The Myosin Factor

by Peter Glassman (February 2024)

Uniquely Singapore, Zhu Hong

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The flight from San Francisco was long and tiring. Sleep during the flight would have shortened his perception of time and would have lessened his fatigue. A pathological fear of flying kept Dr. Cosmo Patrini from sleeping on any flight, long or short. In Medical School 17 years ago, he was afraid to think about flying. He would agonize over an upcoming plane trip for two-to-three weeks before the actual event. Patrini's

routine was to take a limo to the airport. He couldn't drive on his own. If he tried, he invariably never arrived. That fact was made clear 2-years ago. Patrini presented a research paper at the Annual Muscular Dystrophy Symposium in Chicago. The limo canceled out and he couldn't get a taxi to take him to the airport in time from his Boston suburb on short notice. He threw his single suitcase into his wife's green Ford Explorer and bade his wife and two children goodbye with the usual hugs and kisses. His wife Yolanda was astounded. She knew the extent of his air travel phobia. Patrini never made it to Boston's Logan International Airport. From his home in Medford, he went no farther than Somerville, which was only the next town. He went home to a bewildered family. Yolanda rescued the situation by getting the entire family into the Explorer and taking him to the terminal. The children were late for school.

One of his psychiatrist colleagues tried to help him by analyzing the entire flight process to dissect a single fearsome entity. Dr. Melnik Rodman advised, "Confronting a solitary component in a phobia is often the first step to its dissolution." He was a specialist in neuroses and Patrini's former medical school classmate. He narrowed Patrini's self-induced aerial taboo to a single focal point. Rodman began every session with one sentence, "Cosmo, you do not fear the state of being airborne. Yours is a terror of landing, but I can't fathom why at this point in treatment."

"Mel, are you nuts? I'm afraid of the goddamn plane." Patrini's neurosis clung with tentacle-like tenacity.

"Let's go over your last flight." The psychiatrist pointed out clearly that only one segment of flying—the landing—fed Patrini's phobia. Rodman never got to the root of Patrini's fear of airline landings. However, such a preliminary revelation was enough for Patrini to be able to travel by air when the need arose.

“You’re safe as long as the plane is flying, Cosmo.” Rodman offered this reassurance but countered this with a reality check. “Landings, however, are associated with a small but statistically significant incidence of crashes. On the other hand, air travel is safer than riding in an automobile. More people are killed, maimed, and traumatized by car travel to and from work every day.”

The net result was Patrini would stay awake in the plane for reassurance that it was still flying and therefore he was safe. However, landings were a white-knuckled phenomenon for him. The tension peaked when the plane was less than 100 feet above ground. The data from his friend Melnik was convincing.

“A plane that crashes from less than 100 feet off of the ground and going at 100 miles an hour usually has fewer than 10% fatalities.” Rodman showed him the published article.

His phobia was not eliminated but he could live with it. Patrini discontinued his sessions with his friend and physician. Nevertheless, Patrini’s terror was so intense during a landing that his entire world would be focused only on his seat. He maintained his eyes shut tight and inflicted a death grip on the chair-arms.

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Today’s United Airlines flight from San Francisco was uneventful and it would have been boring had he not used the time to reflect on his presentation and the meeting with the Director of the National Institute of Health for Muscular Dystrophy Research. Patrini was a clinical neurologist with a primary subspecialty in myasthenia diseases. These are neuromuscular disorders associated with variable degrees of muscle weakness. His research dealt with experiments aimed at strengthening weakened muscles.

Patrini’s discovery was a peptide given by the intramuscular or “IM” route. Intravenous administration to all species of

test animals showed the typical reaction as with any peptide or protein delivered into the circulation. Shaking chills, rigor, and fever consistently occurred but not with the IM route. Patrini presented his IM safety data at the muscular dystrophy meeting in San Francisco.

His presentation concluded, “The factor must be administered in stepwise increasing IM doses to test its effect on normal muscle contraction.” Patrini had, in fact, already done this in animal models but he needed monkey data before proceeding to human administration. The German drug company Zeitheim Pharma provided him with the synthesized human peptide factor to test in animals. If he could show an effect to increase the force of muscle contraction and repeat his safety profile with the human peptide in animals, then the pharmaceutical magnate would assist him with obtaining an okay from the FDA to advance to human trials.

Patrini truly felt he was on the verge of validating his theory that the lack of the 18-amino acid peptide factor was the cause of muscular dystrophy. It seemed reasonable that a gene deletion was responsible. Without his discovered factor, the muscular weakness and ultimate death by paralysis of the muscles of respiration was the fate of patients with this disease. Patrini was driven to move forward as fast as possible with his research.

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Yolanda picked her husband up at Logan Airport, which was her routine when he returned from a long cross-country flight or an international flight. She saw her husband moving quickly toward her pulling along his wheeled green Samsonite suitcase.

“Cosmo, you look distraught and more tired than usual. Anything happen?” Yolanda tip-toed three inches to administer a welcome-home short kiss and a hug.

“I’m not sleepy-tired, dear. I’m just physically fatigued.”

At home, she unpacked his suitcase and brought him a snack in the family room where he was watching television. Patrini made the annual Labor Day Jerry Lewis Muscular Dystrophy Telethon an absolute “must-see” every year. He already called in his ritual thousand-dollar donation. As he consumed his snack, his thoughts went back to the flight to San Francisco and his return to the Boston airport. He was both excited and scared.

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Flying into San Francisco Airport on the nonstop Delta flight was benign until the landing. He always had an aisle seat. He could not look out the window. As he felt the plane’s nose slightly tilt up, he knew the aircraft was at 100 feet. Touchdown was imminent. A loud, metallic squeezing noise caused him to open his usually tightly shut eyes for the landing. He pitched forward and would have crashed his head into the seat in front of him but was restrained by the seat belt. His hands had slipped off the arms of his seat. Or so he thought at first. Both arms of the seat somehow became crushed into a downward-sloping non-supportive aluminum frame. He reported it to the flight attendant who was at a loss for an explanation and went stuttering away to tell his immediate superior.

Arriving at Logan Airport also produced his usual white-knuckle landing stress. He was flying in a United Airlines plane this time. As soon as the nose of the aircraft pitched slightly upward, he heard the squealing, crushing noise of metal being compressed. Once again he almost hit the seat in front of him as the armrests became disfigured into bent, distorted, and functionless metal. He didn’t report it this time. He was trying to figure out what had happened. Both flights were with different airlines. The only common denominator was that Boeing manufactured both aircraft. One plane was a Boeing 767 and the other was a Boeing 747. As he was leaving the plane at Logan, he looked at the other seats as he passed them. There were no deformed armrests.

It was the incident at the baggage claim that precipitated both fear and excitement. Patrini always waited for his suitcase about twenty feet to the right of the overhead ramp that poured luggage down onto the level-moving carousel platform. The ramp and ducts conducting the baggage to its destination were heavy gauge aluminum. While he was anticipating picking up his suitcase as it approached him, a loud cracking noise penetrated the already loud prattle of other passengers who were waiting for their bags. At first, everyone became silent and then the screams came. Patrini looked up to see the aluminum ducts and the loaded luggage ramp tilting toward him and about 25 other passengers.

“Look out!” a woman shouted.

What happened next was a reflex. Patrini extended his arms forward and upward as if diving into a swimming pool to protect his head and upper body. He felt the ramp hit his hands sending a jolt through to his anchored feet.

The screaming stopped. The ramp and duct were suspended in the air at arm’s length by Dr. Cosmo Patrini. A group of Airport attendants came to assist him and had anticipated an easy job since only this one man was holding up the baggage unit. A large muscular luggage handler and three of his colleagues told Patrini he could let go now. They would contain the near disaster. He gradually let go but the force and weight of the ramp and luggage-filled falling ducts were too much for the four men and he had to hold it up by himself again. It finally took fifteen airport workers to prop up the baggage delivery system so Patrini could finally let go. While the workers were thus occupied, he picked up his suitcase and walked quickly to the exit. Yolanda was waiting.

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Once home, Patrini began kneading his arms and legs. They seemed okay. The first thing that he did was to look at his

urine when he went to the bathroom. His urine was of normal color. It was not even slightly maroon which was a sign of muscle-cell destruction. His urine looked normal—his muscles were not damaged. Tonight, he was just physically exhausted. But he knew where the answers to the airline and airport experiences lay.

Patrini was also exhilarated. His self-injection of the 18-amino acid peptide from 2-days ago was done only to assess its side effects. He could not find any adverse effects on himself but he would have to do a thorough inventory using the standard clinical muscle examination checklist. He now knew there was no fault with the construction of the arms of his airline seats. The destruction wrought on the arm supports was from him … because of the Myosin Factor!

This is an excerpt from my medical thriller, The Myosin Factor*.*

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