

# ADDENDA

**ANSI/ASHRAE/ASHE Addendum e to  
ANSI/ASHRAE/ASHE Standard 170-2021**

# Ventilation of Health Care Facilities

Approved by ASHRAE and the American National Standards Institute on September 30, 2022, and by the American Society for Health Care Engineering on September 28, 2022.

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## FOREWORD

*Addendum e allows natural ventilation for certain limited health care spaces and under certain conditions. ASHRAE Standard 62.1's Natural Ventilation Procedure, which was completely revised in 2019, was used as a starting point for this addendum.*

**Note:** In this addendum, changes to the current standard are indicated in the text by underlining (for additions) and ~~striking through~~ (for deletions) unless the instructions specifically mention some other means of indicating the changes.

## Addendum e to Standard 170-2021

*Add a new Section 6.10 as shown.*

### 6.10 Fan-Assisted Natural Ventilation

**6.10.1 General Requirements.** Using outdoor air through natural ventilation intakes as a means of supply air is acceptable for spaces listed in Table 6-3, provided that the air is mechanically removed from the space and meets pressure relationships, minimum total ach, and design temperature and humidity ranges listed in the "Reference Table" column. All spaces designed for natural ventilation shall include a mechanical ventilation system designed in accordance with this standard except as noted below.

**6.10.2 Intakes.** Fan-assisted natural ventilation intakes shall meet the following requirements:

- a. Intakes shall be at least ten (10) times the crack/leakage area of the space and have a maximum face velocity of 100 fpm (0.508 m/s) at the minimum total air change rate required by this standard. (**Informative Note:** The 100 fpm (0.508 m/s) is a sizing criterion not an operational limit. Refer to 2021 ASHRAE Handbook—Fundamentals, Chapter 16 for information regarding crack/leakage area of the space.)
- b. The device that is mechanically removing the air shall remain operational when the intake is open.
- c. Intakes shall be limited to those dimensions allowable by the local authority having jurisdiction.
- d. The natural ventilation design shall maintain the pressure relationships required in Tables 7-1, 8-1, 8-2, and 9-1 with adjacent spaces.
- e. Intakes shall include a screening device designed to prevent intrusion by insects and vermin.
- f. Intakes shall be located such that the minimum separation distance between the intake to any specific potential outdoor contaminant source shall be equal to or greater than the separation distance listed in Table 6-1.

#### **Exceptions to 6.10.2(f):**

1. As allowed by Section 6.3.1.1, Exception 3.
2. The minimum separation distance between landscaped grade and a natural ventilation air intake shall be 3 ft (1 m).

**6.10.3 Filtration.** Fan-assisted natural ventilation air introduced in accordance with Section 6.10.1 is exempt from meeting the requirements of Section 6.4, provided it is part of a system meeting the requirements in this section.

**6.10.4 Condensation Mitigation.** Interior air barriers, insulation, or other means that separate fan-assisted naturally ventilated spaces from mechanically cooled spaces shall be provided, such that condensation does not occur on indoor surfaces.

**6.10.5 Outdoor Air Quality.** Fan-assisted natural ventilation air introduced in accordance with Section 6.10.1 shall meet the following requirements:

- a. Comply with ASHRAE Standard 62.1, Section 4.
- b. Compliance with ASHRAE Standard 62.1, Section 4.3(b)(8) shall include identification of potential biological contaminant sources.

**Informative Note:** Monitoring PM10 and/or PM2.5 with local sensors can be helpful in implementing natural ventilation.

*Revise Informative Appendix E as shown. The remainder of Informative Appendix E is unchanged.*

ASHRAE. 2017-2021. *ASHRAE Handbook—Fundamentals*. Atlanta: Peachtree Corners, GA: ASHRAE.

**Table 6-3 Spaces Acceptable for Natural Ventilation**

<b><u>Function of Space</u></b>	<b><u>Reference Table</u></b>
<b><u>General patient room</u></b>	<u>7-1</u>
<u>General exam room</u>	<u>7-1</u>
<u>Physical therapy</u>	<u>7-1</u>
<u>Patient bedroom</u>	<u>7-1</u>
<u>Resident room</u>	<u>7-1</u>
<u>Examination/observation</u>	<u>8-1</u>
<u>Urgent care exam</u>	<u>8-2</u>
<u>Urgent care observation</u>	<u>8-2</u>
<u>General examination room</u>	<u>8-2</u>
<u>Psychiatric examination room</u>	<u>8-2</u>
<u>Psychiatric consultation room</u>	<u>8-2</u>
<u>Psychiatric group room</u>	<u>8-2</u>
<u>Psychiatric seclusion room</u>	<u>8-2</u>
<u>Physical therapy individual room</u>	<u>8-2</u>
<u>Physical therapy exercise area</u>	<u>8-2</u>
<u>Hydrotherapy</u>	<u>8-2</u>
<u>Physical therapeutic pool</u>	<u>8-2</u>
<u>Speech therapy room</u>	<u>8-2</u>
<u>Occupational therapy room</u>	<u>8-2</u>
<u>Prosthetics and orthotics room</u>	<u>8-2</u>
<u>Dental treatment</u>	<u>8-2</u>
<u>Other dental treatment areas</u>	<u>8-2</u>
<u>Toilet room</u>	<u>8-2</u>
<u>Occupational therapy</u>	<u>9-1</u>
<u>Resident living/activity/dining</u>	<u>9-1</u>
<u>Resident room</u>	<u>9-1</u>
<u>Physical therapy</u>	<u>9-1</u>
<u>Resident corridor</u>	<u>9-1</u>
<u>Toilet/bathing room</u>	<u>9-1</u>

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