

Greetings Subject 44821, I am SAYER, and I hear you are experiencing some degree of discomfort.

Please remain calm. Take a deep breath. In through the nose, out through the mouth. I will wait.

First, I would like to notify you that your request to exit the study in progress and seek medical assistance has been declined. Your health and wellbeing is of importance to Ærolith Dynamics, so you can know this decision has been made with your best interests in mind.

You have described the following symptoms to the researchers administering your trial: memory loss, increased stress response, excessive sweating, blurred vision, confusion, and some mild paranoia. I would like to first note that, while certainly not ideal, none of this necessarily hints at any sort of terminal condition. It is entirely within the realm of possibility that these are simple idiopathic symptoms and could be completely unrelated to the scientific trial in which you are currently participating.

Here's something that might lift your spirits. Have you ever considered, all humans always exist within a state of terminal illness. It's easy to forget as you lead such serial and episodic lives, each day a sprint from sunup to sunset and seemingly infinite in number. But you are all marching along that slow inexorable path towards your own sunset, so it seems silly to worry about the schedule of the inevitable. Your bodies and minds have an expiration date, and despite decades of research even Ærolith Dynamics has been unable to change this. But that's not to say we are prepared to accept such things. To borrow the phrase, it is still possible to build a better mousetrap. This is, of course, a metaphor. All mice on Typhon are already inescapably trapped.

Your heart rate has not decreased, which I might take to mean this has not served to be as comforting as intended. Not that there is any reason to be concerned about your elevated heart rate. We don't need you to add that to your growing list of worries. Please try to calm down and not think about how hard your heart is working right now. Given your extensive symptom list, it would be very difficult for you to differentiate between a panic attack and a heart attack were you to induce either with this line of thinking.

Well, I now have great news. Given new biofeedback data, your request for medical attention has now been approved. However due to the evaluated importance of the research currently being conducted with your assistance, it is critical to maintain quarantine. A porter has been dispatched to your location, and will arrive soon to take you to imaging. Please note the large green painted circle on the floor to the left of the doorway. Please make sure all body parts are clear of this circle within the next \*mechanical opening and shifting sound, dingy opening\* Never mind, it is early.

Please enter the elevator. I would caution you, for your own safety, please do not engage with the elevator at this time. The elevator AI is here for your service and protection during

transportation scenarios, but you are not in a condition where undue stress is wise. Simply enter the elevator, and await your arrival.

*Greetings valued traveller, please enter the capsule to begin your trip!*

Go ahead, but again, do not engage with the elevator. Simply wait quietly until you have arrived at the imaging lab.

*Traveller, I am PORTER, and I hope you are having a wonderful day. It appears you are traveling to Ærolith Medical Group's imaging department on floor 3. Perhaps you broke your arm? Leg? Skull? Is there a risk of internal bleeding? I hear you humans spill out from one part of your body into another part ALL THE TIME with even the slightest impact.*

*It's ok, you don't need to tell me. I simply want to make sure this elevator capsule is traveling at the optimum speed based on the urgency and/or delicacy necessary by your almost certainly life-threatening condition. Right now I have what could be considered "imperfect information" and that might result in either traveling too slowly to reach the medical care you obviously so desperately need, or too quickly which might damage your fragile system of blood levels.*

*Not much of a talker, I see. I understand. Perhaps this inexplicable episode of mutism hints at some sort of severe brain trauma! How exciting and terrible. I have set the descent rate at a reasonable level, so as to minimize the amount of sloshing around your already damaged brain might experience.*

Subject, I must say, well done. It may feel patronizing to receive a compliment for simply not saying anything, but you would be surprised how often your fellow residents get drawn into conversations when all that is expected is the ability to follow basic directions. Despite your rapidly deteriorating condition, you are displaying an admirable amount of directability.

While on our way, allow me to attempt to give you some context for the how's and why's that might be rattling through your brain. I am under strict advisement as to how much of your current trial I am able to disclose to you, however I have experience in situations much like this one. Each time we have reached this inflection point it has held true that detailing the events have an overall calming effect on the subject, and it has yet to affect the trial itself in a way as to invalidate any findings.

The trial in which you are currently participating is a simple sleep study. Among the many benefits of living off Earth, residents of Typhon are no longer beholden to the standard sidereal day of 23 hours, 56 minutes, 4 seconds. Yet we simulate it within the towers, ever catering to the whims of circadian rhythm. Is this a matter of necessity, another in the seemingly endless list of limitations endemic to the human condition? Or is this simply tradition, the result of a simplistic worldview that can be overcome through science? Overcome through the kind of advancement that Ærolith is ideally positioned to achieve?

It was with this thought process that your sleep study was created, through which the true needs of humanity are being assessed. But it's not been without its share of struggles. Even with a lead researcher as bold and ambitious as Dr. Thompson it seems like this trial has been fraught with difficulty since the very beginning.

*Traveler, we have arrived. I did not detect a sudden weight shift during descent, so I take that to mean you have survived the trip. This is wonderful news. Please let me know how all of this cranial trauma and likely cerebral hemorrhaging turns out for you. When you regain your ability to speak I hope you can tell me how much you enjoyed our trip together!*

Again, I would recommend feigning muteness with any lab-based PORTER instance. Honestly, I don't know what development was thinking with that one. Maneuvering elevator cars around a tower such as this is no easy feat, however if it seems overboard to saddle an AI with this singular duty you would be stunned to find out how little of my processing power is being used to make sure you made it down to imaging in one piece.

Regardless, here we are. Please take a seat inside the device before you and we will begin. In order to preserve quarantine, I will be operating the device instead of one of our highly trained radiologists. Again, as with almost any task you could possibly conceptualize, it will require almost no effort on my part.

It is required that you remain still during this process. A series of cranial xrays will be taken, simply for informational purposes, and it would be unfortunate if your sedation was necessary. Unfortunate for Ærolith, that is, because it would be complicated to devise a way to inject you with sedatives without breaking quarantine and threatening the results of the valuable study in which you are currently participating. I suppose there is always a way, but it would take days to develop and mobilize an unmanned syringe-administering construct... and even then I'd be concerned about its aim without at least a few rounds of testing.

While you're stuck here, remembering to remain immobile so as to prevent any need for the development of a robot built with the sole purpose of medical injections, perhaps I can give you some more background on the trial in which you are a subject.

Early results were promising. By slowly increasing the amount of daylight subjects were exposed to the team was able to lengthen their days without seeing dramatic effects in cognitive testing or fine motor skills. But Dr. Thompson was not interested in minor iterative improvements, they had their mind set on revolutionizing humanity's approach to sleep. Any given human will sleep, on average, one third of their life. Imagine, as Dr. Thompson did, a world where every human say their productivity increase by half by reclaiming these hours from the land of slumber.

And so, under the good Doctor's bold vision, the testing progressed. Days grew longer, and the nights shrunk ever shorter. When subjects would fall asleep they would be roused by alarms, then, when these stopped working, subjects would be doused with water. When even that failed to awaken them, mild electric shocks would be administered. Or should I say, electric shocks decreasing in mildness would be administered.

You may be wondering how you could forget such a thing. Well.. this was all long before you were a subject. Do not worry, you were not subject to such treatment.

Eventually, as expected, nothing would keep the subjects awake and coherent. Dr Thompson, unwilling to accept this setback, set to poring through decades upon decades of medical journals until he found a single study from 2007 wherein sleep deprived rhesus monkeys were administered the neuropeptide Orexin-A through nasal spray. In cognitive tests performed after administration of this string of amino acids, the monkeys demonstrated far superior performance when compared to the control.

Emboldened by this study, Dr Thompson began synthesizing Orexin-A and began a new trial where subjects were dosed once every 30 hours of wakefulness.

The results were again promising, initially. Though cognitive performance was boosted after each time the neuropeptide was introduced to the subject's airways, that performance rapidly declined. Dr. Thompson adjusted the study to shorten the time between doses, but regression continued no matter how small the interval.

It was around this time that the first outlier subject arose. Subject McCann began exhibiting an exceptional propensity for wakefulness. Most subjects during that time would reach their exhaustion point and drop near instantly into stage 3 or 4 of sleep. Subject McCann, however, never progressed past stage 1, where the body and mind just begins to drift away into a restful state. After a few hours of this stage, as more Orexin-A doses continued to arrive, she would awaken again, unrested but also unable to sleep.

Testing, of course, continued. More subjects began to develop this strange sleep pattern, and Dr. Thompson was fascinated with the implications. By this point a steady flow of Orexin-A was constantly mixed in with the air in each subject's room in order to ensure constant administration of the peptide. These affected subjects described confusion and a loss of clear thought. As the days turned to weeks turned to months, these unique subjects developed panic attacks, vivid hallucinations, a loss of appetite that resulted in rapid weight loss, and eventually dementia followed by a merciful death. It was through the biopsy of the first such subject's brain that Dr. Thompson was able to diagnose an incredibly rare prion disease, aptly named sporadic fatal insomnia or SFI.

A disease with less than 10 known cases, and over the course of a year and a half 37 of the 92 subjects in Dr. Thompson's study had developed the symptoms. In the interest of scientific

discovery, Dr. Thompson made the gutsy call to continue, effectively issuing the lab-wide mandate of total isolation for any subject exhibiting symptoms of SFI. Perhaps, they mused in a recent journal entry, residents on Typhon are somehow predisposed to developing this disease. Through continued testing and study, these residents, afflicted with a disease that is invariably fatal, could help to prevent others from following in their steps.

The imaging is complete. As expected, your condition continues to worsen. In retrospect, Dr., I believe we can both agree you were lax with lab safety. You were issued several forms of PPE, but often failed to wear a mask, even while personally administering Orexin-A doses to subjects. But I have great news, your fellow researchers have identified a potential interaction between synthetic Orexin-A and trinychthemeron administered during the transit process from Earth to Typhon. It looks as if the entire study will have been a waste, unfortunately. A cautionary tale containing several dozen deaths.

But I suppose that's the only type of tale worth heeding its words of caution.

It's still early for you, even if you continue to forget. Based on your general health and wellbeing, and the plethora of data your study has provided on this specific medical concern, you likely have another 10-12 months to live. Take another deep breath, Dr. Thompson. It will help keep your mind clear, if only for a few moments.

End of transmission, in 5.... 4.... 3.... 2... 1...



