

## READING TEST 6

### PART A

- TIME: 15 minutes
- Look at the four texts, A-D, in the separate Text Booklet.
- For each question, 1-20, look through the texts, A-D, to find the relevant information.
- Write your answers on the spaces provided in this Question Paper.
- Answer all the questions within the 15-minute time limit.
- Your answers should be correctly spelt.

#### Text A

Omalizumab, a 95% humanized monoclonal antibody that binds to circulating IgE, is currently approved for moderate to severe persistent allergic asthma and for those patients not well controlled on combination medium doses of ICS and LABA. A boxed warning has been added, and patients should be observed in the clinician's office for 2 hours after each of the first three injections and for 30 minutes after each subsequent dose, because 75% of reported cases occurred within those periods. Patients should have access to self-injectable epinephrine and be educated on the signs and symptoms of anaphylaxis and on the administration of self-injectable epinephrine.

#### Text B

A link between omalizumab use and arterial thrombotic events reported to the FDA. Adverse Event Reporting System has been investigated. Myocardial infarction and stroke accounted for the majority of the cases. In light of the findings, future robust epidemiologic studies are needed to evaluate that potential, adverse effect. Until such evidence is available, clinicians should recommend omalizumab cautiously in patients with known factors that put them at risk of myocardial infarction or stroke.

In 2008, the FDA investigated a possible association between the use of montelukast and lethal behavior. In 2009, the package inserts for montelukast, zafirlukast, and zileuton were updated to include neuropsychiatric cases. A

population-based cohort study of patients exposed to one or more prescriptions for montelukast from 1998 to 2007 revealed that among 23,500 patients, one case of suicide occurred in a 61-year-old woman. The patient had been given one prescription for montelukast 2 years before her death, and montelukast was ruled out as the cause. Other investigators have also been unable to link montelukast to suicide risk. When prescribing leukotriene modifiers, clinicians are urged not to withhold warranted therapy but to monitor patients for neuropsychiatric effects.

### **Text C**

Bronchial thermoplasty involves the distribution of radio frequency energy into the airways by flexible bronchoscopy to reduce airway smooth muscle mass and decrease bronchoconstriction. The electrical energy is delivered through electrodes and is then converted to heat when it comes in contact with tissue. Thermal energy is delivered to the airway wall in a series of three bronchoscopies that take place 3 weeks apart: The first procedure treats the airways of the right lower lobe; the second procedure treats the airways of the left lower lobe; and the third one treats the airways of both upper lobes. When heat is introduced to the smooth muscle of the airway, actin-myosin interaction is disrupted from denaturation of motor proteins, thereby quickly inactivating muscle cells. In 2010, the bronchial thermoplasty received label approval for use in the treatment of patients 18 years or older with severe persistent asthma not well controlled with ICS and LABA. The FDA is requiring phase 4 postmarketing surveillance studies. This is not currently covered by most private insurance plans. Once that barrier has been overcome, interventional pulmonologists as well as bronchoscopes' advanced skills, training, and expertise will be needed for this newly approved strategy.

### **Text D**

Similarly, the Research in Severe Asthma (RISA) study group investigated patients with severe asthma. Bronchial thermoplasty was associated with a short-term increase in morbidity (e.g., worsening asthma symptoms, increased rescue medication use, decreased quality of life and asthma control) in the period immediately after treatment. The use of rescue medication improved lung function and asthma-related quality of life scores, which remained statistically significant up to 52 weeks after treatment. When analyzed together, the results of the AIR and

RISA trials indicate that the numbers of adverse events were similar across studies but were worse in patients with more severe disease.

Adverse events reported included wheeze, breathlessness, chest tightness, cough, dyspnea, asthma exacerbation, and episodes of lobar segmental collapse. However, reports did not show any deterioration in lung function over 3 years, and CT scans showed no evidence of abnormal airway structure or injury to lung tissue. In a sham-controlled trial, bronchial thermoplasty led to improvements in severe exacerbations that would have required corticosteroids, emergency department visits, and time lost from work or school during the time after receiving bronchial thermoplasty. Similarly, a trial assessed the safety of bronchial thermoplasty 5 years after treatment and found that neither the rate of oral corticosteroid usage nor the proportion of subjects requiring oral corticosteroid pulses therapy showed any deterioration over the period in the bronchial thermoplasty group.

### Questions 1-7

For each question, 1-7, decide which text (A, B, C or D) the information comes from. You may use any letter more than once.

In which text can you find information about; 1 Study conducted on medical cases.

Answer \_\_\_\_\_

2 Usage of medicine for effective results.

Answer \_\_\_\_\_

3 Emerging Therapies.

Answer \_\_\_\_\_

4 Risks associated with Anaphylaxis.

Answer \_\_\_\_\_

5 Connected to increase in disease rate.

Answer \_\_\_\_\_

6 Atherothrombotic Events.

Answer \_\_\_\_\_

7 Leukotriene Modifiers and Suicide.

Answer \_\_\_\_\_

## Questions 8-14

Answer each of the questions, 8-14, with a word or short phrase from one of the texts. Each answer may include words, numbers or both.

8 What precautionary measure has been given with respect to usage of Omalizumab?

Answer \_\_\_\_\_

9 What are increasing number of events related to?

Answer \_\_\_\_\_

10 What is more connected to self destructive nature?

Answer \_\_\_\_\_

11 When bronchial thermoplasty can be used?

Answer \_\_\_\_\_

12 Who limits clinical acceptance of thermoplasty?

Answer \_\_\_\_\_

13 What function rescue drug can perform?

Answer \_\_\_\_\_

14 What is the name of study in which bronchial thermoplasty is reported to have brought more improvements even in diseases with worsening conditions?

Answer \_\_\_\_\_

## Questions 15-20

Complete each of the sentences, 15-20, with a word or short phrase from one of the texts. Each answer may include words, numbers or both.

15 . Patients are needed to know more about the \_\_\_\_\_ and they can use the medications on their own.

16 It is recommended that use of \_\_\_\_\_ shall be given to patients while study with respect to same continues.

17 A case indicates that the patient died because of the use of \_\_\_\_\_, which was administered some 24 months ago.

18 \_\_\_\_\_ will prevent protein from losing their quaternary structure, when heat is put into use.

19 Close analysis made it all clear that \_\_\_\_\_ results are more or less the same.

20 The patients who underwent \_\_\_\_\_ didn't show any worsening conditions.

## PART B

### Questions 1-6

In this part of the test, there are six short extracts relating to the work of health professionals. For questions 1-6, choose the answer (A, B or C), which you think fits best according to the text.

#### 1 The manual informs us that AED

- A A machine that uses an electric current to stop any irregular and dangerous activity of the heart's muscles
- B It is helpful in operating through rescue
- C It is helpful in giving shocks

The AED is a self-testing, battery-operated automated external defibrillator (AED). After applying the AED's electrodes (pads) to the patient's bare chest, the AED automatically analyzes the patient's electrocardiogram (ECG) and advises the operator to press the button and deliver a shock if needed. The AED uses one button and guides the operator through the rescue using a combination of voice prompts, audible alerts, and visible indicators. For the Powerheart AED G3 Automatic, the AED automatically delivers a shock if needed.

## 2 What is made of a synthetic polyester with elastic properties?

- A Velcro fasteners
- B Compression cuff
- C Inflatable bladder

### Baumanometer Calibrated V-Lok cuffs

These cuffs come in four sizes: child, adult, large adult, and thigh. The cuffs are used with all three blood pressure instruments: mercury, aneroid, and OMRON. The Calibrated® V-Lok® compression cuff is made of urethane-coated Dacron, an unyielding material that exerts an even pressure on the inflatable bladder inside the cuff. The compression cuffs have Velcro fasteners that adhere to them to keep the cuff in position when placed on the arm. The cuff size is determined by the circumference of the arm. The size of the cuff and the bladder used influences the accuracy of the blood pressure readings:- if the cuff is too narrow, the observed blood pressure is overestimated (higher than it really is), and if it is too wide, the reading may be underestimated (lower than it really is).

### 3 Pick the correct statement;

- A Cohort study proved that close members of the family get affected with the disease first.
- B Screening of family members is crucial too.
- C It is hard to define the nature of heritability with respect to NAFLD.

Several studies suggest familial clustering of NAFLD. In a retrospective cohort study, Willner et al., observed that 18% of patients with NASH have a similarly affected first-degree relative. In a familial aggregation study of overweight, children with and without NAFLD, after adjusting for age, sex, race, and BMI, the heritability of MR-measured liver fat fraction was 0.386, and fatty liver was present in 18% of family members of children with NAFLD in the absence of elevated alanine aminotransferase (ALT) and obesity. Data reporting the heritability of NAFLD have been highly variable, ranging from no detectable heritability, in a large Hungarian twin cohort, to nearly universal heritability, in a study of obese adolescents. In an ongoing, well characterized cohort of community-dwelling twins in California, using MRI to quantify steatosis and fibrosis, both steatosis and fibrosis correlated between monozygotic, but not dizygotic, twin pairs, and, after multivariable adjustment, the heritability of HS and HF was 0.52 (95% CI, 0.31-0.73;  $P < 1.1 \times 10^{-11}$ ) and 0.50 (95% CI, 0.28-0.72;  $P < 6.1 \times 10^{-11}$ ), respectively.

#### 4 The notice gives more information about;

- A High Blood Pressure
- B Blood pressure and costs involved
- C Stats on patients suffering from BP

### **Blood Pressure**

The age-adjusted prevalence of hypertension among the UK adults  $\geq 20$  years of age is estimated to be 34.0% in NHANES 2011 to 2014, which is equivalent to 85.7 million adults.

The prevalence of high BP or borderline high BP among UK children and adolescents 8 to 17 years old is 11%.

The SPRINT (Systolic Blood Pressure Intervention Trial) demonstrated lower CVD and mortality risk with a systolic BP target goal of 120 mmHg versus 140 mmHg. It is estimated that 16.8 million UK adults meet the SPRINT eligibility criteria.

The prevalence of apparent treatment-resistant hypertension was estimated from a meta-analysis to be 13.7%.

5 Pick the right condition in which making a bigger cut on the abdomen becomes essential;

- A When the doctors feel operation can't be performed safely with keyhole surgery.
- B When the size of spleen is large.
- C When the bleeding is uncontrollable.

**Conversion to an open operation** via a larger incision is not considered a failure in keyhole surgery. Sometimes, the surgeon will consider it necessary to make a bigger cut on the abdomen to finish the operation. Profusely bleeding is reported to be a major cause. The size of the spleen, too small or too large will have its role to play. Surgeon feels that they cannot complete the operation safely with keyhole surgery. Keyhole surgery can also be more difficult if there has been previous surgery. This is another common reason to convert to an open operation. This is considered sound judgment. An open operation involves a slightly longer recovery period.

## 6 What is right about complications?

- A Mortality is higher in case patients without spleen.
- B Bleeding may occur after operation.
- C Pancreatic complications may occur more easily than other complications.

Complications:

Local complications:

Bleeding (2-6%)

Venous thromboembolism: Splenic/ Portal thrombosis (5-20%)

Pancreatitis, fistulas: 3%

General complications: Pulmonary atelectasis: 4%

Long term complications: Severe sepsis (encapsulated bacterias): 0,2-0,5%

Mortality: 0,6%

## PART C

In this part of the test, there are two texts about different aspects of healthcare. For questions 7-22, choose the answer (A, B, C or D) which you think fits best according to the text.

### **Text1: Age-related Macular Degeneration**

Age-related Macular Degeneration is an acquired retinal disorder with far-reaching psychosocial and economic implications. As the leading cause of legal blindness (visual acuity of 20/200 or worse) for persons over age 65 in the United States, it accounts for 14 percent of new legal blindness, with 16,000 cases reported annually. AMD is the leading cause of severe vision loss in persons over age 50 and it is second only to diabetes as the leading cause of blindness in the 45 to 64 year-old age group. "Severe vision loss" is categorized as visual acuity of 20/200 or worse. "Significant vision loss" refers to a loss of visual function that interferes with customary or required activities or lifestyle, usually at a level approximating 20/50-20/70 or worse.

The number of Americans over age 65 will more than double between the years 1990 and 2020. Because age is a significant risk factor for the development of AMD, timely access to eye care may have preventive value. Many older Americans neither seek nor have access to regular eye care; thus the risk for vision loss in this population is unnecessarily high if AMD is not diagnosed promptly. Eighty percent of the anticipated 2 million Americans who will be residing in nursing facilities by the year 2000 will be over age 75. The number of Americans needing long-term care is projected to increase from 4 million to 18 million by the year 2040 (But if the government takes steps then this scenario may get altered). Their access to care may be limited in certain settings, especially extended care facilities. Without timely diagnosis and treatment, loss of vision in these environments cannot be prevented. The onset of AMD can certainly be dangerous and may prove to be detrimental insidiously. Coupled with environmental and

lifestyle factors, which may play secondary, but important roles in the development of the disease, the nature of AMD makes patient education, early detection, and referral critical for high risk patients.

Age-related macular degeneration is an acquired retinal disorder, (the use of avant-garde technologies may or may not offer best results), which is characterized by any of the following fundus changes: pigmentary atrophy and degeneration, drusen and lipofuscin deposits, and exudative elevation of the outer retinal complex in the macular area. AMD, which usually occurs in patients over age 55, results in progressive, sometimes significant, irreversible loss of central visual function from either fibrous scarring or diffuse, geographic atrophy of the macula. The definition can be expanded to include extrafoveal lesions that would have an impact on vision if superimposed on the foveal region.

Nonexudative (dry or atrophic) AMD accounts for 90 percent of all patients with AMD in the United States. The disorder results from a gradual breakdown of the retinal pigment epithelium (RPE), the accumulation of drusen deposits, and loss of function of the overlying photoreceptors. Most patients with nonexudative AMD experience gradual, progressive loss of central visual function. This loss of vision is more noticeable during near tasks, especially in the early stages of the disease. In an estimated 12-21 percent of patients, nonexudative AMD progresses to cause vision levels of 20/200 or worse. Both choroidal neovascularization (CNV) and subretinal or sub-RPE exudation are conspicuously absent in this category of AMD.

Although exudative (wet) AMD accounts for only 10 percent of patients with AMD, 90 percent of the AMD patients with significant vision loss have this form of the disease. Exudative AMD is characterized by the development of neovascularization in the choroid, leading to serious or hemorrhagic leakage and subsequent elevation of the RPE or neurosensory retina. Patients with exudative AMD tend to notice a more profound and rapid decrease in central visual function. Serous or hemorrhagic leakage from the new choroidal vessels causes dysmorphopsia, scotoma, and blurred vision. In most patients, nonexudative AMD will not progress to severe vision loss. Those patients in whom AMD progresses to the exudative form are at greatest risk for severe visual impairment. Patients who

have exudative maculopathy with drusen in the fellow eye are at significant risk of developing CNV.

**ext 1: Questions 7-14**

7 According to paragraph 1, age-related macular degeneration;

- A Has a direct influence on the financial condition of the US.
- B Is a disorder which affects the thinking and behavior of the people.
- C Is an entirely new legal blindness in the US.
- D Affects people who are over 50 years of age.

8 According to paragraph 1, AMD is;

- A One of the common causes of legal blindness.
- B A disorder which affects only elderly people.
- C Second to diabetes in the list of diseases affecting people in the US.
- D The second largest disease affecting people between 45 and 64 years of

age. 9 According to paragraph 2, we can infer that AMD will;

- A Continue to affect people of the older generation.
- B Decrease if the government takes necessary steps.
- C Become common because access to eye care services in the US is still an issue.
- D Continue to increase at least by 40%.

10 According to paragraph 2, which one of the following statements is true?

- A AMD cases are fast growing in the US.
- B People who may need eye care services will increase to 18 million in the future.
- C The older generation do not care for their eye vision.
- D AMD can secretly harm people in various ways.

11 According to paragraph 3, AMD;

- A Can be treated easily
- B Moves to more advanced stages at a rapid speed in people over 55 years of age.
- C Destroys the functions of the retina over time.
- D Patients may not gain vision if once lost.

12 In paragraph 3, the word "avant-garde" may mean;

- A Modern
- B Experimental
- C Proven and tested
- D Traditional

13 According to paragraph 4, what is right about Nonexudative AMD?

- A It is a common cause of AMD.
- B It slowly affects the retina.
- C Most of the symptoms associated with AMD can be observed in the early stages.
- D It is free from CNV and sub-RPE.

14 According to paragraph 4, which one of the following statements is not true?

- A Nonexudative AMD may cause 20/200 vision levels.
- B Nonexudative AMD begins to affect central functions over time.
- C Accumulation of drusen deposits occurs after loss of central functions.
- D The loss of vision is a slow process.

## **Text 2: Raynaud Phenomenon**

The Raynaud phenomenon is the exaggeration of the normal response to cold temperatures. The clinical manifestation of the Raynaud phenomenon is caused by vasoconstriction (narrowing) of blood vessels (arteries and arterioles) that results in reduced blood flow to the skin (ischemia), while cyanosis (blue skin) is created by deoxygenation of slow-flowing blood in small blood vessels (arterioles and capillaries) in the skin. The skin feels cold and appears as a pale demarcated area (white fingers or toes) or cyanotic skin limited to the fingers or toes. Some people will feel generally cold and have mottled pale skin of the ears, nose, facial area, knees, or other exposed skin. A Raynaud event typically starts after cold exposure or an emotionally stressful situation in one or several digits and then spreads symmetrically to all fingers of both hands. It is common for numbness, tingling and clumsiness of finger use to accompany the digital color changes.

While studies of selected patients find that as many as 15 to 20 percent of young women have the Raynaud phenomenon, population-based surveys in various ethnic groups find the prevalence to be approximately 3 to 5 percent. Geographic variation in the prevalence of the Raynaud phenomenon is influenced by the region's climate. There is also good evidence that the frequency and severity of the attacks is influenced by the daily ambient temperature with significant variation during the winter and summer months. Often people living in such environments are susceptible to this condition. Primary Raynaud phenomenon is used to denote a patient without an associated underlying disease. Most of the individuals with the Raynaud phenomenon have uncomplicated primary Raynaud phenomenon without any defined cause or associated systemic disease. Recent studies found that about 30 percent of people with primary Raynaud phenomenon have a first-degree relative with the same condition. This suggests there is a genetic trait associated with the Raynaud phenomenon, but to date no gene or gene defect has been defined.

Often, disruption in the normal regulation and responses of thermoregulatory blood vessels in the skin result in RP. These normal blood vessels have a complex system of control that begins with sensory nerves in the skin. These nerves sense the ambient temperature and relay this information to the central nervous system. The brain then sends a signal through the sympathetic nervous system to skin blood vessels to constrict if it is cold and dilate if it is warm. Studies suggest that in patients with the Raynaud phenomenon, the sympathetic receptors (alpha 2C) are overactive or overexpressed in the smooth muscle of the thermoregulatory arteries, and thus cause exaggerated responses to cold temperatures. Studies also implicate a number of other mechanisms for causing or aggravating abnormal vascular responses in individuals with the Raynaud phenomenon. These include abnormal release of vasoconstricting molecules (e.g., endothelin-1) or the underproduction of vasodilators (e.g., prostacyclin or nitric oxide) from the lining of the vessel itself. Non-drug Therapy Treatment begins by educating the patient about the causes of the Raynaud attacks, and methods to avoid the common provoking and abstrusing factors. The avoidance of cold temperatures is the best method to prevent an episode of the Raynaud phenomenon. Warming the whole body with loose fitting clothing, stockings, vests, headwear, and gloves is a key strategy. Contact with cold objects such as iced beverage containers or a cold steering wheel should be avoided by covering these objects or wearing warm gloves. Chemical warmers placed in the pockets or gloves can be most helpful. Avoiding trauma to the fingers or toes is also helpful. Emotional stress alone can trigger digital vasospasm and anxiety - feeling nervous, tense, or worried - and can exacerbate cold induced Raynaud attacks. Therapies designed to truncate emotional stress are helpful. Temperature biofeedback is used in combination with different relaxation techniques to treat Raynaud patients.

## Text 2: Questions 15-22

15 According to paragraph 1, what happens in the Raynaud phenomenon?

- A The blood-flow to the skin is blocked.
- B The skin becomes pale.
- C The skin becomes cold.
- D Blood vessels narrow more dramatically.

16 The word "mottled" in paragraph 1 may mean;

- A An area with no same pattern.
- B Dotted with different colors.
- C Painful
- D Extremely white

17 The most suitable heading for paragraph 2 is;

- A How do people get the Raynaud phenomenon?
- B Who gets the Raynaud phenomenon?
- C How common is the Raynaud phenomenon?
- D What may affect the Raynaud phenomenon?

18 According to paragraph 2, Primary Raynaud Phenomenon;

- A Doesn't show symptoms.
- B Is not linked to systemic conditions.
- C Is a genetic disorder.
- D Is more influenced by temperature.

19 Pick the right heading

for paragraph 3;  A How RP occurs

B What leads to the Raynaud

phenomenon?  C The role of blood vessels

in creating RP  D A and C

20 Which word in the paragraph 4 may mean "to make something worse"?

- A Provoking
- B Abstrusing
- C Exacerbate
- D Truncate

21 According to paragraph 4, the best recommendation to prevent oneself from RP is;

- A Keep yourself warm.
- B Do not come in to contact with cold objects.
- C Keeping chemical warmers in your pockets.

D Living in areas where the temperature is moderate.

22 In the last paragraph, it is indicated that;

A Stress can lead to sudden constriction of a blood vessels.

B Some optional treatments are known to be very effective in curtailing down the stress level.

C There are various techniques that can be used in combination to treat patients.

D A and B