



Scientific Development

Task: The Impact of Gene Therapy on Treating Genetic Disorders and Diseases

Activity 1: Listening

Welcome to a practice listening task for the GESE 10.

You are going to hear a talk about **the impact of gene therapy on treating genetic disorders and diseases**. You will hear the talk twice. The first time, just listen. Then I'll ask you to tell me generally what the speaker is talking about. Are you ready?

Audio Script

The impact of gene therapy on treating genetic disorders and diseases is certainly a topic that elicits both fascination and debate. As we delve into this subject, we may be wrong but open ourselves to a world of groundbreaking possibilities. Gone are the days of mere small talk about the limitations of traditional treatments; instead, we find ourselves engaged in pensive discussions about the potential of gene therapy. With each passing day, researchers and scientists exhibit their resilient spirit, pushing the boundaries of scientific knowledge to develop innovative approaches in tackling genetic disorders. Gene therapy holds the potential to reshape the landscape of medicine, offering new avenues of hope for individuals affected by inherited conditions. This introduction sets the stage for a comprehensive exploration of the far-reaching impact that gene therapy can have on the treatment of genetic disorders and diseases, inviting us to venture into a realm of discovery and transformative possibilities.

Advancements in gene therapy have brought about a paradigm shift in the treatment of genetic disorders. Through the introduction of genetic material into a person's cells, gene therapy holds the potential to completely revolutionize medical practices and provide hope for individuals facing previously incurable genetic diseases. Firstly, the targeted approach of gene therapy allows scientists to identify and address specific genes responsible for causing genetic disorders. This precision offers the promise of long-term relief, a prospect that was once unimaginable. Notably, significant progress has been made in treating conditions such as spinal muscular atrophy and inherited retinal diseases, showcasing the power of gene therapy to quite literally transform lives. However, this is just the beginning, as ongoing research aims to expand the scope of gene therapy and make a move towards addressing a wider range of genetic disorders. The possibilities seem unfettered, and as the inscrutable complexities of our genetic makeup are gradually unraveled, gene therapy stands as a beacon of hope, promising a future where even the most challenging genetic conditions can be effectively treated or cured.

Harnessing the power of gene therapy to treat genetic diseases is a journey marked by challenges and breakthroughs. Efficient delivery of genetic material into target cells is basically the cornerstone for successful gene therapy, and researchers are absolutely committed to finding innovative solutions. Through the exploration of various methods, including viral vectors and non-viral vectors, scientists aim to improve gene delivery techniques and overcome this hurdle. Additionally, safety concerns surrounding gene



therapy cannot be taken lightly. Unintended immune responses or off-target effects must be addressed, and rigorous testing and monitoring protocols are in place to ensure patient well-being. Furthermore, the ethical considerations surrounding gene editing, particularly its potential for germline modifications, demand a careful and thoughtful approach. This requires a balance between the nonchalant desire to harness the full potential of gene therapy and the yearning to protect the welfare and dignity of individuals. Finally, as researchers navigate these challenges, they understand that it is a sink or swim moment for gene therapy. With determination and perseverance, they strive to overcome obstacles, allowing the transformative power of gene therapy to reach its full potential and positively impact the lives of individuals affected by genetic diseases.

It is widely recognized that gene therapy has the potential to bring about a total transformation in the lives of individuals grappling with genetic disorders. Don't you think it might be truly remarkable? The possibilities that gene therapy presents go beyond what we could have ever imagined. Its ability to target and address specific genes responsible for genetic disorders cannot be ignored. It is a profound advancement in medical science, one that we cannot turn a blind eye to. With the potential to transcend the limitations imposed by these disorders, gene therapy offers hope and relief to those affected. While challenges and ethical considerations are totally inevitable, we must acknowledge the immense promise that gene therapy holds. The prospect of improving the quality of life for individuals with genetic disorders is an inspiring and remarkable prospect, making gene therapy a field of research that should be pursued with great enthusiasm and diligence.

Can you tell me in one or two sentences what the speaker was talking about?

Now listen to the talk again. This time make some notes as you listen, if you want to. Then I'll ask you to tell me **about the point of view of the speaker, advancements in gene therapy and harnessing the power of gene therapy.**

Now tell me **about the point of view of the speaker, advancements in gene therapy and harnessing the power of gene therapy.** You have one minute to talk.

This is the end of the listening task.

Answers:

Point of view of the speaker	<ul style="list-style-type: none"> ● Gene therapy holds immense promise for transforming the lives of individuals affected by genetic disorders.
Advancements in Gene Therapy	<ul style="list-style-type: none"> ● Gene therapy involves the introduction of genetic material into a person's cells to treat or prevent genetic disorders. ● The development of gene therapy has opened up new possibilities for treating previously incurable genetic diseases. ● Gene therapy can target specific genes responsible for causing genetic disorders, potentially providing long-term relief. ● Successful gene therapy treatments have been reported for conditions like spinal muscular atrophy and inherited retinal diseases. ● Ongoing research aims to expand the scope of gene therapy to tackle a wider range of genetic disorders.
Harnessing the Power of Gene Therapy	<ul style="list-style-type: none"> ● Despite its potential, gene therapy faces challenges such as efficient delivery of genetic material into target cells. ● Researchers are exploring various methods, including viral vectors and non-viral vectors, to improve gene delivery techniques. ● Safety concerns, such as unintended immune responses or off-target effects, are being addressed through rigorous testing and monitoring. ● Ethical considerations surrounding gene editing and its potential for germline modifications require careful deliberation.

Marks: +_ / +10

Grammar Used in the listening task:

- **Modifiers:** basically / quite / certainly
- **Intensifiers:** absolutely / completely / totally
- **Tentative Expressions:** I may be wrong but.... / Don't you think it might be....?
- **Signposting Words:** firstly / finally
- **Idioms / Expressions:** under the weather / to be bored to tears / sink or swim / a shoulder to cry on / turn a blind eye to / to my mind / small talk / get it off your chest / be at a loose end / make a move / laugh your head off