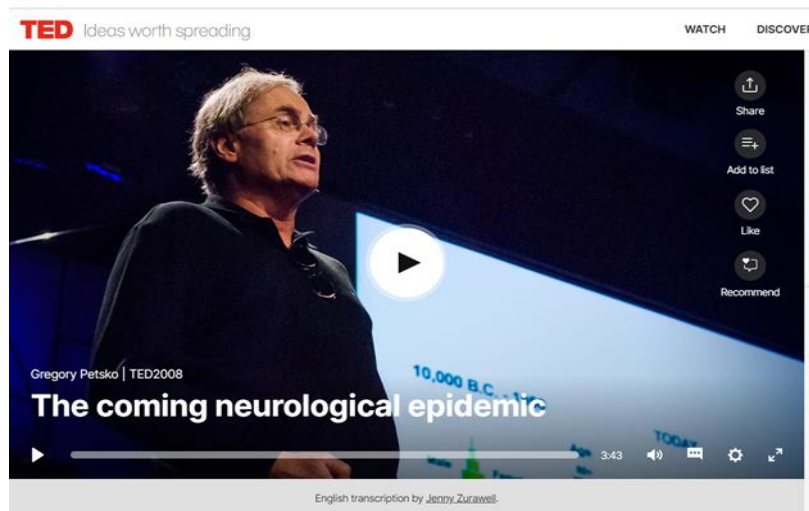


## The Coming Neurological Epidemic

Lesson by Catherine Richards /Video by TED & Gregory Petsko



### A. Before you watch (TED.com, Gregory Petsko)

1. What do you think is meant by the title 'The Coming Neurological Epidemic'.
2. Watch the video until **>1.38** Were your predictions correct?

### B. Vocabulary

The sentences below contain words from the TED talk. Read the sentences then guess the meaning of the word in bold. Match each word to a definition.

**tangles** (n) **lifespan** (n) **fold up** (v) **pursue** (v) **global scale**(n) **exponentially**(adv)  
**proper**(adj) **keep from** (v) **meantime** (n)

- a. The cables that run under our desks are a mess of **tangles**.
- b. The average **lifespan** of a domestic cat in the UK is around 17 years.
- c. I always find it more difficult to **fold up** a map after using it.
- d. She moved to London when she was 18 to **pursue** her dream of becoming an actress.
- e. Last year was, on a **global scale**, the warmest on record
- f. As you get older your risk of developing Alzheimer's increases **exponentially**
- g. You can't enter the factory without the **proper** safety shoes
- h. The child's bicycle has stabilisers to **keep it from** falling over
- i. Her PhD will take seven years to complete; in the **meantime** she plans to continue working as a teacher

**Definitions**

1. .... while something else is being done
2. .... (to change) increasingly rapidly
3. .... knotted together in a complicated way
4. .... related to the whole world
5. .... prevent something from happening
6. .... appropriate or correct
7. .... the duration of a living organism
8. .... to try to get or do over a period of time
9. .... to make into a smaller or neater shape

**C. Watch for the main ideas**

Watch the presentation. Which TWO sentences best expresses the main ideas in the talk.

1. *An increasing number of new neurological diseases will appear by 2050*
2. *Ageing will result in a huge increase in people suffering neurological diseases*
3. *Neurological diseases will affect an increasing number of younger people*
4. *More money needs to be spent on researching neurological diseases*
5. *Poor diets in Western countries are the principal cause of the increase in neurological disease*

**D. Watch for detail**

1. What do the following numbers refer to?

- 12,000 .....
- 65 .....
- 5 .....
- 32 .....

**2. True or False?**

- 1. Gregory Petsko says there is nothing we can do to prevent the increase in cases of neurological disease  
True      False
  
- 2. Our lifespan has more than tripled since 1840 (\* in industrialised countries)  
True      False
  
- 3. Petsko says that around 16 million people over the age of 80 are likely to be suffering from Alzheimer's by 2050.  
True      False
  
- 4. Drugs are currently being investigated that keep the protein in its correct shape  
True      False
  
- 5. The relationship between cancer and neurological disease is behind a lot of current research  
True      False
  
- 6. Petsko says government spending is currently being matched by privately funded research  
True      False
  
- 7. High blood pressure is a risk factor for both Alzheimer's and glaucoma  
True      False

## E. Communicate

1. Look at <https://www.alz.org/alzheimers-dementia/treatments>
2. **Pair A** read and make notes on Treatment for Behaviour  
**Pair B** read and make notes on Treatment for Sleep Changes

*For groups of three*

- Pair C** read and make notes on Alternative Treatments
3. **Practice** presenting your summaries (with your partner if in class)
4. **Re-group** and present your findings to a classmate from a different pair.

## 2) Discuss

A study published in March 2020 shows that a metabolic pathway plays a determining role in Alzheimer's disease's memory problems. The research also shows that supplying a specific amino acid as a nutritional supplement in a mouse model of Alzheimer's restores spatial memory affected early. This is a promising path for reducing memory loss related to that disease.

Summary [www.sciencedaily.com/releases/2020/03/200303113357.htm](http://www.sciencedaily.com/releases/2020/03/200303113357.htm)

How significant do you think this study is? Tell your classmate.

Have you heard of any other promising developments in Alzheimer's and Parkinson's research?

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[https://www.ted.com/talks/gregory\\_petsko\\_the\\_coming\\_neurological\\_epidemic?language=en](https://www.ted.com/talks/gregory_petsko_the_coming_neurological_epidemic?language=en)

### A. Before you watch

1. What do you think is meant by the title 'The Coming Neurological Epidemic'?

**Suggested answer:** Neurological Epidemic refers to neurological conditions such as Alzheimers' and Parkinson's which affect a growing number of people across the world. Because of the huge numbers that are predicted will suffer from a neurological condition, and how much of the world it will affect, the author /presenter has used the term epidemic.

### B. Vocabulary

- a. The cables that run under our desks are a mess of **tangles**.
- b. The average **lifespan** of a domestic cat in the UK is around 17 years.
- c. I always find it more difficult to **fold up** a map after using it.
- d. She moved to London when she was 18 to **pursue** her dream of becoming an actress.
- e. Last year was, on a **global scale**, the warmest on record
- f. As you get older your risk of developing Alzheimer's increases **exponentially**
- g. You can't enter the factory without the **proper** safety shoes
- h. The child's bicycle has stabilisers to **keep it from** falling over
- i. Her PhD will take seven years to complete; in the **meantime** she plans to continue working as a teacher

### Definitions

1. **in the meantime** while something else is being done
2. **exponentially** (change) increasingly rapidly

3. **tangles** things that is joined together in a complicated way
4. **global scale** related to the whole world
5. **keep from** prevent something from happening
6. **proper** appropriate or correct
7. **lifespan** the duration of a living organism
8. **pursue** to try to get or do over a period of time
9. **fold up** to make into a smaller or neater shape

**C. Watch for the main ideas**

Which TWO sentences best expresses the main ideas in the talk.

1. *An increasing number of new neurological diseases will appear by 2050*
2. ***Ageing will result in a huge increase in people suffering neurological diseases***
3. *Neurological diseases will affect an increasing number of younger people*
4. ***More money needs to be spent on researching neurological diseases***
5. *Poor diets in Western countries are the principal cause of the increase in neurological diseases*

**D. Watch for detail.** Watch the video then answer the following questions.

**1. What do the following numbers refer to?**

12,000 – how long ( in years) / the number of years the distribution of ages in the human population has looked like a pyramid

65 The age above which your risk of getting Parkinson’s or Alzheimer’s increases exponentially

5 hours – the rate at which our lifespan increases ever day

32 million - the number of people (who are) over the age of 80 in the USA by 2050

**TEACHER'S NOTES:** You may like to introduce a focus on language at this point to revise / clarify relative pronouns. I like the Khan Academy video for students with B2 and above.

<https://www.youtube.com/watch?v=ZHkQkX3IxI>

There are plenty of videos online that you may prefer.

Or if you're in a classroom, you can revert to good old-fashioned teacher input.

## 2. True or False?

1. Gregory Petsko says there is nothing we can do to prevent the increase in cases of neurological disease

True      **False**

***Petsko says 'unless we do something to prevent it...'***

2. Our lifespan has more than tripled since 1840 (\* in industrialised countries)

True      **False**

***Petsko says 'more than doubled'***

3. Petsko says that around 16 million people over the age of 80 are likely to be suffering from Alzheimer's by 2050.

**True**      False

4. Drugs are currently being investigated that keep the protein in its correct shape

**True**      False

5. The relationship between cancer and neurological disease is behind a lot of current research

True      **False**

***Petsko says most people (i.e. researchers) are not interested in this relationship***

6. Petsko says government spending is currently being matched by privately funded research

True      **False**

***Petsko says that 'most of the important and all of the creative work in this area is being funded by private philanthropies'***

7. High blood pressure is a risk factor for both Alzheimer's and glaucoma

**True**      False