

Weather Decision Making/Priorities for Improvement

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Make Safe Decisions

- **Have a plan B**
- **Manage Workload**
 - With first priority to fly the airplane
- **Make Personal Minimums**
 - Based on your personal training & experience
- **Consider the bigger picture when making a go/no go decision**
 - Take into account that weather can change Enroute



The Accident Chain Concept

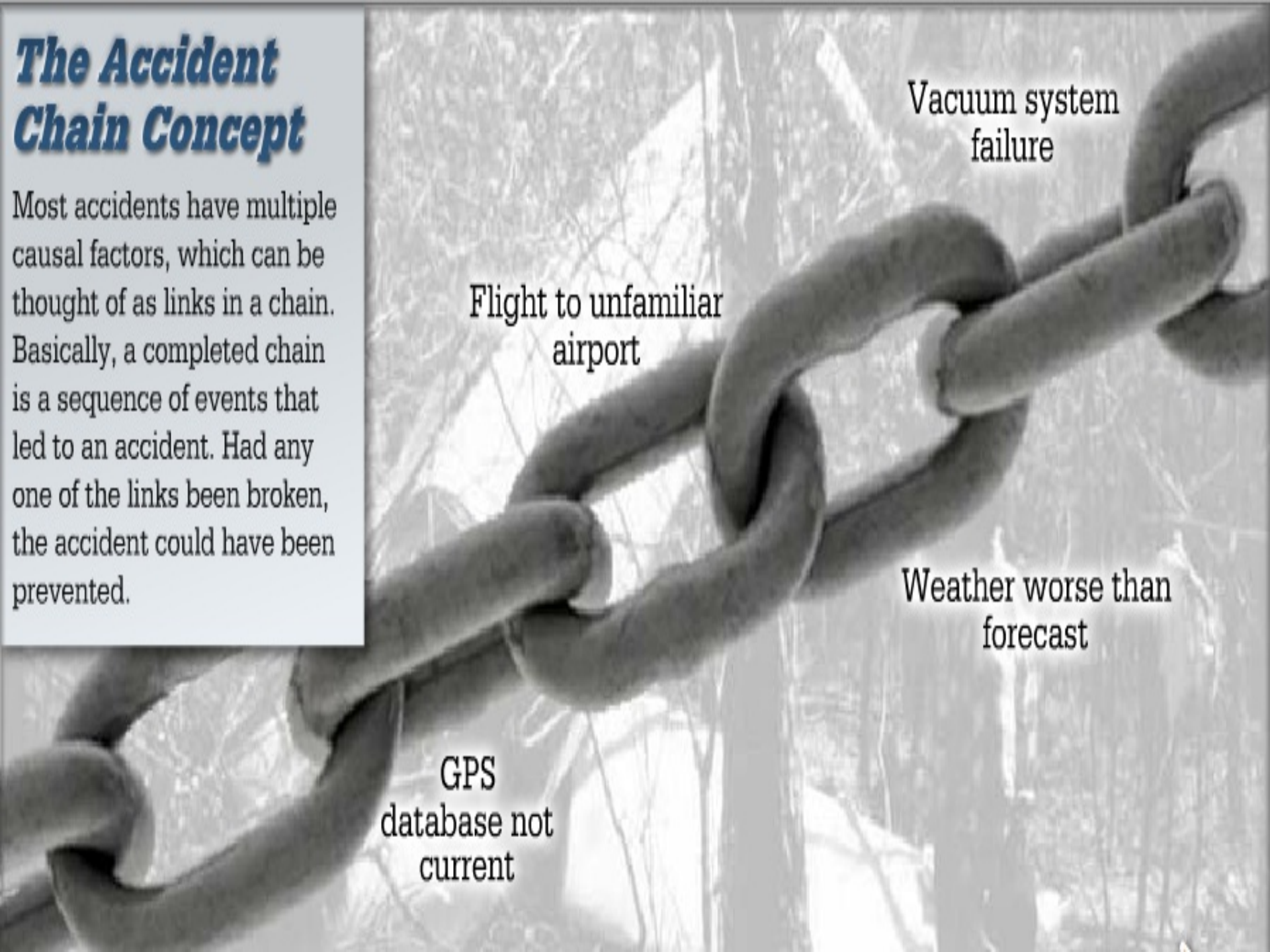
Most accidents have multiple causal factors, which can be thought of as links in a chain. Basically, a completed chain is a sequence of events that led to an accident. Had any one of the links been broken, the accident could have been prevented.

Vacuum system failure

Flight to unfamiliar airport

Weather worse than forecast

GPS database not current



In Flight Weather

- **Pilots are becoming more reliant on cockpit wx technology**
- **Pilots sometimes choose to take off and evaluate the weather as they go**
 - At typical GA aircraft speeds, a 200-mile trip can leave a 2-3 hour weather information gap between the preflight briefing and the actual flight
 - In bridging that gap, in cockpit wx technologies come into play.
 - In flight weather can a great tool, but can also instill confidence that can be misplaced



With New Technology comes New Responsibility



- With new technology emerging every day, and an increased reliance on decision support tools in Next Gen operations it is critical that pilots have the tools to become well-versed in new weather technologies, so they can make the best decisions



General Aviation vs. Airlines

General Aviation

Typical Number of Pilots: One

Pilot Certificate: All levels, including student pilot

Currency: Specified by federal regulations, but not always monitored

Aircraft Equipment: Varies widely

Flight Planning: Burden is on the pilot

Airlines

Typical Number of Pilots: Two

Pilot Certificate: Minimum Commercial, captain needs ATP

Currency: Annual or semi-annual recurrent training in high-fidelity flight simulators

Aircraft Equipment: Flight management system (FMS), traffic alert and collision avoidance system (TCAS), and ground proximity warning system (GPWS), deicing equipment, etc.

Flight Planning: Dedicated support from company dispatch



Flight Risk Evaluator

Learn About Flight Risk

Quick Check

Detailed Evaluation

Back

Tough Calls

Complications

GA versus Professional

What's Your Story?

Good Judgment

SUPER RISK
ADVISOR
3000

AIRCRAFT:

Cessna 150

ROUTE:

Telluride, CO, to Leadville, CO

DATE/TIME:

August 10, 3 p.m.

WEATHER:

Wind calm. Temp 100F.
Density Altitude 14,000 feet.

Commentary:

So, uhh...you're kiddin' me, right? No?? Wow.

100% SAFE

SAFETY SPECTRUM



0% SAFE

Close



FLIGHT 1

Telluride, CO to Leadville, CO



FLIGHT 2

Salina, KS to Wichita, KS



FLIGHT 3

Local Flight



FLIGHT 4

Reno, NV to San Jose, CA



Flight Risk Evaluator

Learn About Flight Risk

Quick Check

Detailed Evaluation

Since you've chosen the quick analysis, we only need you to answer a couple of questions. **Note:** If you've selected this option before, the program will automatically pre-fill the blanks with your most recent responses.

Your Flight:

Please answer the following questions regarding your upcoming flight.

1. Will the flight be conducted **during the day, or at night**?

Day

Night

2. Will the flight be conducted **under VFR or IFR**?

VFR

IFR

3. Is your VFR flight a **local flight** (e.g., traffic pattern or practice area)?

Yes

No

4. How much **flight time** do you have?

200 hours





Flight Risk Evaluator

Weather Factors

Ceiling (departure, destination, and en route):

- Minimum 5,000 feet

Visibility (departure, destination and en route):

- Minimum 6 miles

Wind:

- Max 25 knots, including gusts
- Max crosswind 50% of aircraft limit

Operational Factors

Terrain:

- No departures/arrivals from designated mountainous areas without special training
- No terrain more than 2,000' above departure or destination airports within 20 nm

Runway (departure and destination):

- At least 50 feet wide, *and*
- 50% longer than POH requires
- No takeoff or landing from contaminated runways (snow, rain, etc.)

Aircraft:

- Single-engine, 25 hours in type
- Multiengine or turbine, 50 hours in type

Fuel:

- Arrive at destination with no less than 1 hour remaining

Recent Experience:

Previous 90 days:

- At least 10 hours
- At least 6 takeoffs/landings



Flight Risk Evaluator

Learn About Flight Risk

Quick Check

Detailed Evaluation

Based on the information you provided, we've prepared this form showing the relative safety of your flight in several areas. Note: Safety recommendations are intended as general guidelines only.



Print Your Results

To edit your inputs, click your browser's back button.

Your Results:

Pilot:	Melissa Mccaffrey	Departure:	KISP
Flight Time:	100 hours	Destination:	KITH
Instrument Time:	N/A	Flight Type:	VFR Time of Day: Day
Aircraft:	C172	Date:	Oct 23, 2013 7:32 PM

Key: Meets ASI Safety Recommendations | Use caution | Unsafe

Weather:

Departure Ceiling
We do not recommend departing with a ceiling this low.

Operations:

Departure Terrain
Although the airport is not located in mountainous terrain, it's still important to be aware of any

Weather:

X **Departure Ceiling**
We do not recommend departing with a ceiling this low.

X **En Route Ceiling**
We do not recommend departing with an en route ceiling this low.
Read an **accident report**.

X **Destination Ceiling**
We do not recommend flying to an airport with a ceiling this low.

X **Departure Visibility**
We do not recommend departing with visibility this low.

X **En Route Visibility**
We do not recommend departing

Operations:

✓ **Departure Terrain**
Although the airport is not located in mountainous terrain, it's still important to be aware of any obstructions in the area.

✓ **Destination Terrain**
Although the airport is not located in mountainous terrain, it's still important to be aware of any obstructions in the area.

X **Departure Runway**
Under the circumstances, we do not recommend using this runway. Read an **accident report**.

X **Destination Runway**
Under the circumstances, we do not

What we Teach



1



2



3



4

5: In-Flight Decisions

6

7

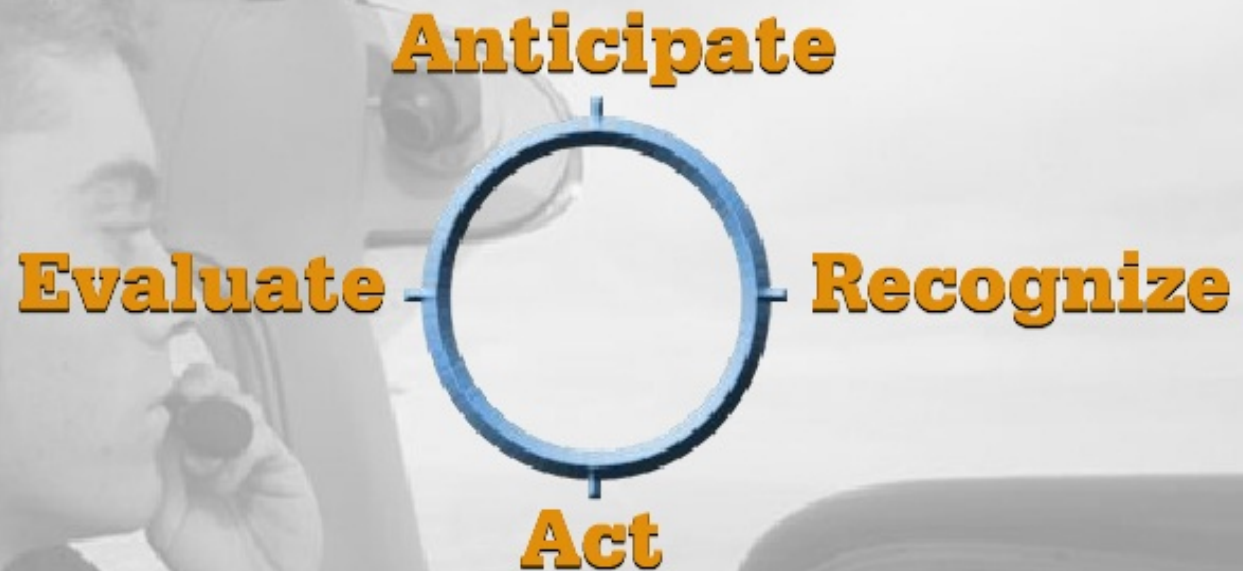
Quiz

- 5-1
- 5-2
- 5-3
- 5-4
- 5-5
- 5-6
- 5-7
- 5-8
- 5-9
- 5-10
- 5-11
- 5-12
- 5-13

The Decision-Making Cycle

The complex process of decision making has four basic parts: anticipate, recognize, act, and evaluate.

Don't think of each part as a step that has to occur in a set sequence, but rather as a process that is repeated over and over—most of the time in parallel for multiple issues.



Click on each step to the right for more details.

FAQs



Learn More

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Next



1



2



3

4: Go/No-Go Decisions

5

6

7

Quiz 4-1 4-2 4-3 4-4 4-5 4-6 4-7

Practice the Go/No-Go Decision

You're planning a long VFR cross-country flight to visit a close friend in the hospital. It will mean a lot to your friend if you can get there. The weather is marginal, but the forecast says it won't get any worse. You plan to arrive right around sunset. That's good, because you haven't flown much at night—particularly in marginal visibilities. During preflight, you notice that the tires look pretty low. You don't have access to an air compressor, and the mechanic on the field has left for the day. The mechanic can be back in an hour if you would like him to service the tires.

What will you do?

[FAQs](#)

Select an Option:

A

Go ahead with the flight

B

Cancel the flight

C

Call the mechanic and fill the tires

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Practice In-Flight Decision Making

An hour into a VFR cross-country on a hot summer day, you notice your passenger isn't looking well—probably the result of the continuous light turbulence. You're only a thousand feet below a widely scattered cumulus layer, but there's a steady stream of airline traffic just above the clouds, headed for the nearby international airport.

What will you do?

Select an option:

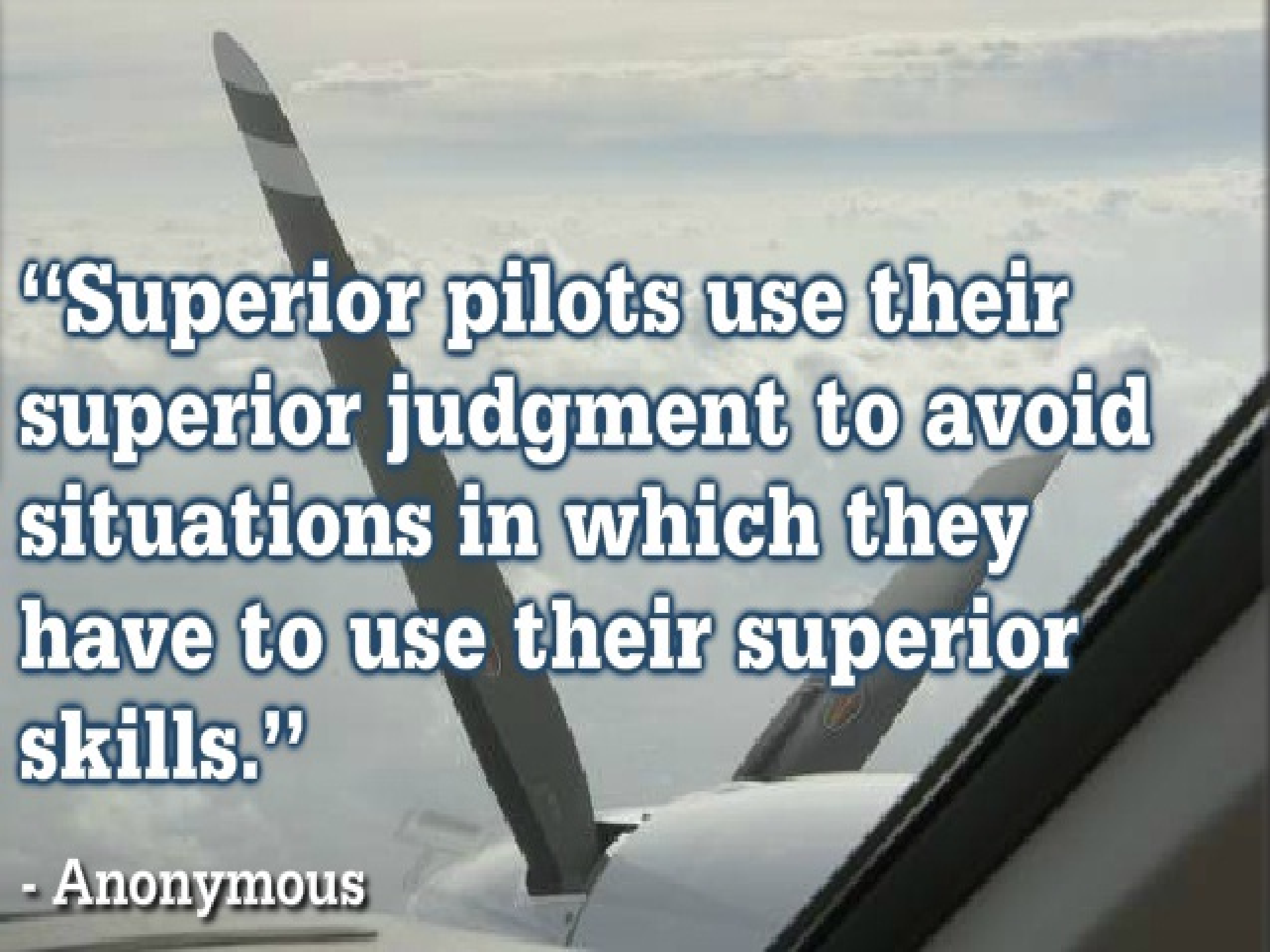
A Climb to a higher altitude

B Divert to the nearest suitable airport

This is probably the best choice. Once a passenger begins to experience motion sickness, your best bet is typically to get him or her back on the ground as soon as practical.

C Tell your passenger to relax and focus on his breathing, and continue your flight





“Superior pilots use their superior judgment to avoid situations in which they have to use their superior skills.”

- Anonymous