human race because of the poor drinking water at the time. Alcohol has been a part of culture across the world since the time of mead. Alcohol shows up in religion, social arenas, and family gatherings. In Europe, children start drinking wine at the age of five. Organized crime developed in Chicago and other major cities because of alcohol bootlegging during Prohibition. Alcohol is in our culture and part of our society.

Alcohol is administered orally or inhaled (ether). A molecule of alcohol is very small and fat soluble, which means it can go anywhere in the body. It can pass through the brain and placental barriers and can cause damage in both places. 10 – 20 % of alcohol is absorbed by the stomach while 80 –90 % is absorbed by the small intestine. Factors which may cause faster alcohol absorption are: empty stomach, amount of alcohol consumed, carbonation, and an individual's size. It takes 1 to 1 1/2 hours for the liver to eliminate the alcohol in 1 drink.

## BLOOD ALCOHOL LEVEL – DOSE RESPONSE

<u>Blood Alcohol Level</u>	<u># of Drinks</u>	<u>Body Response</u>
0.04 =	1 to 2 drinks =	decreased inhibitions, increased heart rate, warm feeling
0.06 =	3 to 4 drinks =	decreased judgment, decreased coordination (1/2 hour)
0.10 =	5 to 6 drinks =	slowed reaction time, decreased coordination, impaired vision, and impaired memory.
0.16 =	6 to 8 drinks =	stumbling, slurred speech, impaired vision and hearing. (3 hours)
0.20 =	8 to 10 drinks =	Stuporous
0.30 =	10 to 15 drinks =	Coma (consumed in a short amount of time)
0.45 =	15 to 25 drinks =	Respiratory arrest – Death

## LONG TERM AFFECTS OF ALCOHOL

Gastrointestinal problems – internal bleeding

Gastritis – inflammation of the stomach lining-nausea, pain, vomiting

Pelvic ulcers – increase in stomach acids

Pancreatitis – inflammation of the pancreas –fatal

Liver problems – alcoholic hepatitis, fatty liver, cirrhosis

Enlarged spleen

Cardiac problems

Malnutrition

Decreased sexual function

\*\*\*\*\* No Other Drug Has This Level Of Toxicity To All Systems \*\*\*\*\*

1. List 5 long-term affects of alcohol abuse:
2. Alcohol has been around since \_\_\_\_\_.
3. List 3 factors which may cause faster alcohol absorption:
4. Alcohol is a product of \_\_\_\_\_.

BONUS: (not on the sheet)

Explain what proof is in regards to alcohol in beverages: \_\_\_\_\_

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### REFERENCES

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Hanson, Steve. Class notes from SUNY Brockport class “Drug Use and Abuse.”

# MARIJUANA

The earliest known use of marijuana is 2700 BC, making it one of the oldest known drugs. Marijuana was first introduced in China. It was used to treat rheumatism, constipation and ironically, absent-mindedness. By the twelfth century, marijuana spread to the Middle East where the religious group Hashishiya discovered it.

In the 17<sup>th</sup> century, Napoleon's army was very much a pot smoking unit. There were also bars in France where smoking marijuana was socially acceptable in the 18<sup>th</sup> century. By 1926 Marijuana was coming over the Mexican border into New Orleans. A report came out about the Hashishiya tribe smoking pot, "hash", and then killing people. The Hashishiya were a murderous lot with or without the marijuana, but marijuana was given the connotation of being a drug that made people violent. In 1936 Marijuana was outlawed by all 48 states.

Marijuana became popular again in the 1970's, which is where our attitude toward pot comes from today. Most people think, "It is only pot". However, in the 70's, marijuana only contained **1/2 to 2%** of THC, (the drug in pot). Today pot contains **7 to 11%** THC with a record amount of **24%**. The drug people are using today is vastly more harmful than the one people used in the 70's. In the 70's most people started to experiment with marijuana when they were **18 or 19** years old. Today the average age of first usage is **12** years old. At this early age the body is not ready to synthesize the drug. The most startling statistic of all is that in the 70's, **10%** of all high school seniors had tried marijuana. In 1999, **50%** of all high school seniors had tried pot. If someone older than you says that pot is no big deal, they are unaware of the changes in the drug and the culture in which you are growing up.

## **Effects of Marijuana:**

Contributes to memory loss

Focuses concentration on one thing (lava lamps)

Increases appetite

Impairs lung function

Increases susceptibility to disease

Causes Cancer (1 joint = 5 cigarettes)

Decreases sex drive

Emphasizes lack of caring about things

Some people will say, “I would rather drive with someone who has smoked pot than someone who has been drinking”. It is the equivalent of saying you would rather be executed by lethal injection than be subjected to the firing squad. Marijuana smokers concentrate too much on one thing. Unfortunately when one is driving one has to concentrate on about 12 to 15 different things per minute. Don’t get into a car with either smokers or drinkers.

### ASSIGNMENT

1. Marijuana was first used in the United States in which of the following cities? (circle the correct answer)

- a) New York
- b) Cleveland
- c) New Orleans
- d) Rochester

2. **T or F** Marijuana THC levels have increased over the past 30 years.

3. **T or F** More kids use marijuana at an earlier age than 30 years ago.

4. Some effects of pot smoking are:

5. **T or F** It is better to get a ride from someone that is high than someone who is drunk.

### REFERECES

Hanson, Steve. Class notes from SUNY Brockport class “Drug Use and Abuse”.

# COCAINE

Cocaine is a psycho-stimulant that is found in leaves of the South American shrub *Erythroxylon coca*. The drug induces a sense of exhilaration in the user. Some who use it call it instantly addictive. The reason that they say this is because cocaine gives an immediate rush or burst of energy. It may make you feel as if you can do anything in the world. Unfortunately, as with every drug, there is a rebound affect which is directly opposite the affect the drug produces. A short feeling of superiority will be followed by extreme depression. The need to get rid of the horrible feeling is what makes one crave the drug.

Cocaine can be snorted, injected, or smoked. Crack cocaine is the rock form of the drug that made street sales skyrocket because of the ease at which it can be transported. Crack reaches the brain within seconds and is a much purer form of cocaine.

Using cocaine is like taking a roller coaster ride that is speeding out of control and the track ends. At the time of administering the drug everything happens very quickly. Heart rate, blood pressure, and body temperature all rise. Pupils widen and distort the distance that objects are from the user. Concentration becomes difficult. Almost as fast as the high is the let down. The severe depression that the user feels makes the user want to take more of the drug to get out of the valley. The rapid ups and downs of cocaine put a tremendous amount of stress on the heart. Many users have suffered heart attacks and died on even the first use.

Cocaine is a very expensive drug. The will to get one more trip becomes the only priority in the users life. In drug studies done on monkeys, an experiment was set up to see how the animals would react to using cocaine. Early in the experiment there was a button the monkey could press to get food and a button that would administer cocaine. After a period of time the monkey was not hitting his food button and began to take rapid hits of the cocaine. The researchers then took the cocaine away. The monkey stopped eating and hit the cocaine button over 15,000 times to try to get a hit of the cocaine. Cocaine was then readministered and the monkey took the drug until it was dead. Cocaine is the only drug ever tested that a monkey will administer until it dies. The only priority in the life of that monkey was to get another hit of cocaine. Everything else just went away. Think of all the responsibilities you have as a brother or sister, a student, a teammate, and a son or daughter. All of those responsibilities vanish when you are on cocaine. A user will do anything to get the next high, even resort to crime.

## ASSIGNMENT

Cocaine is administered by:

- (a) needles
- (b) snorting
- (c) smoking
- (d) all of the above

The main reason why cocaine is such an addictive drug is:

- (a) it reacts slowly in the brain
- (b) to get rid of the depressed feeling after you rebounded from the drug
- (c) it lowers heart rate
- (d) all of the above

**T or F** Crack is a rock form of cocaine that can only be injected with a needle.

**T or F** Cocaine is the only drug ever tested that a monkey will self-administer until death.

Give three ways your body reacts when using cocaine:

## REFERECES

*"Cocaine and Crack."* The Textbook Alternative for Health Curriculum. Johnson Publications Ltd. Lewiston, New York. 1993 pg. 16-20.

Hanson, Steve. Class notes from SUNY Brockport class "Drug Use and Abuse."

*"The Tragic Lure of Cocaine."* Current Health 2 Vol. 25 No. 6. February 1999. pg. 6-12.



# STEROID USE

## THE DON'T'S OF THIS DANGEROUS DRUG

Today's athletes may look at steroids as a performance-enhancing drug, but in essence, it is a dangerous drug that has many disastrous side effects. Athletes are always looking for shortcuts to bettering their performance. Hard work and patience may sometimes take a back seat to faster times, bigger lifts, and being stronger than your opponent. Steroids work to provide those quick fixes but they also come with many negative effects.

Steroids are a synthetic hormone that when taken, will rapidly produce muscle mass and work to develop the body at a pace where it can not keep up with itself. In males, this rapid development will cause thinning of the hair or hair loss. Another side effect is massive amounts of acne, both facial and on the back. The most common side effect steroids have on people is the uncontrollable rage one may have when taking steroids. These mood swings can ruin friendships and alienate a steroid abuser from people he or she may care about. Steroids also can produce breasts in males. One of the greatest side effects steroids has on males is it causes a shrinking of the testicles. Lyle Alzado, a former All-Pro defensive tackle for the Oakland Raiders, was an avid steroid abuser. He developed an in-operable brain tumor, which many doctors believed was directly correlated to his steroid abuse. Mr. Alzado spent the last year of his life discussing the negative effects steroids have on athletes.

As women's athletics grow today, so does steroid abuse among female athletes looking to get an edge over their opponent. The side effects that steroids have on women are as equally dangerous as they are on men. Females develop facial and body hair along with acne that can become severe. Women will develop a deeper voice due to the steroid hormone. Females who use steroids could also encounter sterility. This sterility can happen during the use or even as a long-term effect when the use is over.

Even though an athlete may stop taking steroids, steroids can remain in the body for a very long time. Their effects may not show right away but can come about down the road. As the steroids store in the body they go directly to fat cells and may cause weight gain when the training stops.

When you factor all of the risks involved in using anabolic steroids, you must ask yourself if such use is worth the rewards. Unfortunately, there are many people who will break the law to better their performance. Remember, steroids are illegal. By educating yourself, you can make the right choice to protect your body.

## ASSIGNMENT

What are some side affects males can encounter from steroid use?

Why would someone experiment with steroids if they knew the negative side affects?

Explain what is meant by a “quick fix” and why it doesn’t pay off in the long run:

How can steroid use effect a non-user?

What are some side affects females can encounter from steroid use?

## REFERENCES

“*Anabolic Steroids.*” The Textbook Alternative for Health Curriculum, Johnson Publications Ltd. Lewiston, New York March 1995 pg. 28-33

Hanson, Steve. Class notes from SUNY Brockport class “*Drug Use and Abuse.*”

# CREATINE SUPPLEMENTATION

The practice of creatine supplementation as an ergogenic aid in high intensity exercise has become increasingly prevalent among athletes. Creatine is a natural occurring substance that is produced in the body and ingested through meat or fish products. It is stored in the muscle and plays an important role in energy metabolism during the early phase of high intensity exercise. In the form of phosphocreatine it aids in replenishing the ATP, which is the primary energy source for muscle contraction.

Creatine supplementation does appear to be an effective means of improving performance of repetitive high intensity exercise. Athletes involved in sports of an intermittent nature such as football, wrestling, and weight lifting might benefit the most from creatine supplementation. Although still legal and proven to produce results, creatine has many unknowns to consider. Most of the studies that have been completed have been done on physically fit athletes with controlled diets. The average high school athlete cannot use those studies to justify their experimentation. Improper use has already lead to the deaths of several high school and college athletes and some of the leading fitness magazines have stopped endorsing and advertising the supplement.

Many concerns have surfaced due to the similarities between creatine and steroids. They are both cycled and can be mixed with other supplements, which could lead to unknown results. Another concern is that many athletes take the supplement in amounts far greater than the suggested daily dose. The recent explosion of supplements has also limited the long-term studies performed on them. There is still much to learn about the effects of creatine supplementation on athletic performance.

Until more long-term studies have been done, great caution should be taken before experimenting with any performance enhancing supplements, including creatine.

## ASSIGNMENT

Creatine can be found in what natural foods?

Why don't we know more about creatine?

What type of exercise or activities benefit the most from creatine?

What does creatine do?

Name some other popular performance enhancing supplements that you have heard of:

## ADDITIONAL REFERENCES

Toner, Patricia Rizzo. *Substance Abuse Prevention Activities*. Unit 6. The Center for Applied Research in Education. New York. 1993

# CRIME AND VIOLENCE – THE ALCOHOL / DRUG CONNECTION

There is no doubt that the number one cause of social decay is crime and violence and the number one cause of crime and violence is alcohol/drug abuse. We know that a high percentage of criminal offenders have problems with alcohol and other drugs. One survey indicates that 62% of inmates in federal and state prisons – almost two of every 3 inmates – used drugs on a regular basis prior to their incarceration. In many metropolitan areas, more than 70% of arrestees test positive for drugs. The National Institute of Justice estimates up to 80% of offenders, parolees, and probationers, have some degree of substance abuse problem related to their criminal activity. Substance-abusing offenders commit four to eight times more crimes than other criminals do. Arrests related to alcohol and other drug use increased by 126% during this last decade.

While it is commonly recognized that a large percentage of individuals in crime and violence are abusing or dependent upon illegal drugs, there is much less recognition of the alcohol connection. Alcohol's status as the gateway drug is an important phenomenon and has major implications. Because of the immediate intoxicating and disinhibiting effects of alcohol, crime and violence is more probable than without any alcohol consumption. Alcohol is implicated in the return to criminal behavior as well as relapse into other drug abuse.

Studies of domestic and criminal violence often document high rates of alcohol involvement, as alcohol consumption impairs moral judgment, reduces inhibition, and increases aggression. Alcohol is associated with a substantial proportion of violence, and often both the victim and perpetrator have been under the influence at the time of the incident. Alcohol further plays a role in both intentional and unintentional injury, in both premeditated as well as spontaneous violence.

The New York State Anti-Drug Council Strategy Report of 1989 stated that the alcohol and drug abuse problem in New York State, and the impact such abuse had could be seen through the increase in the numbers of murders, aggravated assaults and other violent crimes, the rising incidence of child and spousal abuse, suicide, alcohol and drug impaired driving. While the statistics are chilling, the true extent of misery and suffering due to abuse and dependency can never be fully conveyed. Crime and other violence are factors, which negatively affect lives for years, often for lifetimes.

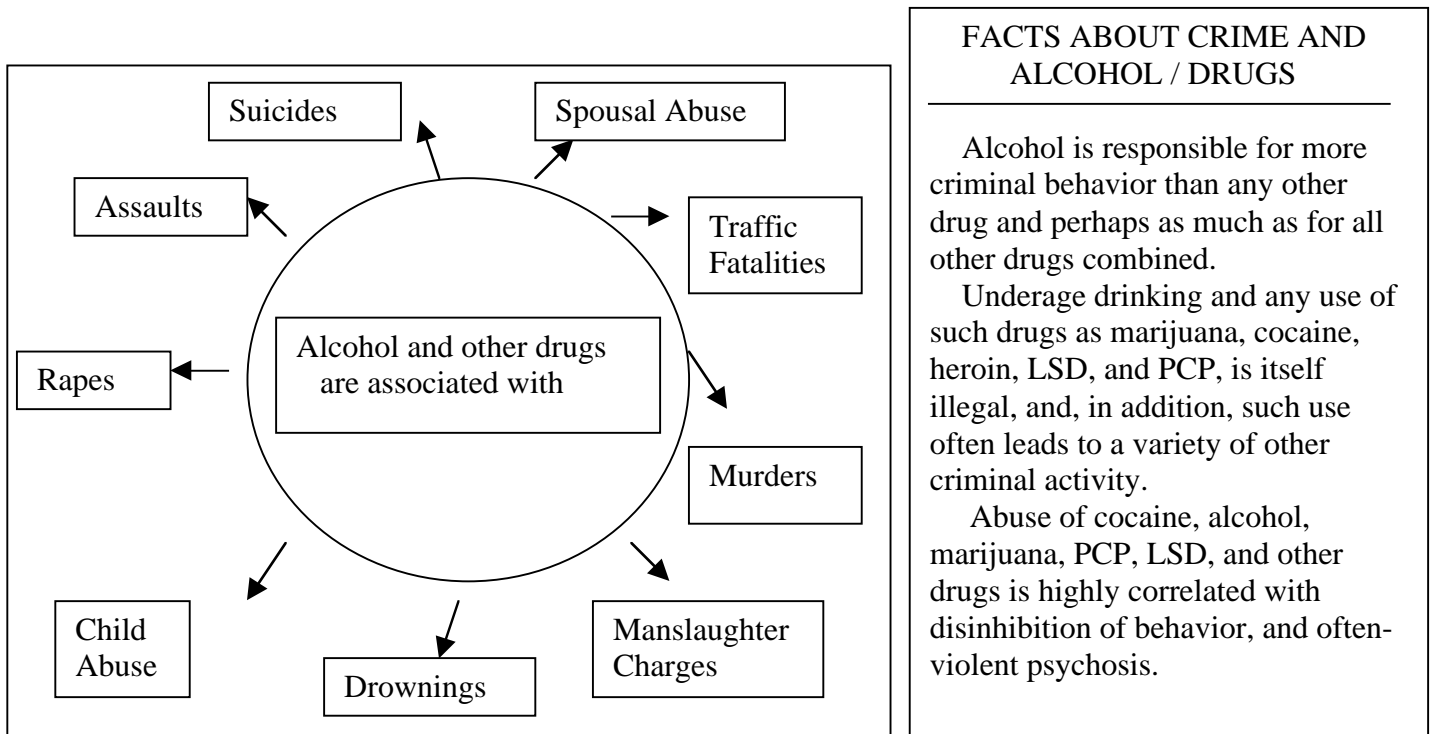
## ASSIGNMENT

What is the number one cause of crime and violence?

What percent of criminals have some degree of substance abuse problem?

Studies in domestic and criminal violence document what substance being involved?

What is the “gateway” drug referred to in this article?



NON-SMOKING

# SMOKING CESSATION

Wellness includes as one of its 12 aspects not smoking or quitting smoking. The reason for this is quite apparent.

Every day in the United States more than 3,000 children under the age of 18 become cigarette smokers. That's more than one million children a year picking up the habit. Peer pressure, tobacco advertising, and the entertainment industry all contribute to our interest in smoking.

Studies show that if a person doesn't smoke by the age of 18, he or she probably never will. Exposure to smoke sickens and kills more people than alcohol, cocaine, heroine, homicide, suicide, car accidents, fires and AIDS combined.

Most people start smoking between the ages of 10 and 18. It's easier to try to prevent smoking than it is to try quitting. The immediate negative effects of smoking are bad breath, smelly hair and clothes, impaired athletic ability, and the cost. The long-term effects are much more serious and often lead to death – cancer, especially lung, throat, or mouth; also emphysema, and heart attacks.

The tobacco industry has been under attack because of the damage smoking has done and the drain it has caused with medical expenses. In November 1999, a tentative settlement was reached with the tobacco industry in which:

- the total cost to the tobacco companies was estimated to be as much as \$206 billion over 25 years (Monroe County would receive \$362.9 million)
  - all outdoor cigarette advertising, promotional merchandise with brand name logos, and use of cartoon characters in advertising tobacco products would be banned
  - tobacco companies would be limited to one brand-name sponsorship of a sports event each year
  - the industry would pay \$25 million each year for 10 years to fund a foundation to reduce teen smoking
- Research on the recreational use of tobacco has found that:
- tobacco stimulates the heart and respiratory rates yet people who smoked reported a sense of relaxation
  - tobacco smoking has been directly related to the development of health problems especially of the heart and lungs
  - most tobacco smokers say that they would like to quit
  - use of tobacco by minors is illegal
  - social reinforcement seems to be the primary reason for smoking

**The best advice is – if you haven't started, DON'T. If you have, get help to quit.**



## ASSIGNMENT

List 3 areas that contribute to our interest in smoking:

When do most people start smoking?

Why is the tobacco industry under attack?

What are the long-term effects of smoking?

Is it easier to prevent smoking or to quit smoking?

# NICOTINE

Nicotine comes from a plant that is native to the Western Hemisphere. In the 1600's nicotine was used medically for coughs, colds and flu, and labor pains. The most interesting medical aspect of nicotine was its use as a reviver of drowning victims by blowing smoke into the rectal cavity (this is not a joke). Nicotine was an important trade commodity. Originally popular in pipe smoking and in the 1800's in snuff, it became extremely popular with the military. General Persing said, "Tobacco is just as important as bullets to winning a war".

By the 1950's, cigarette sales increased 40% while house fires also rose 40%. Nicotine has a lethal dose, which is found in 1/2 of a cigar or two packs of cigarettes smoked rapidly. Most fatalities occur with children who get a cigarette and eat it. Two cigarettes can be fatal to a child.

Nicotine is the "gateway" drug. Most other drug use stems from starting to smoke. 95% of all cocaine users also smoke. Smoking combines nicotine, tar, and carbon monoxide, which cuts down on the ability of oxygen to travel throughout the body. Nicotine causes physical dependency, which means that even if your body does not need it, your mind tells you it does.

## **Smoking and Nicotine's Vital Statistics**

Nicotine is responsible for 435,000 deaths per year (1/2 the population of Rochester). Approximately 1200 people die every day. In contrast, cocaine kills 3,000 people per year. Alcohol (which kills the second most) kills over 200,000 people per year. Smoking doubles your risk of a heart attack. There is also an increase in sudden infant death syndrome in houses where one person smokes. If you smoke 2 packs of cigarettes a day your life expectancy will be 8 years shorter than your neighbor who does not smoke.

## ASSIGNMENT

How many people die each year of smoking?

Name the three products in cigarettes that can cause health problems:

**T or F** Using snuff is a way to get nicotine.

**T or F** Smokers have no more of a risk of a heart attack than other people do.

**T or F** People tried to revive drowning victims by blowing nicotine into their rectal cavity.

## SMOKING INFORMATION

The following article was written to help parents prevent their children from smoking or help them quit smoking once they start. Read this article from the Blue Cross/Blue Shield Newsletter.

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Living Well

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# Clear the air

*How to prevent your child from smoking*

**N**o parent wants to see a child's good health go up in smoke. You can help protect your children by talking to them about the dangers of smoking. It's never too early to start this discussion. About 30 percent of high school seniors report having had their first cigarette in sixth grade or earlier, according to the American Academy of Pediatrics (AAP).

"Start early by making sure your children aren't exposed to tobacco smoke in your home and in other settings, such as their day care," says Donna Satterlee, R.N., BlueCross BlueShield of the Rochester Area (BCBSRA) quality-management nurse. Children exposed to tobacco smoke are more likely than other children to have health problems including ear infections, asthma, bronchitis, pneumonia and upper respiratory tract infections.



### **The effects of advertising**

As children grow, they are influenced by media images of smoking. Advertisements often show smokers as healthy, energetic, sexy and successful, says the AAP. “One thing that parents can do is point out the lies in advertising,” says Satterlee.

Talk with your children about why the harmful effects of smoking aren’t discussed in ads. Many children and young adults get angry when they realize how ads misrepresent the truth and try to get them to smoke.

### **What parents can do**

Stressing the negative, short term effects of smoking, rather than the long-term health risks, seems to have the most impact on teenagers, says Satterlee. Smoking causes bad breath,

smelly clothes, wrinkled skin and stained fingers and teeth. Cigarettes are also expensive. Smoking a pack a day costs about \$24 a week – more than the cost of a compact disc – or close to \$1,300 a year. Encourage teens to think about what they could be spending their money on instead of tobacco.

Lead by example. If you smoke or use tobacco, quit. Encourage your children to live a healthy lifestyle, including getting regular physical activity, eating a nutritious diet and socializing with friends who don’t smoke.

### **Helping your child quit**

Quitting becomes more difficult the longer your child smokes. Once your child expresses an interest in quitting, ask what you can do to help. Your child’s primary care physician can help assess your child’s needs and provide information on smoking

cessation.

The Lifetime Health Medical Centers offer a smoking -cessation program especially designed for teens. Called Smoking Cessation Teens, the four, one-hour sessions are offered at the centers and high schools throughout Monroe County. Call **(716) 338-4916** for dates, times and locations.

Your child may not be able to quit for good the first time. In general, it can take several tries to stop smoking. Continue to show your support and be patient if your child isn’t successful on the first try.

## **ASSIGNMENT**

Do you think parents can affect whether a child smokes or not? If yes, how do they? If no, why don’t they?

Find a cigarette ad. List what the ad says is good about their product. Then list what the ad says is bad about their product.

Do you think that the article fairly represents what parents can do to “clear the air”?