

Mealtime Pulse Oximeter Study

General Guidelines



IntellectAbility

1 Baseline

SpO2 and pulse normals outside of eating. This is best done for one minute just before mealtime.

2 Mealtime Range

Impact of eating on SpO2 and pulse once coordination of respiration and swallowing has begun. This is compared to the baseline.

Significant if

SpO2 drops into 80s. SpO2 does not rebound into 90s (best if 93% plus.) Values decline steadily over course of meal. Pulse rate increases and stays excessively elevated without returning close to baseline rate.

3 Length of Mealtime

Mealtimes which require longer than 30 minutes to complete place the person at risk for fatigue leading to further problems with coordination of respiration and swallowing.

4 Coughing Episodes

Observe amount of coughing during mealtime and its effects on SpO2 and pulse. A good clearing cough should result in a rise in SpO2 to 95% or greater, facilitating O2/CO2 exchange.

Generally, a poor or inadequate clearing cough will not affect the SpO2 or cause it to drop even further. Excessive coughing during mealtime can increase fatigue and increase the risk of aspiration.

5 Coughs with Color Changes

Generally indicates aspiration of mucus/food/fluids in significant amounts. If either wheezing or apnea episodes are also present, the overall seriousness of the aspiration episode increases.

6 Decline of SpO2 During and/or Shortly Following Mealtime

Answer "yes" or "no" by comparing the average SpO2 during the meal to the average baseline. Many individuals are experiencing "silent aspiration". Decline of SpO2 values into the 80s can indicate aspiration even if coughing is not present. Decline of SpO2 values after mealtime may be indicative of the onset of reflux with aspiration. Readings are observed at 5 minutes and 30 minutes after the meal.

7 Oxygen Saturation

SpO2 during eating and drinking is also recorded in terms of the highest, lowest, and most common value. If SpO2 values are below normal limits (95%), they are further evaluated according to what percentage of time is spent below 90%, 85%, 80%. Many individuals with chronic respiratory diseases (COPD, ARDS) have lower baseline SpO2 values. These individuals may normally run between 80-85%.

8 Inadequate SpO2 During Meals

Decreases alertness and general CNS function, which includes movement in the oral structures. Hinders the efficiency of coordination of respiration and swallowing.

Mealtime Pulse Oximeter Study Sample

Name **Jim Jones**

Date **2-2-23**

Assessed by **K. Green, RN**

Time Start: **12:15pm**

Time End: **12:45pm**

Baseline SpO2 **95%**

Pulse **90**

Mealtime Range SpO2 **91-98%**

Pulse **89-108**

Length of Mealtime **22 min.**

Coughing Episodes **3**

Single Coughs **0**

Coughs with Color Change **0**

Decline of SpO2 During **none**

Following **none**

Five Minutes Post meal

SpO2 **92 for 2 min,
then 93-98**

Pulse **99**

Thirty Minutes Post meal

SpO2 **95 steady**

Pulse **99**

Oxygen Saturation (SpO2)

Highest

98

Lowest

91

Avg.

94-99

Percent of Time Below

90%

0

85%

0

80%

0

Interpretation

1) Minimal fluctuation in SpO2/pulse during meal.

2) SpO2/pulse minimally changes from baseline during meal.

3) Three single coughs w/i 30 minute post-meal period. SpO2 and pulse not significantly affected.

4) No "wet" respirations noted during or after the meal.

5) Position upright in wheelchair with head in midline and neutral position.

Mealtime Pulse Oximeter Study



IntellectAbility

Name

Date

Assessed by

Time Start:

Time End:

Baseline SpO2

Pulse

Mealtime Range SpO2

Pulse

Length of Mealtime

Coughing Episodes

Single Coughs

Coughs with Color Change

Decline of SpO2 During

Following

Five Minutes Post meal

SpO2

Pulse

Thirty Minutes Post meal

SpO2

Pulse

Oxygen Saturation (SpO2)

Highest

Lowest

Avg.

Percent of Time Below

90%

85%

80%

Interpretation