

1 *For Teachers: When you use Dual method, please have the students do the shadowing. Then have them*  
 2 *read by them self. And correct their pronunciation,*

2 イートックのレッスン以外で使用禁止 Ban to use this without eTOC lesson.

3  Part2Lesson4 Pre1 3.2-2019.1chobundokkai スマホの方は横にご覧下さい

#### 4 *The Uncertainties of Celiac Disease*

5 It seems unlikely that wartime **circumstances** would help solve a medical  
 6 mystery, but that is what happened during World War II. Before the war, a  
 7 Dutch doctor had been observing a puzzling condition in which local children  
 8 with apparently healthy eating habits were unable to **absorb** nutrition from  
 9 their food. They were losing weight and experiencing **digestive** problems. Then,  
 10 in the winter of 1944, the German army **cut off** food supplies to the Netherlands.  
 11 Thousands of Dutch citizens left with little to eat but grass and tulip **bulbs** died  
 12 of **starvation**. Many children who had been sick from the mysterious disease,  
 13 however, saw their symptoms improve dramatically. When bread was  
 14 reintroduced to Dutch diets, children got sick again. The connection was clear:  
 15 something in the children's **normal diets**-specifically in the **staple food** of bread-  
 16 was causing health serious problems.

17 circumstance 状況 *Celiac Disease* 小児脂肪便症 absorb 吸収する digestive 消化器

18 cut off 中断する starvation 餓死する bulb 球根 normal diet 普通食 staple food 主食

19 **Further Questions & Sample Answers** *For Teachers: Please use the direct method like CALLAN for this*  
 20 *part. 1. Ask student to answer the question on their own first. 2. Then read the "sample answer". 3. Tell student to close*  
 21 *their eyes. 4. Let them repeat after you again. Because student can't see the answer. 5. Have the student try to memorize the*  
 22 *student answer. 6. Once they have memorized the answer, ask the question one last time.*

20 **1) What was the puzzling condition a Dutch doctor had observed among local children before World War II?**

21 *The doctor had observed that local children with apparently healthy habits were*  
 22 *unable to absorb nutrition.*

22 **2) What was the cause of the serious health problems among children?**

23 *Something in the children's diets specifically in the bread was the cause of their*  
 24 *health problems.*

23 Since that time, the cause of the children's illness, now known as celiac disease,  
 24 has been **identified** as a group of proteins called gluten. Gluten is found in many  
 25 **grains** especially wheat, and it can cause an **immune system** problem in humans  
 26 in which the body attacks its own cells. In the case of celiac disease, which  
 27 affects around 1 percent of people worldwide, gluten causes a response that  
 28 damages the **intestines** and prevents the **gut** from absorbing nutrients. Although  
 29 the cause of celiac disease had been identified, the more researchers studied it,  
 30 the more mysterious it seemed. They found that although about 30 percent of  
 31 people with European heritage carry the **genes** associated with celiac disease, 95  
 32 percent of those people can eat gluten without experiencing any problem. Some  
 33 other factor, it seems, is responsible for causing the symptoms.

34 identified 見分ける grain 穀物 immune system 免疫系 intestine 腸 gut 消化管 gene 遺伝子

#### **Further Questions & Sample Answers**



35 **3) What is gluten and how does it affect humans?**

36 *Gluten found in grains especially wheat. It can cause an immune problem in*  
 37 *body attacks own cells.*

38 **4) In the case of celiac disease, how does gluten affect humans?**

39 *Gluten causes a response that damage the intestines and prevents the gut from*  
40 *absorbing nutrients.*

41 One possible explanation is related to **hygiene** practices. A study of children  
42 living in towns across the border from each other in Finland and Russia showed  
43 that five times as many Finnish children suffered from celiac disease. This  
44 seemed strange because both populations share a very similar genetic  
45 background and history, and similar types of wheat are eaten in the towns. The  
46 average income in the Russian town, however, is **one-fifteenth** that of the  
47 neighboring Finns, and because sanitation practices are poorer, the Russian  
48 children are exposed to more bacteria. The researchers suspect this is behind  
49 the higher incidence of celiac disease on developed countries. Without exposure  
50 to bacteria that were once common in human environments, the immune  
51 system may overact to **substances** such as gluten, leading to conditions such as  
52 celiac disease and allergies.

53 hygiene 衛生学 one-fifteenth 15分の1 substance 物質・実体

### Further Questions & Sample Answers

55 **5) What did the study of children living in towns across border of Finland and**  
56 **Russia show?**

57 *The study showed that five times as many Finnish children suffered from celiac*  
58 *disease.*

59 **6) What made the researchers' finding seem strange?**

60 *The finding was strange because both populations share a similar genetic*  
61 *background and a type of wheat.*

### \*Choose the correct answer from these choices.

63 **(35) What was observed during World War II?**

- 64 1. There was an increase in the rates of serious diseases among Dutch  
65 children who started eating more German foods.
- 66 2. Many sick Dutch children experienced an improvement in their health  
67 when their access to a staple food was cut off.
- 68 3. Health benefits were observed when some Dutch and German adults  
69 added grass and tulip bulbs to their regular diets.
- 70 4. Dutch children who ate a lot of bread **weighed** much more than German  
71 children who had similar diet.

weigh 比較検討する

72 **(36) Researchers have discovered that the symptoms of celiac disease**

- 73 1. have become more severe because of the increases in the **quantity** of  
74 wheat that people regularly consume.
- 75 2. occur to **some degree** in the majority of people whose ancestors came  
76 from European countries.
- 77 3. can actually lead to increased **absorption** of nutrients in around 1  
78 percent of people for the condition.
- 79 4. occur in only a small percentage of the people whose genes put them at  
80 risk for the condition.

quantity 量 some degree ある程度 absorption 吸収

81 (37) What do the researchers who studied children in neighboring Russian  
82 and Finnish towns believe?

83 1. The Russian children were more likely to have celiac disease because of  
84 the high amount of bread in their diet.

85 2. The symptoms of celiac disease were more severe in in the Finnish  
86 children because they ate a **certain type of wheat**.

87 3. The Russian's children living **circumstances** were responsible for their  
88 lower rates of celiac disease.

89 4. The Finnish children got sicker because they were exposed to bacteria  
90 known to cause allergic reactions.

91 certain type of wheat 特定の種類の小麦 circumstance 状況

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92 Answers: (35)2 (36)4 (37)3done