

What is Parkinson's disease?

2 credit hour course

Parkinson's disease (PD) is a disorder caused by a loss of nerve cells in a small part of the brain called the substantia nigra. This area of nerve cells makes an important chemical called dopamine. The main function of dopamine is to send signals to the part of the brain that controls movement. Muscles function normally and the body moves the way you want it to. In someone who has Parkinson's, the nerve cells begin to break down. When this occurs, the amount of dopamine that is produced in the brain lessens, causing problems in the way you move.

Parkinson's disease is a progressive disease, meaning a person who has it will get worse over time. It is however a slow process, taking place over a number of years. Many advances are being made in the treatment of Parkinson's, helping a person to live a full life.

WHAT CAUSES PARKINSON'S?

When the symptoms of PD appear, it is due to losing a large number of dopamine producing cells in the substantia nigra. What causes this massive loss of cells? The research into this is ongoing. Many diseases throughout the world have been discovered to have been caused by genetic factors, passed down from family members. There are also diseases that have been proven to be caused by environmental toxins. There is yet another category that points to certain diseases being caused by a combination of the factors already mentioned. Parkinson's is believed to be one of these. There are a few rare cases in the world of PD being an inherited disease. There are also a few rare cases of PD being caused by drug use in individuals, exposed to a toxin called MPTP. The vast majority of people who suffer from PD however do not fall into these categories. Researchers theorize that perhaps a "mystery gene" in their system makes them more vulnerable to environmental toxins, triggering the onset of PD. Only time and more research will tell.

WHO GETS PARKINSON'S?

Though the figures are not exact, it is estimated that there are nearly 1 million people in the United States who have PD. Statistics show that PD tends to affect older people, 55 and over. It has also been shown to affect individuals as early as their 30's and into their 40's. It also tends to affect men more often than it does women. There have been numerous studies done throughout the world to try and determine if PD is more common in certain ethnic groups, with varied results.

There is no denying the fact however that PD has become one of the most common diseases in the United States. There is one main reason for that; advances in medical technology and diet are allowing

people to live longer. Since PD is generally a disease of people 55+ in age, it is of no surprise the number of people with PD is on the rise.

SYMPTOMS OF PARKINSON'S

The signs and symptoms that someone may have PD will be progressive over a number of years. Listed below are some of the main symptoms to look for:

Tremors-When a person has tremors of the hands it will appear as if the person is rolling a small object between the thumbs and fingers. The tremors are progressive over time. They will normally begin in the fingers, spread to the hand and arm, then the entire side of the body. They will then move from one side to the next, affecting the whole body. Tremors tend to be more evident when the person is inactive.

Loss of Flexibility-The loss of flexibility is easier to see when the person is inactive. It appears to lessen when the person is sleeping or engaged in activities that require a large amount of muscle use. The loss of flexibility makes the person with PD more prone to falls and injury.

Akinesia-What this involves is the difficulty in carrying out voluntary muscle activities. A person's movement and actions will appear to be greatly slowed down and increasingly difficult to perform. Signs of Akinesia are:

1. Shuffling manner of walking
2. Difficulty beginning the process of walking
3. Problems stopping once walking has started
4. Slurred or poor speech
5. Facial muscles lose responsiveness, making person seem unemotional

Loss of autonomic nervous control-Because of this, a person with PD may drool, become incontinent, become constipated as well as retains urine.

Mood Swings-A person with PD may appear to be in good spirits one moment, then suddenly sad the next. The feelings of sadness and depression will tend to get progressively worse. In the later stages of PD, changes in behavior may cause psychotic breakdowns and dementia.

DIAGNOSIS

Doctors will ask individuals about symptoms of PD and past health, as well as performing a neurological exam. This exam will include questions and tests to see how well the person's nerves are functioning. A doctor may watch how a person moves, check muscle strength and reflexes, as well as vision. A person may also be asked to try a certain medication. How the medicine affects the person will help the doctor to determine if PD is in fact present.

There are no specific blood or lab tests that can be done to prove to your doctor that you have PD. There are other tests, such as an MRI, that can help rule out stroke or a brain tumor that may be causing the symptoms.

Presently, there is no known cure for PD. However, there are several medicines on the market today that can help in controlling symptoms of PD and make life for the person easier.

YOUR ROLE AS A CAREGIVER

When working with a patient who has PD, there are several factors that you should be aware of that will help their quality of life. Some of those include:

Maintaining calm environment-Symptoms with someone who has PD tend to be more intense when that person is under stress. Be calm and reassuring. Help to maintain a quiet, low-key environment for the individual.

Assist in daily living-Assisting and supervising the person's daily activities is very important. A good example would be helping the person at meal time, directing food into the mouth and help them keep it there while they chew and swallow.

Emotional support-Be a shoulder to cry on, listen to them. Offer your support and encouragement as often as you can. Having someone there that they can talk to and gain emotional support from greatly helps with their quality of life.

Exercise-The majority of plans of care for patients with PD will include some type of exercise regimen. Get them accustomed to exercises that target specific muscles and part of the body. This will help them to maintain a quality of life.

Protection-Some patients with PD will begin to experience dementia at some stage in their disease. It is important to help patients move and protect them from falling or collisions.

Test Questions

1. Parkinson's disease is caused by the loss of _____ in the brain.
 - A. Neurons
 - B. Nerve cells
 - C. Neutrons
 - D. Nuclei
2. PD originates in a part of the brain called the _____.
 - A. Subdural
 - B. Subcutaneous
 - C. Substantia Nigra
 - D. Subcerebral
3. The main function of _____ is to send signals to the part of the brain that controls movement.
 - A. Dramamine
 - B. Dopamine
 - C. Digitalis
 - D. DNA
4. PD is a progressive disease. T F
5. Environmental toxins and _____ may play a role in what causes PD.
 - A. Genetic factors
 - B. Cancer
 - C. Climate
 - D. Age
6. Exposure to MPTP may be a factor in the cause of PD in some people. T F
7. It is estimated that _____ people in the U.S. have PD.
 - A. 250,000
 - B. 500,00
 - C. 1 million
 - D. 2 million

8. Statistics have shown the people _____ years and older have a greater tendency to contract PD.
- A. 35
 - B. 45
 - C. 55
 - D. 65
9. Women tend to be more affected by PD than men. T F
10. Symptoms of PD include all the following except:
- A. Rashes
 - B. Loss of flexibility
 - C. Akinesia
 - D. Mood swings
11. Akinesia involves difficulty in carrying out voluntary _____ activities.
- A. Daily
 - B. Physical
 - C. Muscle
 - D. Mental
12. Conditions resulting from Akinesia include the following except:
- A. Loss of memory
 - B. Slurred speech
 - C. Difficulty starting walking
 - D. Difficulty stopping walking
13. In a person with PD, changes in behavior may result in dementia and _____.
- A. Memory loss
 - B. Psychotic breakdowns
 - C. Bone loss
 - D. Seizures
14. Doctors may ask about symptoms and _____ when diagnosing PD.

- A.** Past accidents
 - B.** Past health
 - C.** Food intake
 - D.** Exercise
15. Currently, there are several cures for PD. T F
16. One important thing to remember as a caregiver of someone with PD is maintaining a _____ environment.
- A.** Fun
 - B.** Temperature controlled
 - C.** Darkened
 - D.** Calm
17. Examples of assisting a person with PD in their daily living include the following except:
- A.** Leaving them alone
 - B.** Cooking meals
 - C.** Helping them eat
 - D.** Keeping them clean
18. Being a source of emotional support for someone with PD can greatly improve their quality of _____.
- A.** Their home
 - B.** Their pets
 - C.** Their life
 - D.** Their food
19. When working with someone who has PD, a caregiver should be aware of all the following except:
- A.** Exercise
 - B.** Protection
 - C.** Emotional support
 - D.** Keeping quiet when patient asks questions
20. Dementia is a possible danger in patients with PD. T F

How to Apply for Course Credit:

Please fill out the information below and mail it in with your test answers and payment of **\$10** to:

Health People, Inc.
12501 Bel-Red Road, Suite 214
Bellevue, WA 98005

Upon verifying completion, we will mail you the certificate for **2 CEU** credits to the address you provide.

Name _____

Institution/Facility _____

Mailing Address _____

City _____ State _____ Zip _____

Telephone _____ Fax _____

Email _____

Date of Course Completion _____
(this date will appear on your certificate)

Signature _____

Payment Type:

- Check made payable to Health People, Inc.
- Credit Card Payment: Visa MasterCard

Credit Card Number _____ Month Year Expire Date _____

X _____
Signature (as it appears on the credit card)