

## Keeping cold could keep you thinner

10th January, 2015



Scientists have discovered that staying in the cold could help us lose weight. Researchers at the University of California found that exposure to the cold increases levels of a protein that helps

form brown fat - the type of fat that generates heat and keeps us warm. Brown fat burns energy, which helps us lose weight. White fat stores excess energy, which results in weight gain. The researchers said that because air conditioning and heating give us constant, comfortable temperatures, our body's need for brown fat has decreased. They found that: "Outdoor workers in northern Finland who are exposed to cold temperature have a significant amount of brown fat when compared to same-aged indoor workers."

The research was conducted on two different control groups of mice. One group was injected with the protein that helps create brown fat. This group subsequently gained 30 per cent less weight after both groups were fed high-fat diets. The researchers say this could be good news in the fight against obesity. People who are obese have lower levels of brown fat than thinner people. Head researcher Hei Sook Sul said: "This protein could become an important target for research into the treatment and prevention of obesity and obesity-related diseases." She added: "If you can somehow increase levels of this protein...you could possibly lose more weight even if eating the same amount of food."

Sources: *MedicalXpress / Yahoo Health / Web MD*

## Writing

We should use less heating to keep to a healthier weight. Discuss.

## Chat

Talk about these words from the article.

*the cold / lose weight / exposure / heat / protein / air conditioning / temperatures / control groups / high-fat diets / obesity / treatment / prevention / diseases / food*

## True / False

- Researchers at Chicago University found the cold helps us lose weight. T / F
- Brown fat helps us lose weight. T / F
- The use of air conditioning has reduced the amount of our brown fat. T / F
- People who work outdoors have less brown fat than office workers. T / F
- Mice with the new protein gained 30% less weight than mice without it. T / F
- Obese people have lower levels of brown fat. T / F
- A researcher said the protein would be no good to tackle obesity. T / F
- The researcher said you would have to have the protein and eat less. T / F

## Synonym Match

- |                 |                |
|-----------------|----------------|
| 1. discovered   | a. carried out |
| 2. exposure     | b. produces    |
| 3. form         | c. in some way |
| 4. generates    | d. found       |
| 5. significant  | e. later       |
| 6. conducted    | f. quantity    |
| 7. subsequently | g. subjection  |
| 8. fight        | h. notable     |
| 9. somehow      | i. battle      |
| 10. amount      | j. make        |

## Discussion – Student A

- How often do you think about your weight?
- How do you like the cold and cold weather?
- What's the coldest you've ever been?
- Do you think this research will help with obesity?
- What can we do to enjoy being in the cold more often?
- Have you ever been on a diet?
- Would you like to eat more and not put on weight?
- What questions would you like to ask the researchers?

## Phrase Match

- |                                    |                                 |
|------------------------------------|---------------------------------|
| 1. exposure                        | a. to cold temperature          |
| 2. the type of fat that generates  | b. eating the same amount       |
| 3. White fat stores excess energy, | c. two different control groups |
| 4. exposed                         | d. to the cold                  |
| 5. a significant                   | e. with the protein             |
| 6. conducted on                    | f. heat                         |
| 7. One group was injected          | g. prevention of obesity        |
| 8. both groups were fed            | h. amount of brown fat          |
| 9. the treatment and               | i. high-fat diets               |
| 10. lose more weight even if       | j. which results in weight gain |

## Discussion – Student B

- What do you think about what you read?
- Do you think cold weather can help us lose weight?
- What part does shivering have to play in weight loss?
- Would you spend longer in the cold to lose weight?
- What do you know about the different kinds of fat in our body?
- Should we use air-con and heating less?
- Would it be better if we all worked outside?
- Are people who live in colder climates thinner?

## Spelling

- eruesxpo to the cold
- a roetipn that helps form brown fat
- fat that tgaeserne heat
- White fat stores ecssxe energy
- cold eptertmurea
- a fagisnicnit amount of brown fat
- One group was nticdjee
- This group eentbsyluqus gained 30% less
- the fight against bsioyet
- Head eshaercrer
- treatment and iteevonnrp
- lose more iegwht

### Answers – Synonym Match

1. d	2. g	3. j	4. b	5. h
6. a	7. e	8. i	9. c	10. f

## Role Play

### Role A – Work in the cold

You think working in the cold is the best thing to do to lose weight. Tell the others three reasons why. Tell them why their things aren't so good. Also, tell the others which is the least effective of these (and why): yoga, weight training or no sweet food.

### Role B – Yoga

You think yoga is the best thing to do to lose weight. Tell the others three reasons why. Tell them why their things aren't so good. Also, tell the others which is the least effective of these (and why): working in the cold, weight training or no sweet food.

### Role C – Weight training

You think weight training is the best thing to do to lose weight. Tell the others three reasons why. Tell them why their things aren't so good. Also, tell the others which is the least effective of these (and why): yoga, working in the cold or no sweet food.

### Role D – No sweet food

You think no sweet food is the best thing to do to lose weight. Tell the others three reasons why. Tell them why their things aren't so good. Also, tell the others which is the least effective of these (and why): yoga, weight training or working in the cold.

## Speaking – Losing weight

Rank these with your partner. Put the best ways to lose weight at the top. Change partners often and share your rankings.

- |                    |                            |
|--------------------|----------------------------|
| • work in the cold | • swim                     |
| • eat less food    | • weight training          |
| • yoga             | • fast for two days a week |
| • sauna workout    | • no sweet food            |

### Answers – True False

a	F	b	T	c	T	d	F	e	T	f	T	g	F	h	F
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Answers to Phrase Match and Spelling are in the text.