

I 次の英文を読み、下記の設問に答えなさい。

Early childhood is an important time for learning about nutrition and establishing healthy eating behaviors. Young children (1) parents to provide food options, and the availability of food in the home affects their dietary choices. A new study from the University of Illinois Urbana-Champaign looks at changes in home food availability and nutrient intake for children from two to four years old.

“It’s important to understand (A) influence their diet and nutrition. What types of foods and beverages are available in the home, and how accessible are those items for the young child? It’s about the likelihood of (2) to foods and having the opportunity to try foods, and whether they may be able to access or grab foods themselves,” said lead author Jennifer Barton, now an assistant research professor at Pennsylvania State University. Barton (3) the research as a postdoctoral^{*1} research associate at the Family Resiliency Center in the Department of Human Development and Family Studies (HDFS), part of the College of Agricultural, Consumer and Environmental Sciences (ACES) at Illinois.

Barton and her colleagues used the Home Food Inventory (HFI) to measure food availability at 24, 36, and 48 months of age. The HFI is a comprehensive checklist of food categories ⁽⁷⁾ administered by a research assistant visiting the homes of participating families. The researchers correlated^{*2} the HFI data with surveys of the children’s food consumption completed by their mothers.

The study included 468 mothers and children (4) in STRONG Kids 2, an ongoing research project at Illinois that looks at nutrition and healthy habits from infancy through 10 years of age. STRONG Kids 2 co-directors Barbara Fiese, professor emeritus^{*3} of HDFS, and Sharon Donovan, professor of food science and human nutrition at Illinois, also contributed to the study.

The HFI includes an obesogenic^{*4} score, which indicates the obesity risk of different foods. However, the scores are based on dietary recommendations for older children and include regular-fat dairy products such as milk, yogurt, and cheese. Toddlers^{*5} have different energy and nutrient needs, and dairy products (5) as part of a healthy diet for young children, necessary for growth and development.

The researchers tested three obesogenic scores, two of which were developmentally sensitive scores that excluded milk, yogurt, and cheese. Even with the ⁽⁸⁾ modified categories, they found that obesogenic scores increased significantly from 24 to 48 months. “It makes sense that as children get older, the presence of more energy-dense and high-fat foods tends to grow. Children may request these foods more often, and outside influences, such as the opinions of peers, are starting to become more (6). I do want to point out that we found

some positive changes. Vegetables also become more available in the home at 48 months,” Barton said.

“The point is not to label certain foods as being good or bad. We likely all have food items in our home that are not ‘recommended.’ It’s really about trying to make sure that we get enough nutritious, recommended foods and eat the non-recommended items in ⁽⁹⁾moderation.” A second research goal was to test the validity of the HFI measure for young children, as the method has been developed for adolescents. Barton and her colleagues (3) comprehensive tests of associations between food availability and nutrient intake, overall finding the expected results.

For example, the availability of processed meats such as lunch meat and hot dogs was correlated with higher saturated fat^{*6} intake. Sweetened beverages, candy, desserts, and savory^{*7} snacks were correlated with higher intake of those foods. A higher presence of fruit and vegetables in the home was also a consistent indicator of nutrients. These findings indicate that the HFI is a reliable measure of home food availability and has demonstrated associations with food and nutrient intake for children ages 24, 36, and 48 months, the researchers conclude.

It’s important to support parents in making healthy decisions for their families, but food choice is much more than individual behavior, Barton stated. “There are complex factors affecting parents’ decisions. Children may ask for certain foods, which may ⁽¹⁰⁾stem from the influence of media and advertising. We should also consider who else lives in the home such as siblings^{*8}, and the parents may experience work demands and financial stressors that can spill over into their family life. Many people struggle with distance to food stores and access to fresh foods as well as food insecurity. I believe we need a food systems approach to ensure people have access to nutritious food and that parents feel supported in making decisions to promote the health and well-being of themselves and their children,” she concluded.

注：*¹postdoctoral 「博士号取得後の」

*²correlate 「互いに関係づける」

*³professor emeritus 「名誉教授」

*⁴obesogenic 「肥満を引き起こす」

*⁵toddler 「よちよち歩きの小児」

*⁶saturated fat 「飽和脂肪」

*⁷savory 「辛味, 塩味がきいた食べ物, セイボリー」

*⁸sibling 「男女の別をつけないきょうだい」

問1 本文中の(1)～(6)の各空欄に入る最も適切なものを、それぞれ①～④の中から一つずつ選びなさい。ただし、(3)は2か所あり、同じものが入ります。

- (1) ① work on ② focus on ③ rely on ④ live on
- (2) ① exposure ② rejection ③ acceptance ④ interaction
- (3) ① attended ② conducted ③ observed ④ collaborated
- (4) ① who participated ② which participated
 ③ who has participated ④ who have been participated
- (5) ① considered ② are considered
 ③ have considered ④ will be considered
- (6) ① unclear ② subtle ③ irrelevant ④ apparent

問2 本文中の下線部(7)～(10)の語(句)に意味が最も近いものを、それぞれ①～④の中から一つずつ選びなさい。

- (7) administered
 ① confused ② mourned ③ managed ④ destroyed
- (8) modified
 ① formed ② increased ③ designed ④ altered
- (9) moderation
 ① restraint ② excess ③ imbalance ④ abundance
- (10) stem from
 ① benefit from ② arise from ③ differ from ④ escape from

問3 本文中の空欄(A)に入る部分を完成するため、①～⑤の語を最もよく意味の通るように以下の空欄に正しく並べ替えたとき、(11)と(12)に入るものの番号をそれぞれ一つずつ選びなさい。ただし、各選択肢は一度しか使えません。

() the environments (11) children () (12) ()

① can ② are ③ in ④ that ⑤ how

問4 次の(13)～(15)の各問いの答えとして最も適切なものを、それぞれ①～④の中から一つずつ選びなさい。

(13) What is the main area of study in the research carried out by Jennifer Barton and her colleagues?

- ① To evaluate the effect of peer pressure on children's eating habits
- ② To measure changes in home food availability and nutrient intake for children aged two to four
- ③ To determine the effectiveness of media campaigns on young children
- ④ To compare dietary habits between adolescents and young children

(14) What does the Home Food Inventory (HFI) measure?

- ① The educational attainment of participating families
- ② The physical activity levels of children and their mothers
- ③ The obesity risk of different foods based on a scoring system
- ④ The availability of various food categories in the homes of participating families

(15) What is Jennifer Barton's main message regarding food choices for families?

- ① Food choices are determined by personal preferences and individual tastes.
- ② The only important factor is the nutritional value of food.
- ③ Food choices are influenced by a range of complex factors, including media and family dynamics.
- ④ Parents should make food decisions based solely on nutritional guidelines, disregarding children's preferences.

Ⅱ 次の(16)～(23)の各英文の空欄に入る最も適切なものを、それぞれ①～④の中から一つずつ選びなさい。

(16) She is very wealthy in () with most people.

- ① comparison ② compare ③ compared ④ comparative

(17) This English question is really hard to figure ().

- ① down ② out ③ away ④ in

(18) The company has discontinued () the product.

- ① to manufacture ② manufacture
③ manufactured ④ manufacturing

(19) I think I left my bag () at the hotel.

- ① near ② beyond ③ behind ④ with

(20) After you () the project, you will be transferred to the main office.

- ① completes ② have completed
③ will have completed ④ completing

(21) Daniel is punctual by nature, so he is sure to turn () on time.

- ① against ② off ③ with ④ up

(22) It was afternoon, but () the shops were closed.

- ① most of ② almost ③ most ④ almost of

(23) I've been () the job of looking after the children.

- ① asserted ② assessed ③ assigned ④ assorted

(余 白)

Ⅲ 次の二人の会話文を読み，下記の設問に答えなさい。

著作権の都合上，省略。

注：*¹ modular kitchen 「規格ユニットを選択して作られた台所」

*² gadget 「目新しい道具，装置」

問1 (24)～(30)の各空欄に入るものを、①～⑦の中から一つずつ選びなさい。ただし、選択肢は一度しか使えません。また、文頭に来る語も小文字の書き出しになっています。

- ① I'm pretty interested in buying this property
- ② tell me about the aesthetic of the home
- ③ you can see that there's a sense of urgency here
- ④ the mansion comes with two TV lounges, a hall, a guest house for visitors, and four restrooms, too
- ⑤ it's in a child-friendly neighborhood; it has four rooms along with two master bedrooms
- ⑥ it has a big backyard and a big living room, which has huge glass doors connected with the backyard
- ⑦ the owner is interested in selling this property, and there are many potential buyers, too

問2 次の(31)と(32)の各英文の問いの答えとして最も適切なものを、それぞれ①～④の中から一つずつ選びなさい。

(31) Why does Matthew's family want to have a modular kitchen?

- ① Because they prefer a kitchen with adjustable features.
- ② Because Matthew's wife is a working woman and they require a kitchen that simplifies her tasks.
- ③ Because they need a kitchen with multiple electric meters.
- ④ Because they prefer a kitchen layout suitable for entertaining guests.

(32) What was removed from Chris's proposed mansion last year?

- ① A swimming pool
- ② A big backyard
- ③ A high-tech gadget
- ④ A playground

Ⅳ 次の英文を読み、(33)～(39)の空欄に入る最も適切な語を、①～⑦の中から一つずつ選びなさい。ただし、選択肢は一度しか使えません。

A new artificial intelligence (A.I.) tool may be able to foil^{*1} fraud^{*2} and help art historians (33) the original creator behind particular paintings. The system analyzes (34) sections of paintings, some as small as half a millimeter, for telltale^{*3} differences in brushwork, reports Benjamin Sutton for *The Art Newspaper*.

While (35) projects used a form of machine learning to identify artists based on the analysis of high-(36) images of the paintings, the new system uses scans of the canvasses.

“We found that even at the brush bristle^{*4} level, there was a fair level of success in (37) the attribution,” Kenneth Singer, a physicist at Case Western Reserve University, tells *The Art Newspaper*. “Frankly we don’t really understand that, it’s kind of mind-boggling^{*5} (38) when you think about it, how the paint (39) off a single bristle is indicative of what we’re calling the artist’s unintentional style.”

注：*1 foil 「失敗させる」

*2 fraud 「詐欺, 不正」

*3 telltale 「隠しきれない」

*4 bristle 「(ブラシの)毛」

*5 mind-boggling 「唖然とさせる」

① resolution

② actually

③ sorting

④ coming

⑤ determine

⑥ previous

⑦ tiny

(余 白)

V 次の(ア)と(イ)の各日本語の文の意味を表すように、空欄にそれぞれ①～⑧の語を入れて英文を完成させ、(40)～(45)の空欄に入るものの番号を選びなさい。選択肢は一度しか使えません。また、文頭に来る語も小文字の書き出しになっています。

(ア) カプサイシンは全ての哺乳動物には感知され得るが、どの種の鳥にも感知されない。鳥はトウガラシをどんなにたくさん食べても、焼けるような辛さを感じない。

Capsaicin () (40) () by all mammals, but is not sensed by any species of bird. Birds can eat () (41) peppers as they want (42) () a () sensation.

- | | | | |
|-----------|-------------|-------|-----------|
| ① as | ② without | ③ can | ④ burning |
| ⑤ feeling | ⑥ perceived | ⑦ be | ⑧ many |

(イ) もし雨が降っていなかったなら、計画通りにキャンプをしていただろう。天気のせいで計画を変更し、代わりにホテルに泊まることになった。

() (43) had not rained, we () have camped () we planned. The weather (44) us () change our plans and stay (45) a hotel ().

- | | | | |
|------|---------|-----------|------|
| ① as | ② it | ③ forced | ④ if |
| ⑤ to | ⑥ would | ⑦ instead | ⑧ in |