



## **Maintain Physical Fitness During Layover**

*The physically fit pilot is less likely to develop a medically disqualifying condition.*

—

by

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The pursuit of a healthy lifestyle by air crew members, who by necessity must maintain an above-average level of physical fitness, presents a challenge during layovers. Different hotels and exercise facilities, varying seasonal outdoor environmental conditions, irregular hours of hotel layover and extensive ground times while on duty are some of the factors that challenge the maintenance of the desired fitness program.

### **Why Practice a Physical Fitness Lifestyle?**

Health status is directly related to continuing a sustained superior performance throughout one's career. The physically feeble and ill individuals fall by the wayside, while their non-impaired peers continue to perform productive work. The physically fit pilot who practices a healthy lifestyle is much less likely to develop a medically disqualifying

condition. He or she will have lengthened life and career expectancy compared with the person who does not exercise, uses tobacco, abuses alcohol, consumes high-fat foods and otherwise reflects the unhealthy lifestyles of the 1950s and 1960s.<sup>1</sup>

In addition, the physically fit pilot resists fatigue better than the less fit individual.

### **Determine Physical Fitness Requirements**

Requirements for maintaining levels of individual physical fitness may range from virtually no exercise (for those who only expend energy on whatever demands the daily work activities require) to a program that produces a high level of physical fitness. Flight crew members probably fall somewhat above the mid-range between these two extremes. Some individual creativity will be

necessary for those pilots who have a physical fitness lifestyle, especially when biding time during a layover. Whatever level of fitness the individual seeks, one should practice the healthy management of the body, on or off duty.

## **Exercise in the Hotel Environment**

Unless the layover hotel has a suitable exercise facility available free or at a reasonable cost, creativity is necessary if the desired physical fitness level is to be maintained. Factors include the hotel's surroundings (inner city vs. an suburban or semi-rural location), the season and the structure of the hotel (multi- vs. single-level).

Some hotels are located in certain city areas where jogging, for example, would not be advisable. Thus, those crew members who use jogging, or rapid walking, as a means of remaining fit cannot safely use these areas if the threat of violence or terrorist activities is present. If the layover is in a high-rise hotel with suitable stairways, it is possible to use these for aerobic exercise. Laps around each hotel floor level can be made using the stairs for the next level until one has reached the top. A slow walk down the stairs back to the room can constitute the cool down.

The crew member can walk within the terminal for exercise and, if the outside environment is suitable, in the open air. To keep a supple musculo-skeletal system, it is important not to sit too long in a fixed position. For hand and forearm muscle exercises, a rubber ball carried in the jacket can be used. This is helpful in toning the hand and forearm muscles.

## **Seasonal Considerations Should Be Kept in Mind**

The winter season in northern locations can cause problems for the outside jogger during layover. It will be necessary to have the appropriate clothing for outdoor running and there is the potential hazard of slipping on ice. In addition, early darkness may lead to collisions with vehicles and to the possibility of twisting an ankle on an obscured ground obstacle. Flight crew members who fly on north-south routes may experience wide variations of temperature and should have suitable clothing for these extremes. An additional consideration is the importance of carrying along appropriate jogging shoes that are compatible with the terrain and the type of jogging to be done.

For the swimmer, cold weather climates can present problems. Many layover hotels and motels do not have indoor pools. An additional problem for swimmers is the practice of

many hotels and motels of advertising the availability of a pool that is really equivalent to an oversized bathtub.

## **Bring the Right Equipment**

Flight crew members who have layovers in hotels with exercise rooms are fortunate. For them, performing various kinds of exercise is greatly simplified. Of course, hotel layover exercise rooms may vary from a broken-down "exercycle" and a cheap rowing machine to a first-class facility with the latest exercise equipment. Most hotel exercise facilities will probably fall in the lower half of these two extremes. However, some hotels may have an agreement with a nearby health club and this can be very advantageous. Many of these hotel-based or hotel-affiliated exercise facilities can be used at no charge by persons registered in the hotel. Some of these facilities may have nominal charges, while others are unreasonably expensive. Alternative exercise approaches must be considered in some cases. In addition, tennis is an excellent fitness activity for those who pursue this sport (if a partner can be found). The same is true for volleyball.

Lightweight exercise equipment for use in the hotel room can be brought in an overnight bag. An excellent piece of equipment is a bicycle inner tube or a rubber stretcher available in exercise stores. Beyond this, the flight crew member has a range of exercise options that include calisthenics, push-ups, sit-ups and a wide variety of stretching exercises that should, of course, be done before and after exercise sessions. Two popular paperback books currently in print provide many stretching suggestions plus various exercises that can be done in a room at home, in a hotel or elsewhere.<sup>2,3</sup> If the hotel room television happens to have a program on aerobics, this can be used if the schedule is compatible.

The individual crew member may be inclined toward aerobic conditioning as his or her primary training mode or concentrate on strength building, or a combination of both objectives. These different approaches will require adaptation to the layover facilities. In some cases, a partial exercise session may be the only option due to layover facility or time limitations. The human body is highly adaptable and should maintain itself if a relatively limited exercise session is all that is reasonably possible. In any event, prolonged stretching, warm-ups and sit-ups, along with push-ups and calisthenics, can be performed. Some persons who have been held by terrorists and placed in isolation cells have maintained a significant degree of fitness through regular practice of the above exercises.

From the personal standpoint, a conscious effort to seek nutritious food is highly advantageous.<sup>4</sup> The crew mem-

ber should not smoke and should avoid alcohol, or at most consume small amounts (and never before a flight). There is increasing evidence showing the damaging health effects of tobacco and alcohol use even in small amounts.

### Identify Specific Facilities

The individual flight crew member faces a number of challenges in achieving maintenance level or conditioning level exercises during layovers. The problems are not insurmountable, but call for some original thinking and planning. It is suggested that pilots make a log of where various types of exercise facilities are available. This can be useful in planning ahead for 30 minutes or more of exercise during a specific layover. It is also suggested that pilots who are interested in this type of lifestyle and health development share the information they have with others in their airline. In this way, a pilot going to a new location for layover will know what to expect ahead of time. Sharing experience and developing group knowledge of facilities at various locations can help in the selection of suitable layover facilities. The facility with the best exercise equipment would certainly be the most desirable for future selection.

The exercises suggested here are “maintenance” exercises and are intended to help maintain a selected target level of physical fitness. Those who seek very high levels of physical fitness must, as a general rule, achieve these while at home base.

Guidelines for cardiac levels of fitness are related to pulse rates and duration of exercise.<sup>5,6</sup> Subtract one’s age from 200 and for the 30-year-old the maximum exercise

“pulse target” would be 170; for the 40-year-old, 160; for the 50-year-old, 150. Of course, there will be individual exceptions in the upper age groups (for example, very fit people), but as a general guideline this formula is excellent. Three, four or five exercise sessions per week, for periods up to 30 minutes (or more if very fit), are considered sufficient as a general rule, depending on the individual and on the fitness goals.

### Gauge Fitness Levels and Limits

There is a self-administered test<sup>5</sup> to determine aerobic fitness. Note the start time and check how much time it takes to “trot, dash, walk, run, jog, skip, amble, sprint, or otherwise” cover one and one-half miles on level ground. This test is not a competition; it is self-assessment. The time should reflect what can be done comfortably. A 12-to-13-minute time is “average.” Fifteen minutes or more is poor. Eleven minutes or less is good to excellent. The aim is to finish the test in a physically comfortable state, with a heart rate that is below the 200 minus age level. After some weeks of exercise, the test can be repeated to check for improvement.

A general indicator of fitness level that can be used in addition to testing pulse rate is body weight in relation to musculo-skeletal frame and height and a determination of the proportion of fat in the body (*Jane Brody’s Nutrition Book*).<sup>7</sup> Ideal body weights in relation to height and age are listed below in Table 1.

A person with a light bony frame may weigh a bit less, and one with heavy bones, somewhat more. The same is true for individuals with stringy (long-distance runners)

**Table 1  
Ideal Weight in Pounds**

Height	20-29	30-39	40-49	50-59	60-69
	Men				
5'3"	125	129	130	131	130
5'6"	135	140	142	143	142
5'9"	149	153	155	156	155
6'0"	161	166	167	168	167
6'3"	176	181	183	184	180
Women					
4'10"	97	102	106	109	111
5'1"	106	109	114	118	120
5'4"	114	118	122	127	129
5'7"	123	127	132	137	140
5'10"	134	138	142	146	147

Source: Reference 7.

muscles vs. those with bulky “weight lifter” muscles. The Brody reference states that body fat can be estimated by squeezing the skin at the back of the relaxed hanging arm with the thumb and forefinger. If the distance between the thumb and forefinger during a light squeeze “is more than an inch,” one is carrying too much fat. The Brody reference also points out that studying oneself in a mirror will disclose whether there is excess fat onboard. Intelligent regular exercise and eating habits will take care of fitness and fat considerations.

Crew members can maintain a desired state of physical fitness and promote good health during layover if they exercise some ingenuity. Each crew member must set his or her personal target for a desired fitness level and tailor the layover fitness program accordingly. Enhanced well-being and a long healthy career are the rewards. ♦

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