

中國醫藥大學115學年度

學士後中醫學系入學招生考試

英文 試題

考試開始鈴響前，不得翻閱本試題！

★考試開始鈴響前，考生請注意：

- 一、不得將智慧型手錶及運動手環等穿戴式電子裝置攜入試場，違者扣減其該科成績五分。
- 二、除准考證、應考文具及一般手錶外；行動電話、穿戴式裝置及其他物品均須放在臨時置物區。請務必確認行動電話已取出電池或關機，行動電話及手錶的鬧鈴功能必須關閉。
- 三、就座後，不可擅自離開座位。考試開始鈴響前，不得書寫、劃記、翻閱試題本或作答。
- 四、坐定後，雙手離開桌面，檢查並確認座位標籤與電腦答案卡之准考證號碼是否相同。
- 五、請確認抽屜中、桌椅下、座位旁均無其他非必要用品。如有任何問題請立即舉手反映。

★作答說明：

- 一、本試題（含封面）共 11 頁，如有缺頁或毀損，應立即舉手請監試人員補發。
- 二、選擇題答案請依題號順序劃記於電腦答案卡，在本試題紙上作答者不予計分；電腦答案卡限用 2B 鉛筆劃記，若未按規定劃記，致電腦無法讀取者，考生自行負責。
- 三、選擇題為單選共 50 題，答案 4 選 1，每題 2 分，每題答錯倒扣 0.7 分，不作答不計分，請選擇最合適的答案。
- 四、本試題必須與電腦答案卡一併繳回，不得攜出試場。

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I. Vocabulary and Phrase (Questions 1-10): Choose the **BEST** answer to complete each sentence.

1. The editorial criticized the plan as _____ because it promised lower taxes, better services, and reduced debt without trade-offs.
(A) indelible (B) inexorable (C) irrevocable (D) untenable
2. The company's report tried to _____ responsibility for the data breach, but internal emails showed managers ignored repeated warnings.
(A) deprecate (B) deflect (C) delude (D) deride
3. The historian described the ruler's reforms as _____, noting that they improved public health while expanding surveillance.
(A) categorical (B) cylindrical (C) paradoxical (D) sabbatical
4. Physicians must _____ competing risks when recommending surgery for elderly patients with several chronic conditions.
(A) weigh (B) freight (C) inflate (D) deflate
5. The spokesperson's apology sounded _____ because it expressed regret without admitting responsibility or promising concrete change.
(A) auspicious (B) deleterious (C) insidious (D) tenacious
6. The author attempted to _____ contemporary social theories into a framework developed under very different historical conditions.
(A) interfere (B) shoehorn (C) reprimand (D) meddle
7. Some people _____ concepts such as "natural selection" and "survival of the fittest" to rationalize the turbulent socio-economic landscapes of industrialization and urbanization.
(A) appropriated (B) accumulated (C) coagulated (D) corrugated
8. His brief _____ of past events will bring you up to date.
(A) running (B) runoff (C) runaway (D) rundown
9. I didn't tell Mrs. Smith her husband had left, but she noticed his car was gone and put _____ together.
(A) one in a million (B) two and two (C) three's a crowd (D) baker's dozen
10. Large corporations are likely to view both customers and employees as _____ commodities.
(A) fungible (B) filtered (C) empirical (D) verbose

II. Cloze (Questions 11-30): Choose the **BEST** answer for each blank in the passages.

Passage A

Psychological research on resilience has moved beyond the idea that some individuals simply possess a stable trait that protects them from adversity. Contemporary models emphasize dynamic regulation: people cope not only by enduring stress, but by interpreting events, recruiting social support, and revising goals when circumstances change. This shift has important implications for intervention. If resilience is treated as a fixed capacity, programs tend to classify students or patients as vulnerable; 11 it is viewed as a process, the focus turns to the conditions that make adaptive responses more likely. Such a process-oriented view, however, should not be confused with the optimistic claim that hardship is automatically beneficial. Exposure to manageable difficulty may strengthen coping skills, but severe or repeated stress can 12 attention, memory, and emotion regulation. Measurement is another difficulty. Many resilience scales ask respondents to rate confidence after adversity, 13 these self-reports may reflect cultural expectations about appearing

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strong rather than actual recovery. For this reason, researchers increasingly combine questionnaires with behavioral indicators, longitudinal data, and contextual information. The goal is not to find a single resilience score but to explain why one person recovers in a given setting while another does not. Interventions are therefore most credible when they 14 coping strategies to specific stressors and social resources. Put differently, resilience should be understood as an interaction between individuals and environments, 15 as an inner asset that can be measured apart from context.

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|---------------------|-----------------|-------------------|-----------------|
| 11. (A) if | (B) unless | (C) wherever | (D) because |
| 12. (A) impose | (B) implicate | (C) implement | (D) impair |
| 13. (A) so that | (B) even though | (C) provided that | (D) as if |
| 14. (A) dismiss | (B) erode | (C) tailor | (D) subordinate |
| 15. (A) rather than | (B) as well as | (C) insofar as | (D) because of |

Passage B

In public discussions of nutrition, fortified foods are often presented as a straightforward solution to micronutrient deficiency. Adding iron to flour or vitamin D to milk can indeed improve population health, especially when vulnerable groups have limited access to diverse diets. Yet the logic of fortification becomes less simple when foods are also highly processed, aggressively marketed, and consumed in quantities far beyond what nutrition planners anticipated. A breakfast cereal may be

16 enriched with vitamins, but its overall contribution to health depends on sugar content, fiber structure, and how it displaces other foods in the diet. 17 nutrient labels invite consumers to evaluate foods item by item, metabolic effects emerge from dietary patterns over time. Recent research on the gut microbiome reinforces this broader view. Fibers that appear chemically similar may 18 different microbial responses because their physical matrix determines how bacteria access them. Consequently, nutrition policy cannot rely exclusively on isolated nutrient counts. It must also consider food processing, affordability, cultural habits, and the commercial incentives that shape choice. This does not mean fortified products should be rejected; in settings where deficiency remains widespread, they may be indispensable. The more defensible position is that fortification should be treated as a targeted public-health tool, 19 as a license to market nutritionally imbalanced products as wholesome. If policymakers ignore this distinction, a technically fortified intervention may even 20 the very dietary transition associated with chronic disease.

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| 16. (A) arbitrarily | (B) perilously | (C) ostensibly | (D) reluctantly |
| 17. (A) As well as | (B) Because | (C) Unless | (D) Whereas |
| 18. (A) elicit | (B) extract | (C) exempt | (D) execrate |
| 19. (A) as much as | (B) in addition to | (C) owing to | (D) instead of |
| 20. (A) attenuate | (B) accelerate | (C) authenticate | (D) abrogate |

Passage C

The distinction between Key Opinion Leaders (KOLs) and influencers is a pivotal concept in contemporary marketing discourse. While influencers are typically digital 21 who cultivate authority primarily within social media ecosystems, KOLs derive their social status from extrinsic expertise or recognized professional accomplishments in specialized fields such as academia, medicine, or athletics. Consequently, a KOL's influence 22 in substantive credibility and informed opinion rather than mere platform-specific engagement.

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A primary divergence involves their engagement with digital infrastructure. 23 influencers, who prioritize the constant creation of curated content, KOLs often view social media as secondary to their primary vocation, frequently limiting their online presence due to the 24 -intensive nature of digital brand maintenance. Nevertheless, when a KOL—such as a renowned nutritionist or specialized journalist—participates in a campaign, they provide an evidential “weapon” of authenticity that traditional advertisements lack. Empirical data supports this shift toward the human element, suggesting that 92% of consumers prioritize personal recommendations 25 conventional advertising. By facilitating an image transfer from an authoritative figure to a brand, organizations can significantly bolster their institutional visibility and secure long-term consumer trust.

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|-------------------|---------------|-----------------|----------------|
| 21. (A) foreigner | (B) humanists | (C) natives | (D) outlanders |
| 22. (A) rooted | (B) is rooted | (C) root | (D) has rooted |
| 23. (A) Unless | (B) Similar | (C) In addition | (D) Unlike |
| 24. (A) time | (B) light | (C) sound | (D) space |
| 25. (A) upon | (B) at | (C) of | (D) over |

Passage D

Recent journalistic accounts based on extensive interviews with Susie Wiles, the White House Chief of Staff, 26 a rare diagnostic view into the internal operational dynamics of the Trump administration. Wiles characterizes the executive’s management style as a byproduct of a highly assertive and changeable personality, drawing parallels to behavioral patterns that resist conventional restraint. This psychological 27 necessitated frequent interventions by staff to mitigate the impact of unilateral decisions regarding trade protectionism and judicial clemency.

Furthermore, the administration is depicted as a complex milieu of ideologically disparate actors. Wiles specifically identifies a 28 between ideological zealots and those motivated by strategic political transitions, exemplified by the burgeoning rivalry between Vice President J. D. Vance and Secretary of State Marco Rubio. 29 interpersonal conflicts, the Chief of Staff’s testimony highlights significant departures from evidentiary standards in presidential discourse—most notably regarding historical investigative files. Finally, in the realm of foreign policy, Wiles delineates a shift 30 aggressive regime-change strategies in Venezuela, while simultaneously emphasizing the constitutional requirement for a legislative mandate to authorize specific military escalations.

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|-------------------|-----------------|----------------|-----------------|
| 26. (A) offer | (B) offers | (C) is offered | (D) is offering |
| 27. (A) stability | (B) credibility | (C) durability | (D) volatility |
| 28. (A) frequency | (B) dichotomy | (C) paradigm | (D) validation |
| 29. (A) Less | (B) Therefore | (C) Beyond | (D) Moreover |
| 30. (A) with | (B) toward | (C) off | (D) on |

III. Reading Comprehension (Questions 31-50): Choose the **BEST** answer for each question.

Passage A

Ovid’s *Metamorphoses*, a monumental Latin compendium of Greek myths completed around AD 8, is often mischaracterized as a static relic of antiquity. However, contemporary scholars argue that the text serves as an extraordinarily contemporary document, characterized by an obsession with fluidity, plasticity, and the transgression of boundaries. By exploring the limitations of the human form, the fluidity of gender, and the precarious relationship between humanity and the natural world, Ovid provides a mirror for modern anxieties ranging from technological hubris to ecological crisis.

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The thematic malleability of these myths allows each generation to repurpose them to reflect prevailing societal conditions. For instance, the myth of Narcissus, traditionally a cautionary tale against vanity, finds a profound parallel in the digital age's culture of self-promotion on social media. Similarly, the story of Pygmalion—the sculptor who fell in love with his own creation—is being reinterpreted through the lens of artificial intelligence. In this reading, Pygmalion's misplaced faith in the superiority of his artificial construct over “real women” mirrors modern society's dangerous belief that human-engineered algorithms can offer a controlled, perfect solution to complex human problems. This arrogance carries significant risk; much like the character Eliza in George Bernard Shaw's adaptation of the myth, *My Fair Lady*, autonomous systems may eventually develop a mind of their own, leading to consequences far less manageable than their creators intended.

Furthermore, Ovid's work resonates deeply with current socio-political upheavals. The myth of Leto, condemned to perpetual wandering, has been utilized by modern novelists to explore the sense of exile and homelessness inherent in the global refugee crisis. Additionally, the story of Salmacis and Hermaphroditus offers an ancient representation of gender fluidity, suggesting that nature itself possesses an inherent ambiguity that defies rigid categorization. In this context, the *Metamorphoses* encourages a shift from viewing individuals as deviations of the norm to recognizing them as unique human beings.

Perhaps the most significant modern engagement with Ovid involves “reclaiming the narrative” for victims of violence. While Ovid was often dismissive of the assaults suffered by his female characters, modern feminist writers are reframing these stories. The transformation of Medusa—from a beast with snakes for hair punished for being a victim to a symbol of survivors of sexual assault—exemplifies this shift. Finally, the myth of Philemon and Baucis, who survived a divine flood through their humility and respect for forces beyond their control, serves as a vital fable for the climate change era. Ultimately, Ovid's work suggests that human survival depends on a fundamental humility in the face of forces we cannot control.

31. According to paragraph 2, how does the myth of Pygmalion relate to modern Artificial Intelligence (AI)?
- (A) It suggests that AI will eventually become a physical form of art displayed in museums.
 - (B) It reflects that artificial creations are superior to and more controllable than natural reality.
 - (C) It proves that ancient Greeks had developed a conceptual framework for programming.
 - (D) It serves as a warning that AI will eventually fall in love with its human creators.
32. Which of the following can be inferred from paragraph 3 about the myth of Leto?
- (A) It was originally written to provide a legal framework for refugee rights in Rome.
 - (B) It suggests that Leto was responsible for the upheaval of the modern world.
 - (C) It is the only myth that does not involve a physical and psychological transformation.
 - (D) It is used by writers to symbolize the plight of those who are homeless or in exile.
33. According to the passage, how has the perception of Medusa changed in modern times?
- (A) She is now viewed as a more terrifying monster than she was in Ovid's original version.
 - (B) Artists stop depicting her with snakes in her hair to make her look more human.
 - (C) She is transformed from a monster to a heroic survivor of sexual assault.
 - (D) She is now used primarily as a symbol for the dangers of violence on social media.
34. All of the following are mentioned as modern parallels to Ovid's myths **EXCEPT** _____.
- (A) the discovery of new species in the animal kingdom
 - (B) the hidden outcomes of autonomous technology
 - (C) the use of social media for self-promotion
 - (D) the challenges faced by refugees and displaced persons

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35. Which of the following best expresses the main idea of the passage?

- (A) Modern adaptations of Ovid, such as *My Fair Lady*, are more effective at teaching ecological lessons than the original Latin text.
- (B) Ovid's *Metamorphoses* is primarily a historical record of Greek myths that has lost its relevance in the digital age.
- (C) *Metamorphoses* remains vital today because its themes of change and fluidity allow it to be reinterpreted to address modern crises.
- (D) The primary purpose of Ovid's work was to warn ancient Roman leaders about the dangers of excessive pride and vanity.

Passage B

In contemporary higher education, the discourse surrounding generative artificial intelligence (AI) has largely coalesced around a set of comforting metaphors. University policies and academic handbooks frequently characterize AI as a “tool,” a “tutor,” or a “helpful assistant.” While these descriptors aim to provide pragmatic clarity, they are far from neutral. Instead, these metaphors exert a profound, often invisible, influence on how educators and students conceptualize the technology's role in the cultivation of critical thinking.

The cognitive power of metaphors is well-documented. A landmark study by Stanford psychologists Paul Thibodeau and Lera Boroditsky demonstrated that framing crime as either a “beast” or a “plague” significantly altered the solutions participants proposed—steering them toward either punitive measures or social reform, respectively. Crucially, participants remained largely unaware of the metaphor's influence, instead attributing their decisions to raw statistics. Similarly, viewing AI as a “tool” implies a degree of moral neutrality and human agency; much like a hammer, the responsibility for its effects is placed squarely on the user. This perspective, however, obscures the ways in which AI systems actively shape interpretations and manipulate judgment, potentially undermining the intellectual habits academics seek to foster.

The “assistant” metaphor further complicates the pedagogical landscape by suggesting a clear hierarchy where the human remains in control. This narrative masks the emergence of a “second hidden curriculum,” wherein AI does not merely assist but actively directs learning by structuring explanations and modeling specific cognitive pathways. When AI is anthropomorphized—attributed human qualities like “going rogue” or being “racist”—it further dilutes accountability. Such language allows users to look away from the institutional and corporate biases embedded within the algorithms, leading to a drift in moral responsibility.

To counteract these cognitive distortions, some scholars suggest a transition from convenient metaphors to disciplined, technical vocabulary. Rather than “brainstorming with AI,” users should recognize the process as “engaging in probabilistic text generation” under specific algorithmic constraints. Shifting from the concept of “hallucinations” to “predictive text failure” transforms verification from an optional task into a fundamental academic practice. Ultimately, by stripping away misleading metaphors and insisting on technical precision, the academic community can better maintain moral responsibility and pedagogical integrity, ensuring that the development of thought remains a distinctly human endeavor.

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36. According to paragraph 2, why is the “tool” metaphor for AI considered problematic?
- (A) It suggests that AI has its own moral agency and can make decisions.
 - (B) It encourages students to use AI for manual labor rather than intellectual tasks.
 - (C) It fails to account for the physical weight and hardware constraints of AI systems.
 - (D) It implies that any negative outcomes are solely the user’s fault.
37. Why does the author mention the study by Paul Thibodeau and Lera Boroditsky?
- (A) To indicate that metaphors can manipulate human problem-solving and decision-making.
 - (B) To argue that crime in cities is subjected to either punishment or reform.
 - (C) To show that psychologists are more qualified than computer scientists to discuss AI.
 - (D) To illustrate that the use of “beast” metaphor is better than the “plague” metaphor.
38. According to paragraph 3, what is the “second hidden curriculum”?
- (A) The secret set of lesson plans developed by corporations to replace traditional teachers.
 - (B) The process by which AI subtly directs learning and structures student thought processes.
 - (C) The specialized course designed to teach students how to use AI tools effectively.
 - (D) The unofficial social interactions that take place among students in a classroom.
39. Which of the following is **NOT** mentioned as a consequence of anthropomorphizing AI?
- (A) It makes it easier to ignore corporate choices embedded in the AI system.
 - (B) It leads to the idea that the AI system has “gone rogue” when it produces errors.
 - (C) It encourages users to think using the AI system is a key to success.
 - (D) It allows users to take an evasive attitude in moral responsibility.
40. In paragraph 4, the author suggests that shifting to technical language like “predictive text failure” would ____.
- (A) make the technology seem more human and approachable
 - (B) highlight the user’s role in interpreting and evaluating the output
 - (C) eliminate the need for students to learn experimental language design
 - (D) allow users to stop worrying about algorithmic constraints

Passage C

Cancer prevention is often discussed as a long-term ideal, yet this study argues that it can be quantified in concrete, policy-relevant terms. The researchers estimate how many new cancer cases in 2022 could be linked to exposures that can, at least in principle, be reduced through individual behavior change, public health programs, regulation, or safer environments. Their work sits within comparative risk assessment and cancer epidemiology and relies on professional concepts such as carcinogenic exposure pathways (chemical, infectious, environmental, and occupational), the time lag between exposure and diagnosis (latency), and the population-attributable fraction (PAF). PAF is a standard metric that combines exposure prevalence with the relative risk associated with that exposure to estimate the proportion of cases that would not occur if the exposure were removed, assuming the relationship is causal and other conditions remain unchanged.

To generate globally comparable estimates, the study combines cancer incidence counts from GLOBOCAN 2022 with risk-factor prevalence and effect estimates for 30 modifiable risk factors. The analysis covers 36 cancer sites and 185 countries and groups risks into four broad domains: behavioral (e.g., tobacco smoking and alcohol use), environmental (e.g., ambient particulate air pollution and ultraviolet radiation), infectious causes (nine infection agents linked to cancer), and occupational hazards (thirteen workplace carcinogens or exposure settings). Because many cancers develop over years, the researchers primarily align incidence in 2022 with exposure prevalence from roughly a decade earlier (around 2012). They then apply PAF calculations to estimate attributable

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cancer incidence by sex, region, cancer site, and risk factor, offering both proportional burdens and absolute case counts.

The central finding is that modifiable risks account for a large share of new cancers worldwide. The researchers estimate about 7.1 million of 18.7 million new cancer cases in 2022—approximately 37.8%—were attributable to the included risk factors. The attributable share is notably higher among men (about 45.4%) than among women (about 29.7%), reflecting sex differences in exposure patterns and infection-related burdens. Regional variation is substantial, which underscores the need for local tailoring rather than relying on a single “global template.” In women, the estimated attributable fraction ranges from about 24.6% in Northern Africa and Western Asia to about 38.2% in sub-Saharan Africa. In men, it ranges from about 28.1% in Latin America and the Caribbean to about 57.2% in East Asia. **Such contrasts** indicate that prevention priorities must be calibrated to regional risk profiles, health-system capacities, and demographic structures.

Across all regions, tobacco smoking emerges as the largest single contributor to incident cancers (around 15.1% globally), followed by infection-related cancers (about 10.2%), with alcohol use contributing additional burden (about 3.2%). These drivers map onto cancer-site patterns that help interpret where prevention could yield the largest gains. Lung cancer accounts for the greatest number of potentially preventable cases worldwide, consistent with the dominant role of smoking. Stomach cancer and cervical cancer also represent major preventable burdens in many settings, aligning with infection pathways and the potential impact of vaccination, screening, and timely treatment of precursor conditions.

The study’s contribution is both empirical and practical. Empirically, it offers an updated, standardized picture of preventable cancer incidence in 2022 across countries and regions, using consistent assumptions and a harmonized risk set. Practically, it translates etiologic evidence into a prevention “roadmap,” allowing policymakers to compare potential impact across different interventions. The researchers’ results support prioritizing strong tobacco control, scaling effective infection prevention and control measures (including vaccination and screening where appropriate), reducing harmful alcohol consumption, improving air quality and UV protection in relevant contexts, and strengthening occupational safeguards. Overall, the study reinforces a prevention-centered framing: while treatment remains indispensable, a sizable portion of cancer incidence can be addressed by targeted actions that reduce exposure to major, changeable risks.

The researchers also emphasize that attributable fractions are not predictions of what will automatically happen but scenario-based estimates that help rank prevention opportunities. PAF calculations assume that exposure–cancer links are causal and that removing an exposure would reduce risk without creating offsetting harms. They also require careful handling of correlated exposures (for example, smoking and alcohol) and of data gaps where prevalence or effect estimates are less precise. Even with these caveats, the analysis provides a transparent benchmark for prevention planning: it identifies which risk factors dominate in a given region, which cancer sites drive the absolute number of avoidable cases, and where prevention could complement screening and early detection to produce the greatest population-level benefit.

41. Which main idea best matches the passage?

- (A) Comparing new chemotherapy outcomes across continents
- (B) Describing imaging tools for earlier tumor detection
- (C) Explaining cancer mainly through inherited genetic traits
- (D) Quantifying preventable cancer incidence across regions

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42. In this passage, “PAF” is best understood as _____.
(A) a reckoning of avoidable cases if the exposure were removed
(B) a laboratory index measuring genetic mutation frequency
(C) a clinical score predicting tumor stage at initial diagnosis
(D) a survival metric calculated after completing chemotherapy
43. In paragraph 3, “Such contrasts” most accurately refers to which of the following?
(A) Discrepancies between the researchers’ incidence-based PAF model.
(B) Divergences between the study’s PAF values and prior analyses for individual countries
(C) Large regional differences in the proportions of new cancers under modifiable risks
(D) Variation arising from grouping behavioral and occupational risk factors.
44. Which of the following is **NOT** reported in the passage?
(A) Infections were the leading attributable risk factor for women in most countries examined.
(B) The PAF calculation assumes a causal relationship between the exposure and cancer risk.
(C) The 2022 PAF estimates are compared with other decades to measure prevention progress.
(D) Tobacco smoking accounted for approximately 15.1% of all new cancer cases globally.
45. Which policy recommendation is best supported by the passage?
(A) Prioritize expansion of occupational safety standards as the dominant cancer prevention intervention.
(B) Strengthen tobacco control alongside infection prevention and control as priority interventions.
(C) Scale up population-based cancer screening to serve as the primary substitute for risk-factor reduction.
(D) Concentrate alcohol reduction programs in high-income regions, where consumption levels are higher.

Passage D

Obesity has become a major public-health concern among young adults because it is associated not only with excess body weight but also with abnormal blood lipid profiles, metabolic dysregulation, and long-term cardiovascular risk. College students are a particularly important group because this period is often when lifelong exercise habits are formed, yet academic pressure, sedentary routines, irregular sleep, and unhealthy diets may increase obesity-related risks. One study compared two exercise strategies for college students with obesity: high-intensity interval training (HIIT) and moderate-intensity continuous training (MICT). HIIT alternates demanding exercise with lower-intensity recovery periods, whereas MICT maintains a steadier aerobic intensity for a longer continuous period. Although both approaches are widely used for weight control and cardiovascular fitness, the researchers noted that direct comparisons in obese college students, especially with attention to sex-based differences and biochemical indicators, remained limited.

The purpose of the study was to examine whether HIIT and MICT differ in their effects on weight, body composition, lipid profiles, and metabolic health. Forty college students aged 18 to 25 with obesity were included in the final analysis, with equal numbers of men and women. Participants were randomly assigned to a HIIT or MICT group, and each group was further divided into male and female subgroups. The intervention lasted eight weeks, with three treadmill-based sessions at night per week on nonconsecutive days. The MICT group performed 35 minutes of continuous aerobic exercise at 60-70% of maximum heart rate. The HIIT group completed a shorter 28-minute session consisting of four cycles: four minutes at 85-90% of maximum heart rate followed by three minutes of recovery at 50-60%. Heart-rate monitors and ratings of perceived exertion were used to check training intensity.

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To make the comparison fairer, the researchers estimated oxygen consumption so that the two exercise protocols involved similar energy expenditure. Participants were also asked to maintain their usual diet and daily routines, although formal food diaries were not used.

The researchers assessed changes in body morphology, body composition, and biochemical markers before and after the intervention. Body-related measurements included weight, body mass index (BMI), body fat percentage (BF%), waist circumference, hip circumference, and waist-to-hip ratio. Biochemical measurements included total cholesterol (TC), triglycerides (TG), low-density lipoprotein cholesterol (LDL-C), high-density lipoprotein cholesterol (HDL-C), alanine aminotransferase (ALT), and uric acid (UA). These markers were important because obesity is often accompanied by **dyslipidemia**, which refers to an abnormal lipid profile marked by elevated TC, TG, and LDL-C and reduced HDL-C. ALT is relevant because elevated values may be associated with obesity, metabolic syndrome, and liver-related metabolic stress, while UA reflects purine metabolism and renal function.

The findings showed that both HIIT and MICT produced beneficial changes after eight weeks. Participants in both groups generally reduced weight, BMI, waist and hip measurements, waist-to-hip ratio, and BF%. However, HIIT produced a more favorable decline in body fat than MICT. Reductions in BF% were larger in the HIIT subgroups than in the MICT subgroups, with female HIIT participants showing the greatest proportional decrease. The study also found that improvements in body-related indicators tended to be larger during the first four weeks than during the second four weeks, suggesting that early adaptation to exercise may be especially visible before progress gradually stabilizes. Despite these improvements, participants' waist-to-hip ratios still remained above normal Asian reference levels, indicating that central obesity was not fully resolved within eight weeks.

Biochemical results also favored HIIT in several respects. Both exercise programs improved lipid-related indicators, but HIIT was especially effective in reducing TG in both men and women. Male HIIT participants also showed a larger reduction in LDL-C than male MICT participants. HDL-C increased after training, while TC, TG, LDL-C, ALT, and UA generally decreased. The researchers suggested several mechanisms for HIIT's stronger effects, including greater excess post-exercise oxygen consumption, increased fat oxidation, and stronger hormonal responses involving catecholamines and growth hormone. These mechanisms may allow HIIT to create meaningful metabolic benefits in less exercise time than MICT.

The study contributes evidence that HIIT may be a time-efficient intervention for improving body composition and selected metabolic markers in obese college students. It also highlights the value of examining sex-based differences and multiple health indicators rather than relying on body weight alone. Nevertheless, the researchers acknowledged several limitations. The study did not include a non-exercise control group, did not use rigorous dietary records such as 24-hour recalls, and involved a relatively small sample. Future research should include better dietary monitoring, longer follow-up periods, and a control group to clarify whether HIIT's advantages persist over time.

46. According to the passage, which statement correctly describes the exercise protocols?

- (A) HIIT used four high-intensity cycles; MICT used steady moderate exercise.
- (B) HIIT required longer continuous sessions than MICT each training day.
- (C) Both protocols were paired with formal supervised dietary restrictions.
- (D) MICT alternated sprint intervals with low-intensity treadmill recovery.

中國醫藥大學 115 學年度學士後中醫學系入學招生考試
英文 試題

47. In the paragraph 3, “dyslipidemia” most nearly refers to ____.
- (A) a temporary decrease in perceived exertion during exercise
 - (B) an abnormal lipid profile involving TC, TG, LDL-C, and HDL-C
 - (C) a loss of muscle strength caused by high-intensity training
 - (D) an increase in oxygen use during recovery from exercise
48. Which statement is correct according to the passage?
- (A) Formal 24-hour dietary recalls allowed researchers to eliminate dietary influence.
 - (B) MICT was superior for reducing body fat because sessions lasted seven minutes longer.
 - (C) HIIT showed stronger body-fat reductions, with the female HIIT subgroup better.
 - (D) The non-exercise control group proved that both interventions beat no exercise.
49. Which of the following outcomes or procedures is **NOT** mentioned in the passage?
- (A) Researchers estimated each participant’s oxygen consumption at target heart rates to equalize energy expenditure across groups.
 - (B) Body-composition improvements were more pronounced during the first four weeks than during the final four weeks of the intervention.
 - (C) Heart-rate monitors and ratings of perceived exertion were used to verify that participants maintained the intended training intensity.
 - (D) Blood samples were also analyzed for fasting glucose and insulin sensitivity, both of which improved significantly more.
50. Which of the following statements is **NOT** correct according to the passage?
- (A) Training sessions were scheduled three times per week on nonconsecutive days, and all sessions were conducted in the evening on a motorized treadmill.
 - (B) To ensure a fair comparison, the two exercise protocols were executed so that participants in both groups expended a similar estimated amount of energy per session.
 - (C) After completing the 8-week intervention, participants’ waist-to-hip ratios had dropped to the normal reference range established for Asian adults of their age group.
 - (D) The researchers acknowledged that the absence of a non-exercise control group and the lack of rigorous dietary monitoring were notable limitations of the study.