

1 次の文章を読んで、各問に答えなさい。

Exposure to a dog in the first year of life was linked to a 13% lower risk of *asthma in later childhood among the 650,000 children the authors tracked. The findings, in *JAMA Pediatrics, support the idea that pets can make the immune system ①strong and prevent allergy. More evidence is still needed because past studies have found (②) results. Certainly, for a child who is already allergic to dogs, buying a puppy would not be a good idea, say the Swedish researchers.

Pets are a common cause of allergy, with half of all asthmatic children allergic to cats and 40% allergic to dogs, according to *the charity Allergy UK. When animals *groom themselves, they lick. Skin cells covered in saliva—*animal dander—are shed along with *loose fur. It's the dander to which some people become abnormally (③). The findings of this latest study suggest that exposure to dog dander in infancy might actually be beneficial.

Children who had grown up with a dog in their home were less likely to have asthma at the age of seven than children without dogs. Living on a farm with lots of animals seemed to confer even more protection, ④(asthma / 50% / the risk / by / of / about / cutting). Lead scientist Prof. Tove Fall, from Uppsala University in Sweden, said: “Our results confirmed the farming effect and we also saw that children who grew up with dogs had about 15% less asthma than children without dogs.” She said this fits with ⑤the hygiene hypothesis which favors exposure to dust and dirt to improve our tolerance of common allergens.

The findings should also provide some reassurance (⑥) parents. “That's important information for parents who are ⑦pregnant or are planning to have a baby, so that they should not worry about getting a dog or a puppy if they would like to. But if you have an allergic child, you should not get a dog to cure your child. It won't work and will probably make the allergy (⑧).” If you are allergic and live with pets, there are things you can do to cut your risk of having an allergic (⑨). *Asthma UK advises: try to keep pets out of your bedroom and living areas; regular grooming and bathing of cats and dogs can help; you could try using air filters and an efficient vacuum cleaner; however the evidence on the benefit of these remains unclear; ⑩ (completely / of / is / dog / sort / non-allergic / no) because they all shed dander.

Amena Warner of Allergy UK said: “There have been a few studies that have suggested this but there has not been such a long-term study with so many children, so that from that point of view this is quite a powerful study. ⑪It's very welcome.” Erika Kennington of Asthma UK, said more research was needed to better understand the effects so that it could be turned into practical advice for parents of young children.

(Adapted from <https://www.bbc.co.uk/news/health-34697408>)

[注] *asthma 喘息 *JAMA Pediatrics アメリカ医学協会誌・小児科学 *the charity Allergy UK 慈善団体アレルギー英国 *groom 毛づくろいをする *animal dander 動物のふけ *loose fur 遊離した柔毛 *Asthma UK 喘息英国

問1 ②、③、⑥、⑧、⑨ の () 内に入る最も適切な語句を (ア) ~ (エ) よりそれぞれ1つ選び、その記号を書きなさい。

② :

(ア) fitting (イ) inevitable (ウ) conflicting (エ) reasonable

③ :

(ア) sensible (イ) sensitive (ウ) sentimental (エ) sensory

⑥ :

(ア) with (イ) against (ウ) by (エ) for

⑧ :

(ア) better (イ) less (ウ) favorable (エ) worse

⑨ :

(ア) reaction (イ) prescription (ウ) situation (エ) prevention

問2 下線部 ① の動詞形と下線部 ⑦ の名詞形を書きなさい。

問3 下線部 ④ と ⑩ の語句を文意に合うように並べ替えなさい。

問4 下線部 ⑤ はどのような仮説か。本文にそって説明しなさい。

問5 下線部 ⑪ について、どうしてこのようなことが言えるのか、その理由を本文にそって説明しなさい。

2 次の文章中の ① ～ ⑤ に最も適切なものを下記の (ア) ～ (オ) から1つずつ選び、その記号を書きなさい。

*Mollusks are fabulous architects. They build houses that (①)—shells of uncommon strength, durability and beauty. Many of these shells have spectacularly complex shapes—*logarithmic spirals *bedecked with *fractal spines or other ornaments, all executed with near-perfect mathematical regularity. Yet mollusks, of course, know nothing of math. How, researchers have wondered, do these humble creatures (②)?

For more than 100 years scientists have recognized that cells, tissues and organs (③) that govern other kinds of matter. But for most of the 20th century biologists focused on understanding how the genetic code (④) and on figuring out how those patterns function.

In recent decades, however, investigators have begun to apply physics-based mathematical modeling to questions about biological form. Our own work along these lines over the past few years (⑤) how shells acquire their ornate structures.

(Adapted from <https://www.scientificamerican.com/article/how-seashells-take-shape/>)

[注] *mollusk 貝類(軟体動物) *logarithmic spiral 対数螺旋 *bedeck 飾る *fractal spines 相似形のとげ

- (ア) must respond to the same physical forces
- (イ) has yielded intriguing insights into
- (ウ) produce such intricate patterns so precisely
- (エ) protect their soft bodies from predators and the elements
- (オ) directs the formation of biological patterns

3 次の下線部の意味に最も近い語句を (ア) ~ (エ) から 1 つ選び、その記号を書きなさい。

問 1 We cannot make up for lost time.

- | | |
|---------------------|--------------------|
| (ア) think little of | (イ) make use of |
| (ウ) seek for | (エ) compensate for |

問 2 I know next to nothing about the incident.

- | | |
|--------------|------------|
| (ア) almost | (イ) less |
| (ウ) entirely | (エ) little |

問 3 She was absent from school due to illness.

- | | |
|-------------------|-------------------|
| (ア) despite of | (イ) on account of |
| (ウ) regardless of | (エ) for all |

問 4 He told a lie on purpose.

- | | |
|------------------|----------------|
| (ア) in vain | (イ) in the end |
| (ウ) deliberately | (エ) eventually |

問 5 We must keep our own confidences.

- | | |
|--------------|-----------------|
| (ア) secrets | (イ) finances |
| (ウ) scandals | (エ) reputations |

- 4 日本文に合うように () に入る最も適切な語句を (ア) ~ (エ) から 1 つ選び、その記号を書きなさい。

問 1 スーザンは無愛想に「大きなお世話よ」と言った。

Susan said abruptly, “().”

- (ア) That's too bad
- (イ) It's a shame
- (ウ) None of your business
- (エ) You are an unwelcome guest

問 2 ケンはキャシーに「どうしてだまってるの」と言った。

Ken said to Cathy, “()?”

- (ア) How come you keep silent
- (イ) How about keeping silent
- (ウ) Why is it kept silent
- (エ) Why don't you keep silent

問 3 ジョンはかしこまって「このカメラを修理していただけますか」と言った。

John said respectfully, “()”

- (ア) Would you mind repairing this camera?
- (イ) I was wondering if you could get this camera to repair.
- (ウ) Would you please make this camera repair?
- (エ) I am wondering if you could let this camera repair.

問 4 ルークは「君の援助がなかったら僕はその事業に失敗していただろう」と言った。

Luke said, “(), I would have failed in the business.”

- (ア) Were it not for your support
- (イ) But your support
- (ウ) With your help
- (エ) Had it not been for your help

問 5 テッドは「最高の天気だね」と陽気に言った。

Ted said cheerfully, “().”

- (ア) Nothing would be worse than this weather
- (イ) No weather could be better
- (ウ) We can't expect worse than this weather
- (エ) Nothing would be inferior to this weather