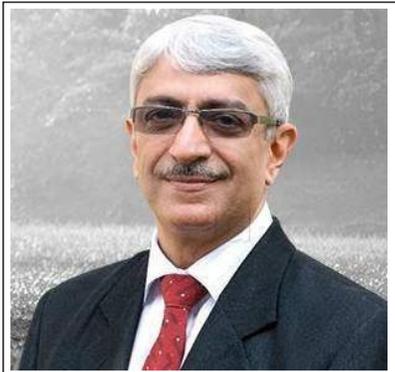


From Doctor to Pilot



Dr. C J Thakkar

It's 6.30 in the morning of 20th December 2017. Outside temperature is -2°C, it snowed yesterday night, the sun is still not up, there is mild wind and I am all bundled up, climbing on body of my Cessna aircraft to remove snow from wings and check level of fuel in the tanks. Though we have fuel gauges, they do not function as efficiently as car fuel gauges. The cold penetrates bone deep, my hands are numb inside two layers of gloves. On draining the fuel from the tank, I find some water mixed with fuel, if not drained out completely, this water could prove dangerous. After thoroughly checking each and every part of aircraft, I phone my instructor that plane is ready for flight.

I quickly go to wash room to warm my numb hands under hand dryer, wondering will I get my solo flight today? Since last 3 days I am carrying extra pair of clothes in anticipation of solo flight and as a ritual after first solo, the instructor pours bucket of cold water over you, no matter what is the temperature outside!!!!

The weather is playing with me for last 3 days, one day, the visibility is poor, on the other day the wind is blowing from side, pushing me away from runway on take-off and landing, making it difficult for me to fly straight course. And yesterday while talking to controller about my position, not only I got tongue tied but also lost 300 feet of altitude and went 20 degrees

off course, both of them NO NO for a safe flight. Today though there is mist, I am hoping it will clear by the time we get permission from air traffic controller to take off.

I ring up the air traffic controller and give him information about the aircraft, its equipment, occupants, proposed route, time en route, the altitude I wish to fly and the fuel on board. He asks me my name and contact number and I tell him Tango Hotel Alfa Kilo Kilo Alfa Romeo (Thakkar in aeronautical alphabet) and give him my phone number to contact in case of emergency.

I start the engine, with my instructor in co-pilot's seat. He is watching my each and every move. Did I check aircraft as per check list? did I follow the check list while starting the aircraft? I put the radio on and talked to controller to ask for squawk code. This is a four digit unique code given by the controller before each flight to track the aircraft. We are located within boundary of special flight regulation zone of Washington DC, so our movements are closely watched on the radar and if even by mistake, we drift away from our route, it could lend us losing license or being shot down by fighter jets if they suspect our intentions. I am no more a confident cocky professor of Orthopaedics who can talk on acetabular fractures without any preparation. I feel like first house poster, who is wondering will I get my first tibia nailing today???? I have done a lot of couch flying yesterday, practiced all radio calls and read up about weather early morning. We enter the runway, the sun is just coming up, the mist has dissolved, the sky is clear blue, the wind is calm, I perform my pre takeoff check list and push the power forwards, the engine obeys and there is sweet purr of its propeller. The air is stable, we climb effortlessly, my radio communication is spot on, the altitude, speed, headings are perfect. I am on the final approach for

landings and wow, what a smooth landing.

The instructor is satisfied and signs me to go solo.....

I drop him and taxi towards end of the runway. The aircraft feels lighter, there is no burden on the shoulder, the mind is crystal clear like the weather. I soar up in the sky, the feeling is difficult to describe. I am alone in the air, the earth is down below, I started humming some song, am totally relaxed, the pattern goes smoothly, I land like a pro and the instructor asks me if I wish to do second pattern, what a question!!! Today I feel like a king. Moment I land, park the aircraft, he is ready with a bucket of cold water. I get down and he pours full bucket of water over me. The outside temperature is 2°C, but the adrenalin in the blood does not let me shiver.

After solo comes training for flying cross country. It's a totally a different ball game. You have to fly to an airport at least 50 nautical miles away and the airport that we go to, has a control tower, unlike ours which does not have tower. This adds additional challenge of communication. The route has to be charted on a paper chart, without using GPS. Every airport has different runway configuration and different radio frequency and that too needs to be taken into consideration. Reading a paper chart is like deciphering an x-ray of pelvis with complex bicolumn acetabulum fracture, pelvis disruption and fracture neck of femur. In a block of 1 foot by 1 foot, there is a ton of information in form of symbols and abbreviations. It requires days to master the art of chart

Green blocks = Types of air spaces

Red blocks = Types of airports

Blue blocks = Height of obstacles

Yellow block = VOR Dial

Black block = Radio frequency

Yellow area = Town

Light blue area = water



While driving, going from place A to B is so easy, not so in air. There is no fixed road to follow. Since you fly using visual landmarks, you select water bodies, bridges, roads, rail tracks to guide you. Since magnetic and geographic poles do not coincide, one has to take into account the variation between the two while charting. The wind god changes its direction and velocity every now and then and at different altitudes, which needs to be taken into consideration else for every one degree of wrong planning, you may end up 60 miles away from your target if you fly that wrong direction for one hour. This reminded of my navigation for knee replacement. I used to say if you plan your surgery wrong, instead of landing at Delhi, you end up at Jaipur!!! Wind has big effect on your planning. Head wind reduces your effective speed and thereby increases travel time and fuel consumption, while tail wind will have the opposite effect. But the wind blowing from side -cross wind- is the most disastrous, if not recognized, it will blow you off your planned course. Calculation of wind direction and velocity at different altitudes and its effect on your flight is very important aspect of flight planning

Today we are three of us, myself, coach and one more student. I will fly the first leg to destination and he will bring us back. He is the heaviest among three. So I need to calculate the effect of his weight while take off and landing. He sits in the

back seat, so the aircraft becomes tail heavy making takeoff easy but while flying I have to adjust the controls to keep the nose level and the landing becomes difficult because of the extra weight. One more challenge is to talk to the control tower and fly at the same time.

The coach on the way tells me that the weather ahead is poor, take me to some nearby airport. I was not prepared for this, so while flying I look at the chart, locate another suitable airport, roughly calculate the distance using fingers as measure, calculate time to reach there and find the radio frequency in the crowded chart. This all to be done while flying without losing altitude, speed or the heading. As we successfully reach there, the coach pulls the plug and says, "you have lost engine, now land....." I quickly pulled out check list, prepared for emergency landing and we came safely and smoothly down. The coach nodded in appreciation and I felt as if I have done an excellent fixation of complex sub-trochanteric fracture

Two days prior to my theory exam, I find difficult to understand one particular topic, I thought of taking it out in option (though there are none in the exam), it was late in night, I called my coach and we spent two hours on phone. I had seven questions of that topic in exam and I answered 59 question correct out of 60, scoring 98%, missing century by just 2 runs.

On 9th July 2018, I was scheduled for my

practical test at 2 in the afternoon. The examiner was very knowledgeable airline pilot cum part time police officer. Due to my thorough coaching I was well prepared. After one hour of tough viva, he told me to prepare for flight. He made me do all manoeuvres that my coach made me do repeatedly till I had mastered them. Same challenges during cross country flight of sudden change in route, engine failure, steep turns, slow flight, different types of landings. All through the test, he kept poker face. When we landed after gruelling 2 hours of flight, he told me to park, shut the engine and saw to it that at every stage I used check list, and only then he smiled, shook my hand and said "You are officially a private pilot now" and printed temporary license. It was already 10pm by then. It was a great feeling, but the real exam was yet to come. After few days, I took my first passenger, my wife on the same route to fly. The take offs were excellent, so were the flights but both the landings were worst that I have made till today, and my "examiner" said, you need more training to smoothen your landings.....

I still need to learn flying through clouds using instruments as reference and also learn to fly sea planes for pleasure. On my bucket list is self flying holidays in Australia, New Zealand, South Africa, France, Canada and fly over Hudson River overlooking Manhattan skyline and fly over Niagara Falls and Grand Canyon. As a surgeon, not only you need knowledge, you need to develop psychomotor skills too.

Same is with flying. No two flight are alike. The aircraft behaves like human body. Needs air to perform, does not perform well at higher altitudes because of thin air and also becomes lethargic when weather is hot and humid. The challenges are endless and so is the sky.....

Dr Chandu Thakkar
Past President
Bombay Orthopaedic Association