２０２６－２次　　受 験 番 号

大学院保健学研究科保健学専攻博士後期課程
外国語（英語）問題

注　意　事　項

１．試験開始の合図があるまで，この冊子を開かないでください。

２．この冊子の本文は６ページです。

３．解答は解答用紙に書いてください。なお，落丁，乱丁及び印刷不鮮明などの箇所がある場合には申し出てください。

４．解答にあたっては次の点に留意してください。
（１） 解答用紙の指定された箇所に書いてください。
（２） 文字はわかりやすく，横書きではっきり書いてください。

５．試験時間は９０分です。

６．答案は持ち帰ってはいけません。

７．問題用紙と下書き用紙は持ち帰ってください。

Ⅰ　次の英文を読んで，問１～問４に日本語で答えなさい。

Today, the World Health Organization (WHO) published its first-ever position paper on immunization products to protect infants against respiratory syncytial virus (RSV) – the leading cause of acute lower respiratory infections in children globally.

Every year, RSV causes about 100 000 deaths and over 3.6 million hospitalizations in children under the age of 5 years worldwide. About half of these deaths occur in infants younger than 6 months of age. The vast majority (97%) of RSV deaths in infants occur in low- and middle-income countries where there is limited access to supportive medical care, such as oxygen or hydration.

Published in the Weekly Epidemiological Record (WER), the position paper outlines WHO recommendations for two immunization products: a maternal vaccine that can be given to pregnant women in their third trimester to protect their infant and a long-acting antibody that can be administered to infants from birth, just before or during the RSV season.

“RSV is an incredibly infectious virus that infects people of all ages, but is especially harmful to infants, particularly those born premature, when they are most vulnerable to severe disease,” says Dr Kate O’Brien, Director of Immunization, Vaccines, and Biologicals at WHO. “The WHO-recommended RSV immunization products can transform the fight against severe RSV disease, dramatically reduce hospitalizations, and deaths, ultimately saving many infant lives globally.”

RSV usually causes mild symptoms similar to the common cold, including runny nose, cough and fever. However, it can lead to serious complications – including pneumonia and bronchiolitis – in infants, young children, older adults and those with compromised immune systems or underlying health conditions.

Two immunization products to protect against RSV

In response to the global burden of severe RSV disease among infants, WHO recommends that all countries introduce either the maternal vaccine, RSVpreF, or the antibody, nirsevimab depending on the feasibility of implementation within each country’s existing health system, cost-effectiveness and anticipated coverage. Both products were recommended by the Strategic Advisory Group of Experts on Immunization (SAGE) for global implementation in September 2024. In addition, the maternal vaccine received WHO prequalification in March 2025, allowing it to be purchased by United Nations agencies.

WHO recommends that the maternal vaccine be given to pregnant women during the third trimester of pregnancy, from week 28 onwards, to optimize for the adequate transfer of antibodies to their baby. The vaccine may be given during routine

antenatal care, including at one of the 5 WHO-recommended antenatal care visits in the third trimester or any additional medical consultations.

The second WHO-recommended immunization product, nirsevimab, is given as a single injection of antibodies that starts protecting babies against RSV within a week of administration and lasts for at least 5 months, which can cover the entire RSV season in countries with RSV seasonality.

WHO recommends that infants receive a single dose of nirsevimab right after birth or before being discharged from a birthing facility. If not administered at birth, the antibody can be given during the baby's first health visit. If a country decides to administer the product only during the RSV season rather than year-round, a single dose can also be given to older infants just before entering their first RSV season.

The greatest impact on severe RSV disease will be achieved by administering the antibody to infants under 6 months of age. However, there is still a potential benefit among infants up to 12 months of age.

WHO regularly issues updated position papers on vaccines, combinations of vaccines and other immunization products against diseases that have major public health impact. These papers focus primarily on the use of vaccines in large-scale vaccination programmes. The new position paper aims to inform national public health policymakers and immunization programme managers on the use of RSV immunization products in their national programmes, as well as national and international funding agencies.

(World Health Organization, 30 May 2025, News release, “WHO outlines recommendations to protect infants against RSV – respiratory syncytial virus” より一部改変して引用)

immunization　免疫化, 予防接種
third trimester 妊娠第 3 期, 妊娠後期, 妊娠 28 週以降のことをいう
born premature 早産
pneumonia 肺炎
bronchiolitis 細気管支炎

問 1　RSV（呼吸器合胞体ウイルス）は, 年間でどのくらいの 5 歳未満の子どもの命を奪い, どのくらいの入院を引き起こしているかを答えなさい。

問 2　WHO が推奨する RSV の免疫化製品は 2 種類あります。それぞれの製品の対象者, 投与時期について答えなさい。

問 3　RSVpreF の作用機序について答えなさい。

問 4　今回新たに発表された WHO の position paper（立場表明文書）の目的について説明しなさい。

Ⅱ．次の英文を読んで，問５～問９に日本語で答えなさい。

In January 2025, the Lancet Diabetes and Endocrinology global commission on clinical obesity recommended a new framework that moves away from BMI as a singular indicator and instead approaches obesity as a disease spectrum. Experts say that not knowing what BMI means can lead to incorrect assumptions about a person's health and risk of disease. This can affect the quality of care patients receive as well as hinder efforts to prevent and treat obesity.

BMI has long been considered a quick and easy way to assess whether a person is at a "healthy" weight, but it does not take into account elements like body composition, age, sex, or other lifestyle factors. The metric is an indirect measure of body fat that does not indicate the degree to which excess adiposity affects the health of a person.

BMI was never meant for evaluating health, says Fatima Stanford, an obesity medicine physician at the Massachusetts General Hospital and one of the authors who contributed to the global commission report. It was initially designed to look at the "normal" height and weight of a population, she says. Although BMI may be strongly correlated with the amount of fat mass on a population level, it loses precision when applied to individuals.

As Stanford points out, people classified as having a normal weight might have a false sense of security about their health, and those with an elevated BMI might think that something is inherently wrong with them, both of which can be (1) problematic. This has been noted before—as recently as 2022, when the American Medical Association (AMA) adopted a new policy recognizing the problems in using BMI as a clinical measure. In its 2022 guidance, it stated that BMI should be used in conjunction with other tools when diagnosing obesity and assessing health risks.

Yet obesity remains diagnosed worldwide on the basis of BMI alone, which tends to underestimate or overestimate both adiposity and illness. By dividing weight in kilograms by height in meters squared, BMI categorizes people based on their weight status: underweight, healthy weight, overweight, and obesity. This simplicity is both the metric's appeal and its weakness.

(2) Experts tell The BMJ that a major failing of BMI is that it cannot distinguish between muscle and fat mass, nor does it take into account the distribution of fat around the body. This means that people with a lot of muscle mass could have a high BMI despite having low body fat. Those in the same BMI category might have variable cardiovascular disease risk depending on where fat accumulates on their body.

Furthermore, women require a higher body fat percentage and might have

about 10% more body fat than men with the same BMI. Proportions of muscle, bone, and fat for the same BMI also vary depending on ethnicity, resulting in a lower BMI threshold for overweight and obesity classifications for certain populations.

Essentially, BMI does not provide enough information about the fat mass a person carries. Indices of central adiposity—the fat around the abdominal area—such as the waist-to-hip ratio, waist-to-height ratio, and waist circumference can be more accurate for estimating body fat and related health risks. But multiple measures are needed to measure body fat, says Adrian Brown, NIHR advanced fellow and senior research fellow in nutrition and dietetics in the Centre of Obesity Research at University College London. “We shouldn’t just be using BMI,” he tells The BMJ. “We shouldn’t just be using anthropometric measurements or measures about adiposity. We should combine them.”

There are already attempts to do this. NHS (National Health Service) England, for example, uses waist circumference and waist-to-height ratio to examine the prevalence of overweight and obesity among adults in its official health survey. But relying on BMI alone remains far too common.

Some people might be classified as underweight or with obesity based on BMI and yet experience no health problems, says Brown; for example, people with obesity might fall under the (3) “metabolically healthy obesity” phenotype that was first described in the 1980s. The characteristics and definition of this phenotype vary, but it generally refers to people with obesity having high insulin sensitivity, favorable lipid and inflammation profiles, and normal blood pressure. It shows that many factors must be taken into account when evaluating the health risks of people with obesity.

Brown says it’s important that healthcare professionals give patients an explanation about what BMI is rather than just giving a number. This helps people understand what the number means for them. There’s no point in checking a patient’s BMI without asking them about other factors, such as their physical activity and stress levels, or examining their blood pressure and blood sugar, he says.

Ultimately, anthropometric measures are not a robust measure of ongoing illness or organ dysfunction caused by obesity. Body fat, by itself, cannot be an indicator of health, and health problems are not always due to excess fat. But healthcare providers have been known to over attribute symptoms to obesity and advise patients to lose weight without referring them for diagnostic testing or treatment options, like ascribing joint pain to obesity without considering musculoskeletal conditions.

（BMJ 2025;389:r241 Obesity: can we cure our dependence on BMI? 2025 年 5 月 19 日より一部改変して引用）

adiposity　肥満（症），脂肪過多
inherently　生得的に，本質的に
anthropometric　人体測定の
phenotype　表現型（生物の形態的・生理学的な性質。遺伝子型 genotype のみでなく，環境要因も合わさって決まる性質）
musculoskeletal　筋骨格の

問５　BMI は，もともとはどのような目的のために設計された指標なのか，答えなさい。

問６　下線部（1）について，どのようなことが問題となるのか，答えなさい。

問７　下線部（2）の専門家が述べている，BMI の主要な欠点は何か，答えなさい。

問８　同じ BMI 値でも，脂肪の割合は何によって異なるのか。本文中に挙げられている要素を２つ答えなさい。

問９　下線部（3）は一般的にどのような人たちのことを指すのか，説明しなさい。