

## OBESITY AND ASTHMA

### Statement of the Problem

Overweight and obese individuals are at 38% and 92% higher risk respectively for developing asthma than people of normal weight. (Beuther DA, American J Respir Crit Care Med. 2007; 175:661-666) Increased weight also raises the risk for poorly controlled asthma symptoms with medication use. Multiple factors contribute to the development of asthma in the obese e.g. genetics, diet, hormones, allergies, lifestyle and medication use may all be contributors. Obese patients, with severe asthma, account for 75% of all asthma-related emergency room visits. When morbidly obese asthma patients lose weight, there is a decrease in asthma symptoms and severity. (Shore SA, Obesity, smooth muscle and airway hyperresponsiveness. J. Allergy Clin Immunol. 2005; 115:925-927)

### Background

Several factors contribute to the development of asthma in obese individuals:

- Mutations in the gene that controls airway tone and metabolic rate.
- Dietary and environmental factors such as decreased intake of vitamin D, antioxidants, and omega3 fatty acids and possibly exposure to environmental pollutants.
- Changes in hormone levels of estrogen and progesterone.
- Presence of other diseases such as gastroesophageal reflux disease (GERD), diabetes and hypertension.
- Presence of a chronic form of inflammation is present in both obesity and asthma.
- Reduced lung expansion and breath size due to increased abdominal and chest wall mass changes airway diameter and lung capacity.

### ASSESSMENT

- Assess the participant's knowledge of the relationship between obesity and asthma.
- Assess the participant's motivation and readiness level to lose weight.

### Educational Message

- Obesity has been associated with asthma persistence and severity in both children and adults. (EPR3-2007)
- Increased weight can also interfere with the ability of some medications to effectively manage asthma.

- Obesity reduces the ability of the chest wall to rise and fall easily which can lead to a reduction in lung capacity resulting in wheezing and shortness of breath due to decreased airway size.
- Obese patients with severe asthma account for 75% of asthma-related emergency room visits.
- When obese asthma patients lose weight there is a decrease in asthma symptoms and severity. Lung capacity and the ability to breathe in and out deeply can be restored.
- Work with your health care provider to establish a weight loss plan that is appropriate for you.

## Actions

CHW ACTIONS	PARTICIPANT ACTIONS
<ul style="list-style-type: none"> <li>• Discuss with client: <ul style="list-style-type: none"> <li>- Level of readiness/motivation to work on a weight loss program</li> <li>- Benefits to the participant of losing weight</li> <li>- Pros and cons of working on weight loss</li> <li>- Previous experience with weight loss efforts e.g. what worked &amp; what didn't?</li> <li>- What supports are in place that would increase the likelihood of a successful outcome?</li> <li>- What barriers would need to be overcome and how could that happen?</li> <li>- Level of importance (scale of 1-10) in engaging in weight loss effort</li> <li>- Level of confidence (scale of 1-10) in participant's ability to engage in a weight loss effort.</li> </ul> </li> <li>• Acknowledge other behavior changes the participant has done successfully. Express your confidence in the participant's ability to be successful.</li> <li>• Recommend the participant talk with his/her provider about an appropriate weight loss plan when ready.</li> </ul>	<ul style="list-style-type: none"> <li>• Share any past experiences with weight loss with CHW.</li> <li>• Talk with your health care provider about an appropriate weight loss plan when you are ready.</li> </ul>

--	--

Follow-up Visits

Supplies

Education Handouts

Referrals