CLAIMS

[Claim 1]A swallowing training apparatus for swallowing training, the swallowing training apparatus comprising:

a respiration detection part configured to detect a respiratory motion of a subject;

a swallowing induction part configured to provide a trigger for swallowing induction to the subject at a predetermined timing in a first half of an expiration period on the basis of a detection result from the respiration detection part;

a swallowing detection part configured to detect that swallowing has been performed by the subject;

a swallowing determination part configured to determine whether or not the swallowing detected by the swallowing detection part has been at an appropriate timing with respect to the respiratory motion detected by the respiration detection part; ~~and~~

a respiration output part configured to output, to outside, information indicating the respiratory motion of the subject on the basis of the detection result from the respiration detection part;

a result output part configured to output, to outside, information indicating a determination result, in accordance with determination having been performed by the swallowing

determination part; and

a display configured to display information;

wherein the respiration output part causes the display to display, as the information indicating the respiratory motion: first motion information indicating which of expiration and inspiration the respiratory motion is in; and second motion information indicating a progress state of expiration and inspiration; and

wherein the swallowing induction part provides the trigger to the subject by causing a display form of the second motion information in an ideal swallowing period in an expiration period to be different from a display form of a remainder of a respiration period.

~~[Claim 2] The swallowing training apparatus according to claim 1, further comprising~~

~~a respiration output part configured to output, to outside, information indicating the respiratory motion of the subject on the basis of the detection result from the respiration detection part.~~

~~[Claim 3] The swallowing training apparatus according to claim 2, further comprising~~

~~a display configured to display information, wherein~~

~~the respiration output part causes the display to~~

~~display, as the information indicating the respiratory motion: first motion information indicating which of expiration and inspiration the respiratory motion is in; and second motion information indicating a progress state of expiration and inspiration.~~

[Claim ~~4~~ 2] The swallowing training apparatus according to claim ~~3~~ 1, wherein

the respiration output part causes display of at least one of the first motion information and the second motion information to be different between a case of the expiration and a case of the inspiration.

[Claim ~~5~~ 3] The swallowing training apparatus according to claim ~~4~~ 2, wherein

the respiration output part causes a color of the display of at least one of the first motion information and the second motion information to be different between the case of the expiration and the case of the inspiration.

[Claim ~~6~~ 4] The swallowing training apparatus according to claim ~~5~~ 3, wherein

the respiration output part sets the color of the display in the case of the expiration to green, and sets the color of the display in the case of the inspiration to red.

[Claim ~~7~~ 5] The swallowing training apparatus according to any one of claims ~~3~~ 1 to ~~6~~ 4, wherein

as the second motion information, the respiration output part causes the display to display strength of the expiration by means of an indicator configured to change in a first direction, and causes the display to display strength of the inspiration by means of an indicator configured to change in a second direction opposite to the first direction.

[Claim ~~8~~ 6] The swallowing training apparatus according to any one of claims ~~3~~ 1 to ~~6~~ 4, wherein

as the second motion information, the respiration output part causes the display to display an image in which a respiration waveform is superposed on a straight line separating the expiration and the inspiration from each other.

[Claim ~~9~~ 7] The swallowing training apparatus according to any one of claims ~~3~~ 1 to ~~8~~ 6, wherein

the result output part causes the display to display a determination result on appropriateness or inappropriateness of the swallowing, together with the first motion information and the second motion information.

[Claim ~~10~~ 8] The swallowing training apparatus according to claim

~~9~~ 7, further comprising

a sound output part configured to output a sound, wherein

the result output part causes the sound output part to output a sound indicating the determination result on appropriateness or inappropriateness of the swallowing.

[Claim ~~11~~ 9] The swallowing training apparatus according to any one of claims ~~3~~ 1 to ~~10~~ 8, further comprising

a swallowing output part configured to cause the display to display information indicating occurrence of swallowing, in accordance with the swallowing detection part having detected the swallowing.

~~[Claim 12] The swallowing training apparatus according to any one of claims 3 to 11, wherein~~

~~the swallowing induction part provides the trigger to the subject by causing a display form of the second motion information in an ideal swallowing period in an expiration period to be different from a display form of a remainder of a respiration period.~~

[Claim ~~13~~ 10] The swallowing training apparatus according to any one of claims 1 to ~~12~~ 9, comprising

a sound detection part configured to detect a sound of

a larynx portion of the subject, wherein

the swallowing detection part detects the swallowing on the basis of respiration information detected by the respiration detection part and sound information detected by the sound detection part.

[Claim ~~14~~ 11] The swallowing training apparatus according to claim ~~13~~ 10, further comprising

a displacement detection part configured to detect a displacement of the larynx portion of the subject, wherein

the swallowing detection part detects the swallowing on the basis of the respiration information detected by the respiration detection part, the sound information detected by the sound detection part, and displacement information detected by the displacement detection part.