

# The Role of Nurses in the Management of Joint Pain in Women and Black and Hispanic/Latino Women

ONLINE CE



An Online Continuing Education Activity  
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# The Role of Nurses in the Management of Joint Pain in Women and Black and Hispanic/Latino Women

(An Online Continuing Education Activity)

## MOVEMENT IS LIFE MISSION

To decrease musculoskeletal health disparities among women and racial/ethnic minorities by raising awareness of their impact on chronic disease management and quality of life.

By promoting the importance of early intervention, MIL seeks to slow musculoskeletal disease progression, reduce disability and encourage physical activity and daily movement to improve the overall health of the nation.

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## CONTINUING EDUCATION INSTRUCTIONS

This educational activity is being offered online and may be completed at any time.

### Steps for Successful Course Completion

To earn continuing education credit, the participant must complete the following steps:

1. Review the overview and objectives to ensure this activity will address your learning expectations. At the end of the activity, you will be assessed on the attainment of each objective.
2. Study the module in sequence, including the Knowledge Assessment sections.
3. Complete the post-test. Missed questions will offer the opportunity to re-read the question and answer choices. You may also revisit relevant content.
4. For additional information on an issue or topic, consult the references.
5. Complete the evaluation and registration process. Your e-certificate will be immediately available. Should you need documentation of successful completion of this activity after you receive your certificate, the learner must submit a request in writing to Pfiedler Enterprises at [registrar@pfiedlerenterprises.com](mailto:registrar@pfiedlerenterprises.com) or fax 720.748.6196. We will maintain a record of your continuing education credit and provide verification for seven years.

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## OVERVIEW

One in five Americans suffer from doctor-diagnosed arthritis, but among three segments of the population, the impact is worse. Women, African Americans, and Hispanics/Latinos have more severe arthritis and functional limitations. Compared to their Caucasian counterparts, African American and Hispanic/Latina women also have much higher levels of obesity. The role of the nurse in managing a patient's osteoarthritis (OA) progression has been evolving and can include evaluation, education of the patient, risk management for medications and other management activities, care coordination among the patient and healthcare professionals, and compliance strategies including proper medication use, weight reduction, and exercise. Addressing obesity among various racial/ethnic populations requires an understanding not only of the biological causes of obesity, but also of the culture, values, beliefs, resources, and environments that influence eating and physical activity behaviors and choices. This educational activity provides an overview of gender and racial/ethnic musculoskeletal disparities, the relationship between obesity, OA, and other comorbidities, and the potential impact of the AMA recognition of obesity as a disease. Also discussed are cultural and health literacy considerations of the patients most at risk for disability from OA – obese African American and Hispanic women. It concludes with a discussion of the challenges facing healthcare providers in providing culturally competent care that promotes healthy habits, the need to confront conscious and unconscious bias, and communication skills and techniques that enhance shared decision-making with patients in order to reduce and/or eliminate disparities in care by communicating more effectively with obese minority women with OA.

## LEARNER OBJECTIVES

Upon completion of this educational activity, the participant should be able to:

1. Discuss the relationship between obesity and musculoskeletal disorders, their U.S. burden, and their prevalence in minority women.
2. List examples of gender and ethnic musculoskeletal health disparities.
3. Define obesity and its relationship to osteoarthritis in African American and Hispanic women.
4. Identify factors that may account for disparities in the prevalence of obesity in African American and Hispanic women and the challenges facing healthcare providers in treating minority obese woman with osteoarthritis in the practice setting.
5. Delineate the educational role of the provider that results in culturally competent care, promoting healthy dietary and exercise habits for the obese patient, sensitivity to unconscious biases, and accountability for consideration of the patient's wishes regarding care.

## INTENDED AUDIENCE

This educational module is intended for nurses, medical assistants and other healthcare professionals who provide education to African American and Hispanic women who are obese and are subject to musculoskeletal disparities.

## CREDIT/CREDIT INFORMATION

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## Orthopaedic Nurses Certification Board

The Orthopaedic Nurses Certification Board has designated this educational activity to receive 2.0 contact hours in Category A toward recertification.



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A Movement is Life project underwritten by **Zimmer Biomet**.

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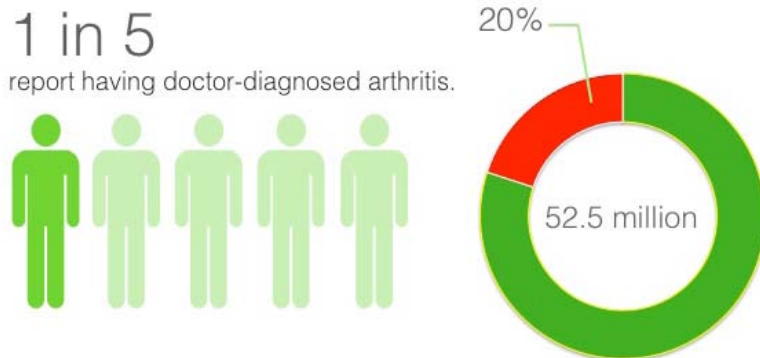
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## Introduction

While the diversity of the American population is one of the Nation's greatest assets, one of its greatest challenges is reducing the profound disparity in health status of America's racial and ethnic minorities and other health-disparity populations compared to the population as a whole. Among the noteworthy findings in their 2002 report entitled *Unequal Treatment: Confronting Racial and Ethnic Disparities in Health Care*, the Institute of Medicine concluded that, even when disease severity, socioeconomic status, education, and access are controlled for, racial and ethnic minorities receive lower quality health care, including routine services, compared to Whites, and these differences are associated with worse clinical outcomes.<sup>1</sup>



Musculoskeletal disparities threaten the health of the nation. One in five Americans suffer from doctor-diagnosed osteoarthritis, but among three segments of the population, the impact is worse. Women, African Americans, and Hispanics/Latinos have more severe arthritis and functional limitations. (Note: Unless a study specifies a particular population such as Mexican American, this document defines Hispanics/Latinos per the U.S. Department of Health and Human Services Office of Minority Health as follows: “This ethnic group includes any person of Cuban, Mexican, Puerto Rican, South or Central American, or

other Spanish culture or origin, regardless of race.”)<sup>2</sup> These same individuals are more likely to be obese, diabetic, and have a higher incidence of heart disease - medical conditions that can be improved with physical activity. Instead of moving, however, these groups have an inactivity rate of 40–50 percent and this rate is going up!<sup>3</sup> According to a 2010 report from the Centers for Disease Control and Prevention (CDC), 22.2% of adults aged  $\geq 18$  years had self-reported doctor-diagnosed arthritis, and 42.4% of those with arthritis had arthritis-attributable activity limitation (AAAL). Among persons who are obese, an age-adjusted 33.8% of women and 25.2% of men reported doctor-diagnosed arthritis. The CDC notes that while arthritis and AAAL represent a major public health problem in the United States, it can be addressed, at least in part, by implementing proven obesity prevention strategies and increasing the availability of effective physical activity programs and self-management education courses in local communities.<sup>4</sup>

The role of the nurse in managing a patient's risk and progression of osteoarthritis (OA) has been evolving and can include evaluation, education of the patient, risk management for medications and other management activities, care coordination among the patient and healthcare professionals, and compliance strategies including proper medication use, weight reduction, and exercise.<sup>5,6</sup> Healthcare workers are aware of the need for culturally competent care, yet current assessment tools cannot identify measures that are effective and those that are not.<sup>7</sup> More effective training needs to be developed for healthcare providers to consider the potential roles of conscious and unconscious bias. And, equally if not more importantly, patients must be educated on the importance of becoming active partners in their own care.

**W**omen in the Framingham

OA study who lost 11 lbs. reduced their risk of symptomatic knee OA by half.

## Osteoarthritis and Obesity

Among the 50 million U.S. adults with arthritis, obesity is associated with progression of arthritis, activity limitation, disability, reduced quality-of-life, and poor clinical outcomes after joint replacement.<sup>8</sup> In middle-aged women, higher weights (BMI) results in an increased likelihood of hip and knee replacement, although the magnitude of risk is much greater for a knee replacement.<sup>9</sup> In particular, obesity is associated with onset of knee OA (the most common type of

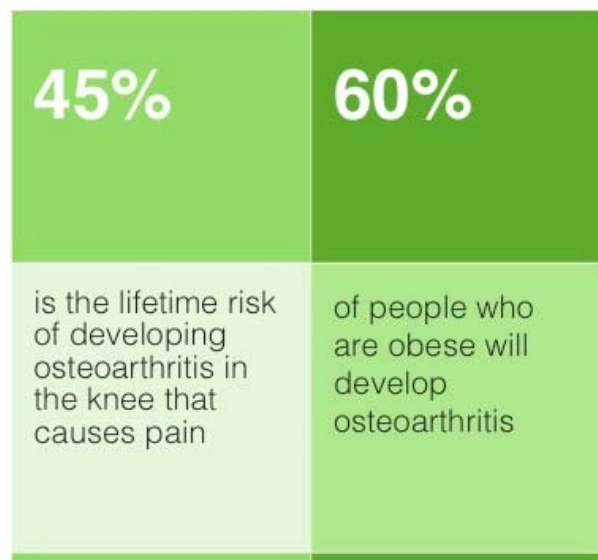


arthritis), disease progression, disability, total knee joint replacement, and poor clinical outcomes after knee joint replacement, and likely has a critical role in the increasing impact of arthritis on disability, health-related quality of life, and healthcare costs.<sup>10;11</sup> Lifetime risk for symptomatic knee OA alone is 60.5% among persons who are obese, double the risk for those of normal/underweight.<sup>12</sup> For hip OA, U.S. and international studies have demonstrated mixed results, with obesity generally associated with symptomatic OA and joint replacement.<sup>13</sup> An ongoing study of 238,00 female nurses that started in 1976 found that women who were obese, especially at age 18, had an increased risk of undergoing a hip replacement in later life.<sup>14</sup> Women in the Framingham OA study who lost 11 lbs. reduced their risk of symptomatic knee OA by half.<sup>15</sup> During 2003–2009, obesity prevalence among U.S. adults with arthritis was 54% higher than among adults without arthritis. From 2003 to 2009, obesity prevalence among adults with arthritis increased significantly in 14 states and Puerto Rico.<sup>8</sup>

### U.S. Burden

Some form of arthritis affects 50 million adults in the United States and the CDC has predicted that the number will increase to 67 million, or 25% of the adult population, by 2030.<sup>4</sup> Obesity and arthritis are critical public health problems with high prevalences and medical costs. In the United States, an estimated 72.5 million adults aged ≥20 years are obese, and 50 million adults have arthritis. Medical costs are estimated at \$147 billion for obesity and \$128 billion for arthritis each year.<sup>8</sup> Osteoarthritis (OA), the most common type of arthritis,<sup>16</sup> accounts for much of this burden.

As a nation, we pay an inordinate price for the pain and disability from OA. In 2004, OA resulted in over 11 million physician and outpatient visits, 662,000 hospitalizations, and more than 632,000 total joint replacements, with accompanying hospital costs of \$22.6 billion.<sup>17</sup> In addition, employment rates are lower among adults with arthritis because of arthritis-attributable work limitations; hence, they either are working less or not working due to their arthritis. Today 41% of the 50 million U.S. adults with arthritis report limitations in their usual activities because of arthritis.<sup>18</sup> While these data consider all types of arthritis, it is likely that OA accounts for a large portion of those with work limitations. An estimated \$3.4–13.2 billion is spent per year on job-related OA costs.<sup>19</sup> Obesity is a long-recognized and fast-growing public health issue in the United States, with serious health and economic consequences. Reversing the trend is a national priority. Underserved people and communities, including racial and ethnic minority populations, are both at greater risk for obesity and more likely to experience its health and economic impact.<sup>20</sup>



### Prevalence of obesity in White, Black and Hispanic/Latina Women (BMI ≥ 30):

- 32.2% of White women
- 44.9% of Mexican American women
- 58.5% of Black women

### Prevalence in African American and Hispanic/Latina Females

OA is highly prevalent and on the rise. All races and ethnic groups are affected by arthritis, including 36 million White adults, 4.6 million Black adults, nearly 3 million Hispanic/Latino adults, and 1.6 million adults of other races.<sup>21</sup> Of those with arthritis, non-Hispanic/Latino Blacks and Hispanics/Latinos report greater work limitations and more severe joint pain than Whites do.<sup>4</sup> The number of individuals with OA is expected to increase with longer life expectancies, the obesity epidemic, and the large number of boomers who started reaching retirement age in 2011. Half of all adults will develop symptomatic OA of the knee at some point in their lives and that risk increases with obesity to two of every three obese adults.<sup>12</sup>

## ASSESS YOUR KNOWLEDGE

Based on your understanding of the prevalence and burden of osteoarthritis and obesity in the U.S, please answer the following questions.

1. Which best characterizes middle-aged women?
  - A. Higher weight results in an increased lifetime risk of total knee replacement.
  - B. Obesity plays a critical role in increasing the impact of OA on disability and healthcare costs.
  - C. Obese people have double the risk of developing symptomatic hip and knee OA.
  - D. All of the above.
2. In the U.S., annual medical costs for obesity are estimated to be:
  - A. \$3.4 Billion.
  - B. \$22.6 Billion.
  - C. \$128 Billion.
  - D. \$147 Billion.
3. Of those with doctor-diagnosed OA, which populations report greater work limitations and more severe joint pain?
  - A. Whites and Hispanics.
  - B. Blacks and Hispanics.
  - C. Women of all racial/ethnic groups.
  - D. There are no differences based on race/ethnicity or gender.

### FEEDBACK

1. D – All of the above. Obesity is associated with onset of knee OA, disease progression, disability, total knee replacement, poor clinical outcomes after joint arthroplasty, and healthcare costs.
2. D – \$147 Billion. Annual medical costs are estimated to be \$147 Billion for obesity and \$128 Billion for arthritis.
3. B – Blacks and Hispanics. These groups have more severe symptoms with OA and report higher levels of joint pain that lead to greater work limitations.

## Musculoskeletal Disparities

### Definition

*Healthy People 2020* defines a health disparity as “a particular type of health difference that is closely linked with social, economic, and/or environmental disadvantage. Health disparities adversely affect groups of people who have systematically experienced greater obstacles to health based on their racial or ethnic group; religion; socioeconomic status; gender; age; mental health; cognitive, sensory, or physical disability; sexual orientation or gender identity; geographic location; or other characteristics historically linked to discrimination or exclusion.”<sup>23</sup>

Many factors contribute to racial, ethnic, and socioeconomic health disparities, including inadequate access to care, poor quality of care, community features (such as poverty and violence) and personal behaviors. These factors often are associated with underserved racial and ethnic minority groups, individuals who have experienced economic obstacles, those with disabilities and individuals living within medically underserved communities. Consequently, individuals living in both urban and rural areas may experience health disparities.<sup>24</sup>

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## Examples of Musculoskeletal Disparities

Disparities extend to musculoskeletal conditions, including osteoarthritis (OA). Osteoarthritis is the most common form of arthritis, is the leading cause of disability in the United States, and is the main indication for total joint arthroplasty (TJA). Examples of disparities are illustrated in the following studies:

- Losina and colleagues found that in persons free of knee OA at age 40, the lifetime risk of diagnosed symptomatic knee OA ranged from 10% among White males to 17% among Black females. The 20-year risk of diagnosed symptomatic knee OA ranged from about 6% in males (race/ethnicity did not affect the rate meaningfully) to 8% in Black females. By age 65, 11.3%, 10.5%, and 10% of Black, Hispanic/Latina, and White females, free of knee OA at age 40, will be diagnosed with symptomatic knee OA. Lifetime

**A** health disparity — between any two people or groups of people — is the observed difference in health status or risk, due to social, economic or environmental factors.

need for total Knee Arthroplasty (TKA) ranged from 3.8% for Hispanic/Latino males to 6.8% for Black females. The authors noted that high obesity rates in the Black female population impacted these risks.<sup>25</sup>

- A number of studies document lower rates of arthritis-related hip/knee surgeries for older Black versus White adults age 65 or above. However, utilization rates for Black versus White under age 65 do not differ. Lower utilization among Hispanics/Latinos versus Whites in both age groups is largely explained by medical access factors.<sup>26</sup>
- Even after adjusting for insurance and health access, Hispanics/Latinos and Blacks are almost 50% less likely to undergo TKA than Whites.<sup>27</sup>
- Although the burden of serious OA is comparable in Blacks and Whites, multiple U.S. studies indicate that Whites over age 65 undergo joint replacement at a higher rate than Blacks.<sup>11;28</sup>
  - In 2006, the rate of TKA among U.S. adults ages 65 years and older was 39% lower in Blacks than in Whites (5.6 and 9.2 per 1,000 people, respectively).<sup>28</sup>
  - Several studies have shown that these racial differences persist even when access to care is similar.<sup>29</sup>
  - The disparities are not explained by varying risk for knee osteoarthritis.<sup>12</sup>
  - Studies have found that, compared to White patients, Black patients tend to report a poorer understanding of TJA; expect longer hospital stays, more residual pain, and more difficulty walking after the procedure; are less likely to believe in the efficacy of TJA; and are less willing to consider it as an option for treating knee/hip osteoarthritis.<sup>30-32</sup>
  - Recent studies have revealed, despite similar education, amount of insurance coverage, number of comorbidities, and self-reported degree of osteoarthritis severity, African Americans were nearly 50% less likely than Whites to perceive the benefits of total joint arthroplasty<sup>33;34</sup> and 70% more likely than Whites to recognize barriers to total joint arthroplasty.<sup>34</sup>
- Clinic-based studies indicate that there may be greater unmet need for joint replacement among women compared with men. However, to date, there is no U.S. population-based evidence of this disparity.<sup>11</sup> It should be noted, however, that the lack of population-based evidence may be due to how clinical research is conducted. Novikoff and Saleh note that a number of factors might explain sex and gender disparities observed in TJA, including underrepresentation in clinical trials. “Even if

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women are represented, many studies do not provide gender-specific analysis because either the study was not powered sufficiently to allow for subgroup analysis or gender-specific analysis was not a part of the hypothesis being tested.”<sup>35</sup>

- Ethnic and race group differences have been reported in both clinical and experimental pain, with Black Americans reporting increased pain. A 2012 study of 94 participants (74% women), including 45 Blacks and 49 Whites, with symptomatic knee osteoarthritis indicated that Blacks had significantly lower levels of vitamin D compared to Whites, demonstrated greater clinical pain, and showed greater sensitivity to heat-induced and mechanically induced pain. The authors concluded that it may be warranted that older Black Americans with chronic widespread pain be screened for vitamin D deficiency to reduce disparities in pain.<sup>36</sup>
- A 2013 study by Colbert and associates<sup>37</sup> found that in 3,695 persons with or at higher risk for knee OA, higher BMI and large waist circumference were each associated with poor outcome over four years. Among women with high BMI and among women with large waist circumference, African Americans were at greater risk for poor outcome by every measure, adjusting for age, education, and income. Modifiable factors that may help to explain these findings include comorbidity, depressive symptoms, and knee pain. Targeting such factors, while supporting weight loss, may help to lessen the outcome disparity between African American and White women.

### *Gender and Ethnic Musculoskeletal Disparities*

Hispanics, African Americans, and women are disproportionately affected by both obesity and osteoarthritis, which is characterized by the breakdown of cartilage that acts as a cushion at the ends of bones.

#### *Osteoarthritis and Obesity Among Women:*<sup>38</sup>

- 61% of arthritis sufferers are women.
- Women represent 64% of an estimated 43 million visits to physicians’ offices and outpatient clinics in a single year, where arthritis was the primary diagnosis.
- Women represent 60% of approximately one million hospitalizations that occurred in 2003 for which arthritis was the primary diagnosis.

#### *Osteoarthritis and Obesity Among African Americans and Hispanics*

It’s interesting to note that although the **prevalence of arthritis is lower** among Blacks and Hispanics/Latinos than among Whites, the **impact is worse**.

Scientists from the Centers for Disease Control and Prevention (CDC)<sup>21</sup> combined data from the 2002, 2003, and 2006 National Health Interview Survey (n = 85,784) and, after adjusting for age, sex, and body mass index, compared racial/ethnic differences. Arthritis-attributable activity limitation, arthritis-attributable work limitation, and severe joint pain were higher for non-Hispanic/Latino Blacks, Hispanics, and multiracial or other respondents with arthritis compared with non-Hispanic/Latino Whites with arthritis.

#### *Impact of Arthritis on Blacks and Hispanics:*<sup>21</sup>

- 1.3 times as likely as Whites to have activity limitation
- 1.8 to 1.9 times as likely as Whites to have severe joint pain, and
- 1.6 to 1.7 times as likely as Whites to have work limitation.

The researchers note that reasons for racial/ethnic differences are unknown but speculate that they may be related to healthcare access, use of healthcare services, language barriers, differences in the prevalence of risk factors for arthritis and related disability (eg, obesity, physically demanding jobs), and cultural differences in the understanding of survey questions, willingness to report limitation and pain, and variations in patterns of medication use and self-management approaches to manage pain.<sup>21</sup>

## ASSESS YOUR KNOWLEDGE

Based on your understanding of musculoskeletal disparities, please answer the following questions.

1. When assessing the lifetime risk of having diagnosed symptomatic knee OA, Losina and associates found that the group with the highest risk was:
  - A. Black females.
  - B. Black males.
  - C. Hispanic/Latina females.
  - D. White males.
2. Which patients are least likely to have total knee arthroplasty?
  - A. Blacks over age 65
  - B. Blacks under age 65
  - C. Hispanic/Latina females
  - D. Women with high BMI and waist circumference
3. What percentage of arthritis sufferers are women?
  - A. 25%
  - B. 50%
  - C. 61%
  - D. 75%

### FEEDBACK

1. A – Black females. Losina and colleagues found that the lifetime risk of diagnosed symptomatic knee OA ranged from 10% among White males to 17% among Black females and noted that high obesity rates in the Black female population impacted these risks.
2. A – Blacks over age 65. A number of studies document lower rates of arthritis-related hip/knee surgeries for older Black versus White adults age 65 or above. However, utilization rates for Black versus White under age 65 do not differ.
3. C – 61% of arthritis sufferers are women.

## Obesity, Diabetes, and Arthritis

### *How is Obesity Defined and Categorized?*

Obesity is defined as excess adipose tissue. The most common measure used is Body Mass Index (BMI), which is calculated by dividing a person's weight in kilograms by height in meters squared. The mathematical formula is "weight (kg)/height (m<sup>2</sup>)." Charts and online BMI calculators are readily available. BMI is the measurement of choice for many obesity researchers and other health professionals, as well as the definition used in most published information on overweight and obesity.

An expert panel convened by the National Heart, Lung, and Blood Institute (NHLBI) in cooperation with the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK), both part of NIH, identified overweight as a BMI of 25 to 29.9 kg/m<sup>2</sup>, and obesity as a BMI of 30 kg/m<sup>2</sup> or greater in its 1998 *Clinical Guidelines on the Identification, Evaluation, and Treatment of Overweight and Obesity in Adults*.<sup>39</sup> As noted in Table 1, the *Guidelines* identify three levels of obesity. Defining overweight as a BMI of 25 or greater is consistent with the recommendations of the World Health Organization and most other countries. These



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definitions, widely used by the Federal Government and more frequently by the broader medical and scientific communities, are based on evidence that health risks increase in individuals with a BMI  $\geq$  25.

**Table 1 – BMI Categories**

BMI	Category
Below 18.5	Underweight
18.5-24.9	Normal Weight
25.0-29.9	Overweight
30.0-34.9	Grade 1 Obesity (sometimes called moderate obesity)
35.0-39.9	Grade 2 Obesity (sometimes called severe obesity)
40 and greater	Grade 3 Obesity (sometimes called morbid or extreme obesity)
50	(sometimes called super obesity)

BMI is not gender-specific in adults, and does not directly measure percentage body fat but it is a more accurate indicator of overweight and obesity than relying on weight alone. Calculating BMI is simple, quick, and inexpensive - but it does have limitations. One problem with using BMI as a measurement tool is that very muscular people may fall into the “overweight” category when they are actually healthy and fit. Another problem with using BMI is that people who have lost muscle mass, such as the elderly, may be in the “healthy weight” BMI category (BMI 18.5 to 24.9) when they actually have reduced nutritional reserves. BMI, therefore, is useful as a screening tool for individuals and as a general guideline to monitor trends in the population, but by itself is not diagnostic of an individual patient’s health status. Further assessment of patients should be performed to evaluate their weight status and associated health risks.

Waist circumference is another widely used measurement to determine abdominal fat content. An excess of abdominal fat, when out of proportion to total body fat, is considered a predictor of risk factors related to obesity. Men with a waist measurement exceeding 40 inches are considered at risk. Women are at risk with a waist measurement of 35 inches or greater.<sup>40</sup>

Other methods of estimating body fat and body fat distribution include measurements of skinfold thickness and waist circumference, calculation of waist-to-hip circumference ratios, and techniques such as ultrasound, computed tomography, and magnetic resonance imaging (MRI).<sup>41</sup>

### *Rates and Trends in Obesity*

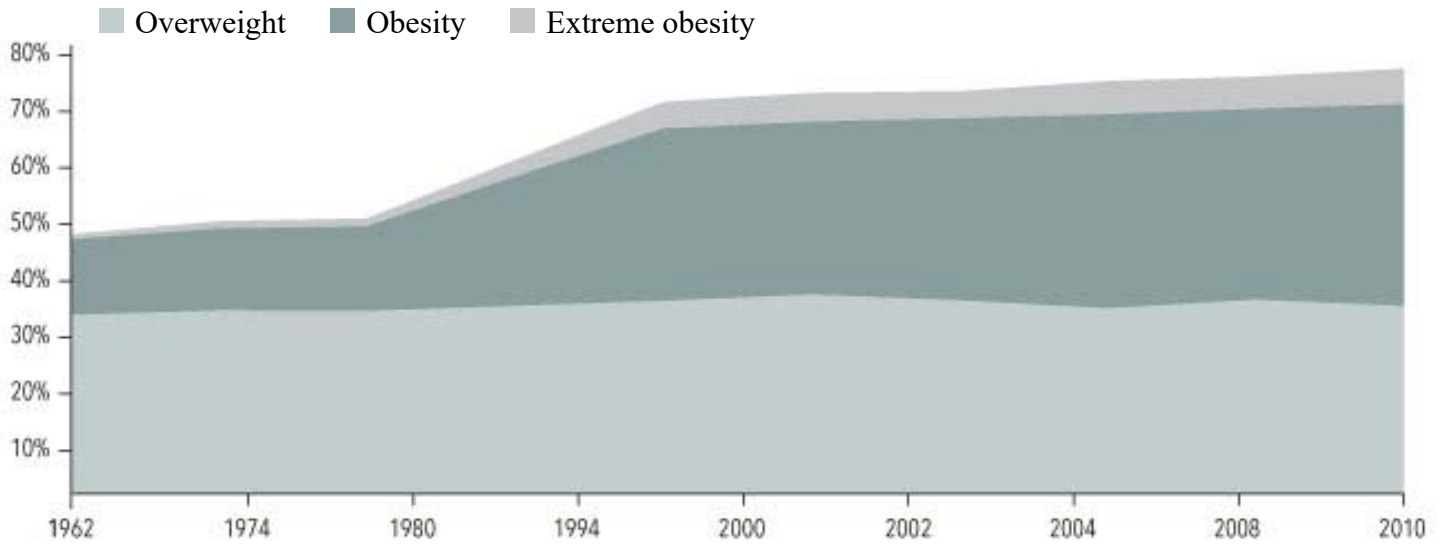
Figure 1 shows that as of 1962, about 46% of U.S. adults fell into the categories of overweight, obesity, and extreme obesity. About 32% of adults were overweight, about 13% were obese, and about 1% had extreme obesity.

Percentages of adults within all of these categories increased gradually until the late 1970s, at which point they began to climb more quickly, leveling off somewhat around 2000. At this point, about 70% of adults were considered overweight, obese, or extremely obese. Of this group, 34% were considered overweight, about 31% were considered obese, and about 5% were considered to have extreme obesity.

By 2010, the percentage of adults considered overweight, obese, or extremely obese had climbed to about 75%, of whom about 33% were considered overweight, about 36% were considered obese, and about 6% were considered extremely obese.



**Figure 1 – Trends in Overweight and Obesity among Adults, United States, 1962-2010<sup>42</sup>**

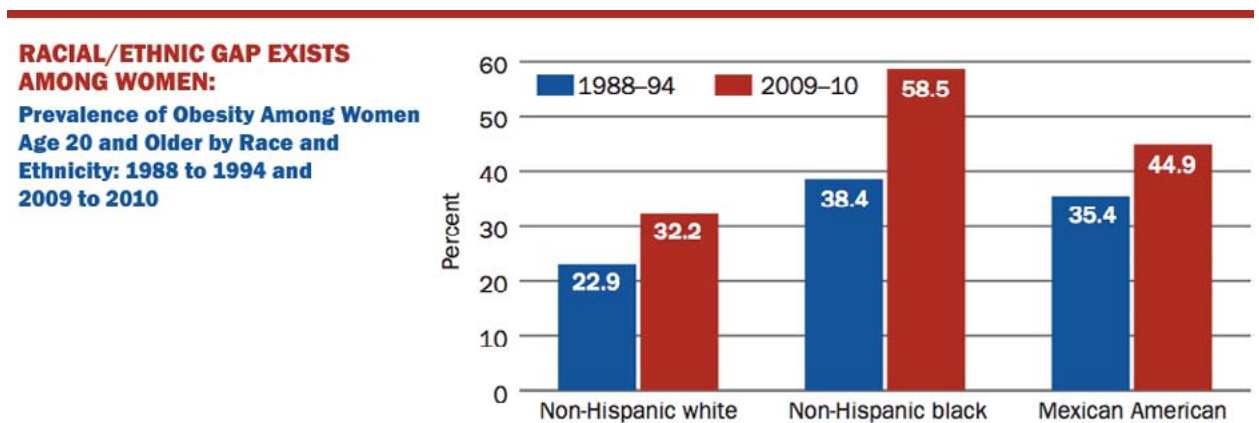


Source: Ogden & Carroll, 2010; Flegal et al., 2012  
 Data for 1960–1980 are for adults ages 20 to 74; data for 1988–2010 are for adults age 20 and older.

The prevalence of BMI-defined obesity in adults in the United States continues to exceed 30% in most sex-age groups. The burden of obesity, however, is disproportionately borne by some racial and ethnic groups. For women, within race/ethnicity groups, data over a 12-year period from 1999 through 2010 show that obesity increased significantly for non-Hispanic/Latino Black and Mexican American women but *not* for women overall. Considering men and women together, non-Hispanic/Latino Blacks have the highest age-adjusted rates of obesity (49.5%) compared with Mexican Americans (40.4%), all Hispanics/Latinos (39.1%), and non-Hispanic/Latino Whites (34.3%).<sup>22</sup>

Obesity rates for men are relatively similar among different racial/ethnic groups: 36.2% among White men; 38.8% among Black men; and 36.6% among Mexican American men. However, women’s rates vary significantly: 32.2% among White women; 58.5% among Black women; and 44.9% among Mexican American women (see Figure 2).<sup>22</sup>

**Figure 2 – Prevalence of Obesity Among Women by Race and Ethnicity<sup>22;43</sup>**



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### *AMA Recognition of Obesity as a Disease*

On June 18, 2013, the American Medical Association (AMA) House of Delegates voted on a resolution to adopt a new policy recognizing obesity as a “disease state with multiple pathophysiological aspects requiring a range of interventions to advance obesity treatment and prevention.”<sup>44</sup>

The implications for patients and the healthcare community may be far reaching. If the AMA recommendations noted in the Resolution are implemented, possible changes include:

- Improved training in obesity at medical schools and residency programs,
- Reduced stigma of obesity by the public and physicians,
- Improved insurance benefits for obesity-specific treatment, and
- Increased research funding for both prevention and treatment strategies.

It is important to note that although AMA decisions do not have recognized legal implications, these policy decisions are often referenced by federal and state legislators and other decision-makers when setting medical policy and health regulations.<sup>45</sup>


### *Effects of Obesity – Physical and Mental*

As a major contributor to preventable death in the United States today, obesity poses a major public health challenge - it is the most prevalent, fatal, chronic, and relapsing disorder of the 21st century.<sup>40</sup> Obesity is a leading cause of U.S. mortality, morbidity, disability, healthcare utilization, and healthcare costs; it causes at least 112,000 excess deaths in the U.S. each year relative to healthy weight individuals.<sup>46</sup> Obese individuals commonly suffer from social discrimination, stigmatization, and even negative attitudes from their own healthcare providers.<sup>47;48</sup>

The risk of serious health consequences increases with increasing obesity; some of these health consequences may constitute the principal cause of death (eg, heart disease, stroke, some cancers), whereas others such as type 2 diabetes lead to a reduced life expectancy.<sup>49</sup>

According to the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK), overweight and obesity are known risk factors for:<sup>42</sup>

- OA
- Type 2 diabetes
- Heart disease
- High blood pressure
- Nonalcoholic fatty liver disease (excess fat and inflammation in the liver of people who drink little or no alcohol)
- Some types of cancer (breast, colon, endometrial, and kidney)
- Stroke



Obesity is the most common chronic, fatal disorder of this century, and a leading cause of morbidity, disability & healthcare utilization.

In addition, the social consequences of being overweight and obese are serious and pervasive and include discrimination in employment, barriers in education, biased attitudes from healthcare professionals, stereotypes in the media, and stigma in interpersonal relationships. All these factors reduce quality of life for vast numbers of overweight and obese people and have both immediate and long-term consequences for their emotional and physical health.<sup>50;51</sup>

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## Diabetes Incidence in Ethnic Groups

More than 80% of people with diabetes are overweight<sup>52</sup> and type 2 diabetes occurs considerably more often in African Americans and Hispanics. National survey data in 2010 indicate that diabetes is present in the following groups as follows:<sup>53</sup>

- Women: 12.6 million or 10.8% of all women aged 20 years or older
- Non-Hispanic/Latino Whites: 15.7 million or 10.2% of all non-Hispanic/Latino Whites aged 20 years or older
- Non-Hispanic/Latino Blacks: 4.9 million or 18.7% of all non-Hispanic/Latino Blacks aged 20 years or older

Compared to non-Hispanic/Latino White adults, the risk of diagnosed diabetes was:

**66%** higher among Hispanics

**77%** higher among non-Hispanic/Latino Blacks

The Agency for Healthcare Research and Quality (AHRQ) *2012 National Healthcare Disparities Report*<sup>54</sup> states that people diagnosed with diabetes are often at higher risk for other cardiovascular risk factors, such as high blood pressure and high cholesterol. Having these conditions in combination with diagnosed diabetes increases the likelihood of complications, such as heart and kidney diseases, blindness, nerve damage, and stroke. Patients who manage their diagnosed diabetes and maintain an HbA1c level <7%, total cholesterol <200 mg/dL, and blood pressure <140/80 mm Hg can decrease these risks.

Looking at data for 2008 and 2009, AHRQ reported that:<sup>54</sup>

- Among adults age 40 and over with diagnosed diabetes, only 23% received all four recommended services (at least two HbA1c tests, a foot examination, an eye examination, and a flu shot) in 2009.
- In 2009, Blacks and Hispanics/Latinos were less likely than Whites to receive recommended care for diabetes.
- In both years, poor, low-income, and middle-income adults were less likely to receive recommended care for diabetes than high-income adults.
- In both years, adults ages 40-59 were less likely to receive recommended care for diabetes than adults age 60 and over.

## Arthritis: Symptoms and Impact on Obese Patients

Obesity is an independent risk factor for severe pain, reduced physical function, and disability among adults with OA, which might be related to both the increased mechanical stress caused by extra weight on the joints as well as inflammatory effects of elevated cytokines and adipokines that affect cartilage degradation.<sup>55</sup> For patients with OA, the friction produced when bones grind against one another causes chronic pain and stiffness. The course of functional decline is generally one of stable to slowly deteriorating function. As a result, many patients limit their physical activity, which often leads to weight gain. Chronic pain, inactivity, and weight gain can escalate into obesity, which in turn worsens the burden of osteoarthritis. Once OA is present, physical inactivity and increasingly sedentary lifestyles may play a major role in aggravating the associated pain, function, and disability of OA.<sup>56</sup>

Obesity can also initiate the cycle. Excess body mass due to obesity and overweight are clearly implicated in the development of OA of the knee and probably OA of the hip as well. The increased load that obesity places on joints can exacerbate the pain and functional limitations of OA. Because of the physics of knee movement, activity magnifies the load across the knee from upper-body weight by three to seven times. Therefore, weight loss in obese patients, especially if accompanied by increased physical activity, can improve physical function and quality of life.<sup>5</sup>

Arthritis often affects people who have other chronic diseases, which can make it difficult for them to exercise to improve any of their comorbid conditions. For example, 52% of people with diabetes, 57% of people with heart disease, and 53% of people with hypertension have doctor-diagnosed arthritis.<sup>57</sup> Physical activity is a key element for managing these prevalent chronic diseases and OA pain stops participation.<sup>58</sup> Obese people with arthritis are 44% more likely to be physically inactive than are those without it.<sup>59</sup> Because OA shares risk factors with other chronic conditions, such as diabetes and heart disease, the self-management and lifestyle changes to prevent or manage OA will likely improve the outcomes for these conditions as well.<sup>58;60</sup>

Physical activity appears to have a substantial protective impact on future OA-related disability.<sup>61</sup> Even small amounts of weight loss (eg, 10–12 pounds) can have important benefits for persons with arthritis.<sup>55</sup> One study indicated that women who lost just two points in BMI in 10 years had a 35% reduction in risk of developing symptomatic knee OA.<sup>62</sup> Randomized controlled interventions of diet, exercise, and diet plus exercise among overweight and obese adults with osteoarthritis have reduced body weight by approximately 5%, improving symptoms and functioning, and preventing short-term disability.<sup>55</sup>

A study by the CDC of 1973 US adults ages  $\geq$  45 years with doctor-diagnosed arthritis found that one-third of respondents reported having either anxiety, depression, or both. Anxiety was found to be almost twice as common as depression (31% and 18%, respectively). Given their high prevalence, their profound impact on quality of life, and the range of effective treatments available, the authors encourage healthcare providers to screen all people with arthritis for both anxiety and depression.<sup>63</sup>

As the largest occupational group in health care delivery, nurses can be a force in changing how OA is perceived and managed. Healthcare providers have an opportunity to discuss how even modest weight loss and physical activity, including exercise, decreases pain, improves function, and boosts mood.<sup>64</sup> Self-directed low-impact



activities, such as walking and swimming are effective, as are community-based physical activity classes. People with arthritis often worry that exercise will exacerbate joint symptoms, but if that happens, it is short-lived and benefits are evident within days to weeks of starting an exercise program.

**O**f those diagnosed with osteo-arthritis, 52% have diabetes, 57% have heart disease, and 53% have hypertension. Physical activity is essential for managing these chronic comorbid conditions.

## ASSESS YOUR KNOWLEDGE

Based on your understanding of obesity, diabetes, and arthritis, please answer the following questions.

1. Body mass index (BMI) for adults is based on a person's height, weight, and gender.
  - A. True
  - B. False
2. Adult obesity is defined as a BMI of:
  - A. 18.5 – 24.9
  - B. 25 – 29.9
  - C. 30 – 34.9
  - D. Over 35
3. Overweight and obesity are known risk factors for :
  - A. Type 2 diabetes.
  - B. Osteoarthritis.
  - C. Some types of cancer.
  - D. All of the above.
4. What percentage of US adults were considered overweight or obese in 2010?
  - A. 46%
  - B. 66%
  - C. 70%
  - D. 75%

### FEEDBACK

1. B – False. BMI is based only on height and weight; it is not gender-specific.
2. C – 30 – 34.9. Obesity is defined as a BMI  $\geq$  30. Overweight is 25 – 29.9.
3. D – All of the above. Overweight and obesity are known risk factors for all of the conditions listed, plus many others including heart disease, hypertension, and stroke.
4. D – 75%. The trend is up – in 1962, the figure was 46%, by 2000 it was 70% of adults, and by 2010 it was 75%, of whom about 33% were considered overweight, about 36% were considered obese, and about 6% were considered extremely obese.

### **Patients at Risk for Disability: Obese African American and Hispanic/Latina Females with OA**

The patients most at risk for disability from osteoarthritis are obese African American and Hispanic/Latina women because their symptoms of OA are more severe than those of Whites and their obesity exacerbates their OA condition. Addressing obesity among various racial/ethnic populations requires an understanding not only of the biological causes of obesity, but also of the culture, values, resources, and environments that influence eating and physical activity behaviors and choices.

### ***What Accounts for Differences in the Prevalence of Obesity in African American and Hispanic/Latina Females?***

A CDC study suggested that at least three reasons might account for the differences in the prevalence of obesity among various racial/ethnic populations.<sup>65</sup>



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1. Racial/ethnic populations differ in behaviors that contribute to weight gain. For example:

- Compared with non-Hispanic/Latino Whites, non-Hispanic/Latino Blacks and Hispanics/Latinos are less likely to engage in regular (nonoccupational) physical activity.
- Among women, regular physical activity was significantly lower among non-Hispanic/Latino Blacks (36.3%) and Hispanics/Latinos (42.3%) than among non-Hispanic/Latino Whites (49.8%).<sup>65</sup>
- Among women, the combined prevalence of eating fruits and vegetables five or more times per day and engaging in regular physical activity was significantly lower for non-Hispanic/Latino Blacks (12.6%) and Hispanics/Latinos (14.8%) than for non-Hispanic/Latino Whites (17.4%).

2. Certain populations have less access to affordable, healthful foods and safe locations for physical activity. Evidence suggests that neighborhoods with large minority populations have fewer chain supermarkets and produce stores and that healthful foods are relatively more expensive than energy-dense foods, especially in minority and low-income communities.<sup>66;67</sup> Evidence also indicates that minority and low-income populations have less access to physical activity facilities and resources and that traffic and neighborhood safety might inhibit walking.<sup>66;67</sup>

3. Culture can profoundly influence the way people experience and respond to health and disease, and differences exist in attitudes and cultural norms regarding body weight. For example, according to one study, both non-Hispanic/Latina Black and Hispanic/Latina women are more satisfied with their body size than non-Hispanic/Latina White women;<sup>68</sup> persons who are satisfied with their body size are less likely to try to lose weight. However, in another study, minimal differences on attractiveness ratings emerged by attire, body size, or model race between African American and White women.<sup>69</sup> In some Hispanic/Latino cultures, weight loss may be viewed as a symptom of illness and a sign of frailty, and may be associated with low sexual attractiveness. Symbolically, an overweight woman may be seen as being well taken care of, and she in turn may be assumed to take good care of her children. In traditional Mexican culture, being overweight may be considered a symbol of maternity and nurturance, a figurative association which increases the cultural acceptability of obesity.<sup>70</sup>

To be effective, interventions on diet and weight must reflect ethnic customs and beliefs. Perceptions of healthy eating and weight vary based on culture.

### *Ethnic and Cultural Beliefs*

Culture can be seen as a pattern of learned beliefs, values, and behaviors that are shared among groups. They include thoughts, styles of communication, ways of interacting, views on roles and relationships, practices, and customs. Culture shapes how we explain and value the world, and provides us with the lens through which we find meaning.

Culture plays a key role in the ability to influence behavior in a patient. We cannot afford to let cultural barriers limit our ability to meet the needs of our patients, or reduce their opportunity to benefit from the services we can provide. Perhaps nowhere are cultural differences more sharply drawn than in our approaches and definitions of health and healthy living. By deepening our understanding of culture we can strengthen the promise of high-quality health care that is accessible, effective, and cost efficient for all patients.

It has long been recognized that weight-loss treatments are more effective when they are personalized to the needs and context of the individuals. The first steps in developing effective culturally tailored interventions must start with identifying the target population, learning about their views on weight and body shape, and understanding the preferences, customs, and beliefs that rule their consumption of food.<sup>71</sup>



## Culture is Tied to Diet

Culture is intimately tied to diet. Food not only provides daily sustenance but also provides a core element that bonds families and communities and provides a common element to mark rites of passage and celebrations. Selection of ingredients, how foods are prepared, the timing and context of meals, size of portions, notions of healthful versus unhealthy foods, and what is considered a “meal” and what is considered a “snack,” are all integral parts of cultural patterns. Dietary patterns separate individuals and groups from one another and are an important component of cultural and national identity.<sup>71</sup>

## Beliefs about Causes of Obesity

Beliefs are important because they guide actual goal-directed behaviors. In a series of studies across five countries on three continents, McFerran and Mukhopadhyay<sup>72</sup> found that people mainly believed either that obesity is caused by a lack of exercise or that it is caused by a poor diet. Moreover, laypeople who implicated a lack of exercise as the cause were more likely to actually be overweight than were those who implicated a poor diet. The authors also experimentally demonstrated the mechanism underlying this effect: people who implicated insufficient exercise tended to consume more food than did those who implicated a poor diet. These results suggest that obesity has an important, pervasive, and hitherto overlooked psychological antecedent.<sup>72</sup>

## Values and Beliefs about Weight Loss and Obesity

Blixen and associates conducted focus group studies of 10 African American and 10 White women recruited from the general internal medicine clinics of a large tertiary care facility in order to learn about values and beliefs about obesity and weight reduction.<sup>73</sup> Six themes were generated in the discussions over a period of two months (see Table 2). African American women cited culture-specific barriers to weight loss more so than White women and differed in their preferences for how healthcare professionals could help them with weight loss.

**Table 2 – Differences in Values and Beliefs About Weight Loss and Obesity Between African American and White Women<sup>73</sup>**

Theme	Similarities	Differences: African American Women	Differences: White Women
Attitudes and Perceptions of Weight	<ul style="list-style-type: none"> <li>Both groups agreed on distinction between obesity and overweight.</li> <li>Both groups tended to view themselves as overweight rather than obese, even though all had BMI <math>\geq</math> 30.</li> </ul>	Less negative view of obesity.	More negative view of obesity.
Areas of Life Affected by Weight	Both groups identified self-image, social life, and ability to engage in physical activities as areas of life that were affected by their weight gain.	<ul style="list-style-type: none"> <li>Felt a lesser sense of stigma attached to their weight.</li> <li>Felt that their men “liked them with some meat on their bones.”</li> </ul>	<ul style="list-style-type: none"> <li>Felt a greater sense of stigma attached to their weight.</li> <li>Felt their weight made them unattractive to men.</li> </ul>
Medical Knowledge Related to Obesity	Both groups were quite aware of the medical consequences of obesity.		
Previous Weight-Loss Attempts	<ul style="list-style-type: none"> <li>Both groups found it easier to lose weight in the past when they were younger and had “peer support” from their school friends.</li> <li>Although “appearance” was the motivator for weight loss efforts when they were younger, “health” became the motivator when they were older.</li> </ul>		
Barriers to Successful Weight Loss		Felt that their culture and ethnicity, food cravings, and family strongly influenced their eating habits.	Cited lack of commitment and being depressed as barriers to their weight-loss efforts.
Help From Primary Care Physicians in Weight Loss Efforts		Wanted encouragement and support from their primary care physicians in the form of group meetings with their healthcare team as well as with other women struggling to lose weight.	Wanted individual weekly meetings with their primary care physicians where they would be “weighed in” and told about the “bad things” that would happen to them if they didn’t lose weight.

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## Nutrition Knowledge, Attitudes, and Beliefs

A 2013 analysis by Acheampong and Haldeman<sup>74</sup> combined data from three different studies conducted in North Carolina over five years in order to (1) describe nutrition knowledge, attitudes, beliefs (KAB), and self-efficacy among low-income African American and Hispanic/Latina women; (2) identify the associations these variables have on diet quality and weight status; (3) identify barriers to healthy eating. The total sample included 92 African American women and 272 Hispanic/Latina women. Results indicated that the variation in diet, KAB, and self-efficacy between the two ethnic groups supports the need for nutrition educators to acknowledge these differences and focus on group-specific needs as they relate to dietary intake or BMI. For instance, among Hispanics, beliefs influence food intake. This was not evident among the African Americans. Among African Americans, attitude toward eating a healthy meal was related to their BMI. As such, one must focus on beliefs when developing a nutrition/health plan for the Hispanic/Latino population while concentrating on the nutritional attitudes among African Americans. Nutrition education geared towards overweight/obese individuals must be practical and aim at behavior changes. Among the Hispanic/Latino group, health/nutrition educators can focus on some basic educational topics such as the benefits of fiber and reading food labels to aid them in selecting healthy foods at the grocery stores. The least-reported barrier in both ethnicities was the dislike of healthy foods. Therefore, education programs can focus on teaching diverse groups simple and quick healthy meal preparation and purchasing seasonal foods for a lower price.<sup>74</sup>

## Cultural Characteristics of Hispanics/Latinos and African Americans

While culture is an essential mediator in people's health status, other factors including environment, economics, genetics, previous and current health status, and psychosocial factors also exert considerable influence on our well-being. While some knowledge about cultural groups is important, relying too much on this approach may lead to stereotyping and oversimplification of culture, without a respect for its complexity. It is important to avoid stereotyping groups and to avoid automatic assumption that patients will exhibit "Hispanic/Latino values" or "African American values." Such factors must be explored and ascertained, rather than automatically assumed. Nevertheless, core elements of various cultures have been explored and identified by sociologists and other professionals. The descriptions that follow are taken from the *Provider's Guide to Quality and Culture*, an online tool for learning about cultural competency for health care available at: <http://erc.msh.org/mainpage.cfm?file=1.0.htm&module=provider&language=English>). The *Provider's Guide* is a joint project of Management Sciences for Health, the U.S. Department of Health and Human Services (HHS), the Health Resources and Services Administration (HRSA), and the Bureau of Primary Health Care.

Educators can focus on basic topics such as the benefits of fiber and reading food labels to aid in selecting healthy foods at the grocery store... focus on teaching diverse groups simple and quick healthy meal preparation and purchasing seasonal foods...

## Hispanics<sup>75</sup>

Hispanic/Latino culture has certain cultural nuances or unwritten rules that govern social interactions. These unstated rules may impact the way in which individuals perceive, seek, and receive services. Common cultural characteristics for Hispanics/Latinos in the United States include family, or *la familia*; *respeto* or respect; *personalismo*; *confianza* or trust; and *espíritu* or spirit.

- **La familia (family):** Traditionally, Hispanics/Latinos include many people in their extended families, not only parents and siblings, but grandparents, aunts, uncles, cousins and compadres, close friends, and godparents (padrinos) of the family's children. When ill or injured, Hispanic/Latino people

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frequently consult with other family members and often ask them to come along to medical visits. Social and family pressures to eat like others, to avoid offending others, or to partake in food-centered celebrations are among the difficulties they encounter in making long-term dietary changes.

- **Respeto (respect):** For Hispanics, the intimate confines of extended families, close-knit Hispanic/Latino communities, and traditional patriarchal networks are mediated by *respeto* (respect). *Respeto* implies a mutual and reciprocal deference toward others based on age, sex, social position, economic status, and authority. Out of a sense of *respeto*, many Hispanic/Latino patients tend to avoid disagreeing or expressing doubts to their healthcare provider and may even be reluctant to ask questions or admit they are confused about their medical instructions or treatment. Associated with this is a cultural taboo against expressing negative feelings directly. This taboo may manifest itself in a patient's withholding information, not following treatment orders, or terminating medical care. One way Hispanics/Latinos show respect is to avoid eye contact with authority figures. Do not misinterpret this respectful behavior as a sign of disinterest. The older Hispanic/Latino adult patient may terminate treatment if he or she perceives that respect is not being shown.
- **Personalismo (personal relationships):** Hispanics/Latinos tend to stress the importance of personal relationships, which is why so many Hispanics/Latinos continue to rely on community-based organizations and clinics for their primary care. Hispanics/Latinos expect health providers to be warm, friendly, and personal, and to take an active interest in the patient's life. Ask about their life (family, friends, and work) and share life stories and pictures. Hispanics/Latinos typically prefer being closer to each other in space than non-Hispanic/Latino Whites do. When non-Hispanic/Latino providers place themselves two feet or more distance away from their Hispanic/Latino patients, they may be perceived as not only physically distant but also uninterested and detached. Overcome such perceptions by sitting closer, leaning forward, giving a comforting pat on the shoulder, or other gestures that indicate an interest in the patient.
- **Confianza (trust):** Over time, by respecting the patient's culture and showing personal interest, a healthcare provider can expect to win a patient's *confianza* (trust). When there is *confianza*, Hispanics/Latinos will value the time they spend talking with their healthcare providers and believe what they say. *Confianza* means that the provider will have their best interests at heart. Patient *confianza* in the provider is central for identifying and treating health concerns and encouraging patient adherence to recommended treatment.
- **Espiritu (spirit):** body, and mind: Healthcare professionals often work within the structures of mainstream medicine, which provides separate physical and mental health care. Hispanic/Latino culture, on the other hand, tends to view health from a more synergistic point of view. This view is expressed as the continuum of body, mind, and *espíritu* (spirit).

### *African Americans*<sup>76</sup>

Core elements of African American culture include self-identity, knowledge, emotions, and behavior.

- **Self-Identity:** By definition, African Americans are group members. The identity of each individual is inseparably tied to that of the group. The self is considered an "extended self" that is validated only by its functioning in relationship and in harmony with the collective whole.
- **Knowledge:** The nature of knowledge for African Americans includes both what is known through the senses and in an extrasensory fashion. The world is seen from an optimal perspective in which all things can exist in harmony. Life experiences are given depth and meaning through the realization of their interrelatedness and significance in the life and existence of the group.
- **Emotions:** African Americans are a highly expressive people. Because of their sense of oneness with life and of harmony with nature, they respond naturally and spontaneously to experiences. Versatility

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and flexibility are two of their most positive assets. These two attributes have contributed greatly to their ability to adjust and adapt to the many pernicious experiences they have had to face.

- **Behavior:** African Americans socialize and become socialized through a process by which the group picks up “modes, sequences, and styles of behavior” through day-to-day encounters rather than through explicit modes of conditioning. African American culture is passed on by family members and friends to children through an unarticulated conditioning process that includes habitual forms of behavior and ingrained patterns of action.

### *Health Literacy*

Compounding the issue of often inappropriately held beliefs by minority patients is the legitimate uncertainty arising from limited “health literacy” prevalent in minority populations. Health literacy is the degree to which individuals have the capacity to obtain, process, and understand basic health information and services needed to make appropriate health decisions. Health literacy is not simply the ability to read. It requires a complex group of reading, listening, analytical, and decision-making skills, and the ability to apply these skills to health situations. For example, it includes the ability to understand instructions on prescription drug bottles, appointment slips, medical education brochures, doctor’s directions and consent forms, and the ability to negotiate complex healthcare systems. For people from different cultural backgrounds, health literacy is

affected by belief systems, communication styles, and understanding and response to health information. Even though culture is only one part of health literacy, it is a very important piece of the complicated topic of health literacy. The United States Department of Health and Human Services (HHS) recognizes that “culture affects how people communicate, understand and respond to health information.”<sup>77</sup>

The National Assessment of Adult Literacy (NAAL) measures the health literacy of adults living in the United States. Health literacy was reported using four performance levels: Below Basic, Basic, Intermediate, and Proficient. According to the NAAL, there is a relationship between health literacy and race or ethnicity. White respondents scored better on the survey than other ethnic or racial groups. Only 9% of White respondents scored at the lowest (Below Basic) level. However, 24% of Blacks, 41% of Hispanics, 13% of Asians, and 25% of American Indian and Native Alaskan respondents scored at the “Below Basic” level.<sup>78</sup> Adults living below the poverty level have lower average health literacy than adults living above the poverty threshold. In adults who receive Medicaid, 30% have “Below Basic” health literacy.

Schillinger and associates found that among primary care patients with Type 2 diabetes, inadequate health literacy is independently associated with worse glycemic

control and higher rates of retinopathy and that inadequate health literacy may contribute to the disproportionate burden of diabetes-related problems among disadvantaged populations.<sup>79</sup>

**H** health literacy is the ability to grasp and apply instructions given by the provider. For Blacks, Native Americans and Alaskans, about 25% score “below basic” in health literacy; 41% of Hispanics also score “below basic.” A lack of health literacy has been independently associated with an increase in diabetes related pathology. Relevant, effective instructional tools and support become critical for patient compliance.

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## Motivation to Change Behaviors

### Weight Control

We still know very little about how to control weight over the long term, and we know even less about how to control weight among African Americans and other ethnic minority populations. Studies to identify effective strategies for obesity prevention and treatment in Black and other minority communities are just emerging. Dr. Shiriki Kumanyika, a Black Professor of Epidemiology at the University of Pennsylvania School of Medicine, notes that “studies from which a direct comparison can be made between weight loss results for Black and White participants suggest that the best treatments do not work as well in Blacks as in Whites.<sup>80</sup> One meta-analysis of 25 published studies of Black women and weight loss shows that Black women lose less weight than other subgroups in behavioral weight loss interventions.<sup>81</sup> Likewise, researchers have noted that traditional weight-loss interventions developed for use on Anglo American subjects do not appear to have been effective for Hispanic/Latino individuals.<sup>82</sup> One of the biggest limitations of studies is a lack of acknowledgment for diversity among Hispanics/Latinos (eg, country of origin) as well as acculturation and ethnic sensitivity. This heterogeneity among the Hispanic/Latino population in the United States is an important factor to consider when designing and implementing a culturally appropriate weight loss intervention because of the potential impact of this cultural diversity on the intervention effect.<sup>83</sup>

A study by Lindberg and Stevens of Mexican American immigrant women<sup>70</sup> found that while generally rejecting the idea of extreme thinness as physically attractive, participants were very concerned about weight-related health problems, particularly diabetes, and all expressed great interest in achieving and maintaining a healthy weight as a way to prevent illness. It is clear that efforts to promote weight loss among Mexican American women should address these health concerns, emphasizing that even moderate weight reductions are associated with specific health benefits, including reducing the risks of diabetes, hypertension, and OA. Another successful group program for Spanish-speaking Mexican women emphasized the value of leisure physical activity not only as a means to improve energy balance and promote good health but also as a way to manage stress and improve mood.<sup>84</sup>

African American women have the highest rates of obesity in the U.S., are less likely to participate in weight loss programs, and are less successful in their weight loss attempts.<sup>85</sup> One Black female personal trainer noted in an online article: “There are many reasons why Black women are disproportionately obese. Cultural beliefs and cuisine, social traditions and expectations, genetics and ignorance all play a role in the Black female obesity epidemic... it’s important to understand how certain popular beliefs are unhealthy and encourage obesity.”<sup>86</sup> An important insight about motivation to lose weight that emerged from the focus group study by Blixen and colleagues was that “health” as opposed to “appearance” was identified by both African American and White women as the motivation to lose weight as they became older.<sup>73</sup>

The U.S. Preventive Services Task Force (USPTF), an independent panel of non-Federal experts in prevention and evidence-based medicine composed of primary care providers (such as internists, pediatricians, family physicians, gynecologists/obstetricians, nurses, and health behavior specialists), conducts scientific evidence reviews of a broad range of clinical preventive health care services and develops recommendations for primary care clinicians and health systems. Their *Recommendation Statement for Screening for and Management of Obesity in Adults*<sup>87</sup> recommends that patients with a BMI  $\geq 30$  should be offered or referred to intensive, multicomponent behavioral interventions. The USPSTF found that the most effective interventions were comprehensive and were of high intensity (12 to 26 sessions in a year). Although the USPSTF could not determine the effectiveness of other specific intervention components, most of the higher-intensity behavioral interventions included multiple behavioral management activities, such as group sessions, individual sessions, setting weight-loss goals, improving diet or nutrition, physical activity sessions, addressing barriers to change, active use of self-monitoring, and strategizing how to maintain lifestyle changes.



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## Physical Activity

Exercise plays a key part in a comprehensive treatment plan. Researchers are studying exercise in greater detail and finding out just how to use it in treating or preventing osteoarthritis. For example, several scientists have studied knee osteoarthritis and exercise. Their results included the following:

- Walking can result in better functioning, and the more you walk, the farther you will be able to walk.<sup>88</sup>
- People with knee osteoarthritis who are active in an exercise program feel less pain and function better.<sup>88</sup>
- Among older adults with knee osteoarthritis, engaging in moderate physical activity at least 3 times per week can reduce the risk of arthritis-related disability by 47%.<sup>16</sup>
- People with arthritis may experience short-term increases in pain when they initiate an exercise program but that continued physical activity results in a long-term reduction of symptoms. Overcoming the initial increase in pain and fears about joint damage are important concerns for people with arthritis and are especially important for people with arthritis and additional chronic conditions.<sup>57</sup>

After a systematic review of 18 published studies, the Community Preventive Services Task Force, an expert panel established by the US Department of Health and Human Services, recommends implementing individually-adapted health behavior change programs based on strong evidence of their effectiveness in increasing physical activity and improving physical fitness and that if appropriately adapted to the target populations, these interventions should be applicable to diverse settings and groups.<sup>89</sup> The 18 reviewed programs helped participants incorporate physical activity into their daily routines by teaching behavioral skills such as:

- Goal-setting and self-monitoring of progress toward those goals
- Building social support for new behaviors
- Behavioral reinforcement through self-reward and positive self-talk
- Structured problem solving to maintain the behavior change
- Prevention of relapse into sedentary behavior



## ASSESS YOUR KNOWLEDGE

Based on your understanding of patients most at risk for disability from OA, please answer the following questions.

1. Health literacy refers only to the ability to read and understand written information.
  - A. True
  - B. False
2. Which of the following was NOT suggested by the CDC study as a possible factor to account for the difference in the prevalence of obesity among Black and Hispanic/Latina females compared to White females?
  - A. Lower rates of physical activity.
  - B. Reduced access to affordable healthful foods and safe locations for neighborhood activities.
  - C. Attitude about body size and weight.
  - D. Level of education.
3. When Blixen and associates analyzed focus groups of Black and White patients with BMI  $\geq 30$  to learn about values and beliefs regarding obesity and weight reduction, they found that:
  - A. White women were more likely to see themselves as obese while Black women saw themselves as overweight.
  - B. Black women felt a greater sense of stigma attached to weight.
  - C. Black women did not feel their culture and ethnicity presented any barriers to weight loss.
  - D. Both groups identified “health” as a motivator to lose weight as they became older.

### FEEDBACK

1. B – False. Health literacy is broader than general literacy; it includes the ability to process numbers and navigate the health care system.
2. D – Level of education. There have been studies that correlate socioeconomic status with obesity, but none correlating the level of education, per se.
3. D – Both groups identified “health” as a motivator to lose weight as they became older. Both groups viewed themselves as overweight, White women felt a greater sense of stigma attached to weight, and Black women felt their culture and ethnicity presented barriers to weight loss.

## Challenges for Healthcare Providers

Tens of millions of patients in the U.S. have limited English proficiency and poor health literacy, making it difficult to ensure that they are receiving the care they need at the doctor’s office and taking the appropriate steps to stay healthy after they go home. Implementing successful programs to mitigate the development of disability in obese Hispanic/Latina and African American women with OA provides many challenges for healthcare providers. In addition to the areas addressed below, it’s helpful to remember that all obesity interventions:

- ✓ Must recognize the importance of cultural and language factors;
- ✓ Be aware that if other persons in the family “translate” for a patient, there is always the issue of things being “edited” by the interpreter.
- ✓ Take into account traditional meals, food sources, family structure, eating routine, and finances; and
- ✓ Focus on healthy eating and physical activity.

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## Understanding the Patient Population

After a diagnosis of OA, education will help patients compensate for and manage its effects by adapting their usual activities; using assistive devices; and complying with medication, exercise, and weight management programs. Helping patients accept their disease and encouraging them to actively participate in the care process are essential. It is also important to identify patients who are hiding their symptoms from healthcare professionals and trying to self-manage their problems.<sup>5</sup> Providers must, both individually and through their professional organizations, explore self-awareness, recognize stereotyping and implicit bias, develop culturally competent communications, and learn to explore patients' views of pain, sickness, and treatment, and provide patient-centered care.<sup>90</sup>

## Providing Services that Reflect Cultural Competence and Cultural Humility

**Cultural competence** is defined in many different ways: some think of it as cultural sensitivity while others speak of anti-bias and still others consider it a cross-system, comprehensive approach that embeds culture into care. Most descriptions contain common threads, including the ideas that developing cultural competence is a process, that culture is learned, and that self-awareness is critical.<sup>91</sup> Cultural competence in health care describes the ability of systems and healthcare professionals to provide high quality care to patients with diverse values, beliefs and behaviors, including tailoring delivery to meet patients' social, cultural and linguistic needs.<sup>92</sup> By tailoring services to an individual's culture and language preference, health professionals can help bring about positive health outcomes for diverse populations. The provision of health care services that are respectful of and responsive to the health beliefs, practices and needs of diverse patients can help close the gap in health care outcomes.<sup>93</sup>

**Cultural humility** a concept proposed by Tervalon and Murray-Garcia in 1998,<sup>94</sup> uses self-reflection and discovery in order to build honest and trustworthy relationships. It involves being flexible and humble enough to assess anew the cultural dimensions of the experience of each patient and let go of the false sense of security that stereotyping brings.<sup>95</sup> Many organizations, including the American Association of Colleges of Nurses, view cultural humility as the supporting framework for developing cultural competencies.<sup>96</sup> Cultural competency is a journey throughout a lifetime, not a goal or an achievement.

## Resources for Obtaining Cultural Competency Education for Health Care

An excellent and thought-provoking book called *Seeing Patients: Unconscious Bias in Health Care*<sup>97</sup> was written by a Black physician at Harvard named Augustus A. White III in 2011. Dr. White describes how doctors - for the most part without conscious malice - discriminate systematically against racial minorities, women, those from different cultures, the elderly, and even the obese. In an effort to advance "culturally competent care," he offers not only his own experience trying to achieve this goal, but also professional guidelines and practical suggestions for expanding personal cultural literacy as well as an awareness of personal biases. He maintains that healthcare providers must learn to communicate effectively with different kinds of patients, learn their languages, understand their cultures, and begin to see patients as individual persons, not simply as individual instances of categories like race, gender and age. His book raises serious moral considerations about the inequalities in contemporary medical practice, inequalities that must to be articulated to be eliminated.

Cultural competence education focuses on equipping healthcare providers with tools and skills to help them overcome some of the major causes of poor quality health care, especially for diverse populations. Both the government as well as private organizations provide online education about cultural competence. Two of the better-known resources are the Office of Minority Health, part of the U.S. Department of Health and Human Services, and a private company called Quality Interactions.

### U.S. Department of Health and Human Services, Office of Minority Health

The Office of Minority Health has National Standards for Culturally and Linguistically Appropriate Services (CLAS) in Health and Health Care to provide individuals and organizations with a blueprint for successfully

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implementing and maintaining culturally and linguistically appropriate services. The National CLAS Standards are intended to advance health equity, improve quality, and help eliminate health care disparities. Adoption of these Standards will help advance the cause of better health and health care in the United States. Accompanying the National CLAS Standards is a technical assistance document entitled, *The National Standards for Culturally and Linguistically Appropriate Services in Health and Health Care: A Blueprint for Sustaining CLAS Policy and Practice (The Blueprint)*, which aims to provide comprehensive, but not exhaustive, information on each Standard.<sup>93</sup>

The Office of Minority Health offers free online continuing education courses for physicians, nurses, and other healthcare professionals about guidelines for providing culturally competent care.<sup>98</sup>

### Quality Interactions

Quality Interactions,<sup>99</sup> a privately-held company founded and owned three practicing physicians (Drs. Joseph Betancourt, Alexander Green, and Emilio Carrillo) has trained over 125,000 healthcare personnel nationwide using a case-based format supported by evidence from the peer-reviewed literature and believes it is the largest provider. “I think the government is our closest competitor and they have trained around 40,000 people,” said Betancourt.<sup>100</sup> The three physicians, two in Boston and Carrillo in New York, collaborated in the early 2000s to create an expansive curriculum to teach medical residents about cross-cultural medicine as a means to improve existing disparities in care and this became the impetus to the the founding of Quality Interactions.

### *Uncovering Unconscious Bias*

There are two types of biases: explicit (or conscious) bias and implicit (or unconscious bias). An explicit bias is the kind of attitude that you deliberately think about and report. Explicit bias accounts for many cases of discrimination and should not be tolerated. Unconscious bias is tougher to identify because we want to believe we treat everyone equally and with respect. However, we now have a vast body of research that is showing us that unconscious bias or hidden beliefs – attitudes and biases beyond our regular perceptions of ourselves and others, underlie a great deal of our patterns of behavior. Counteracting unconscious bias requires awareness, introspection, authenticity, humility, compassion, communication, and a willingness to act.

### *Is Bias Always Bad?*

As we go out in the world every day, we constantly, automatically, and usually subconsciously make evaluations of millions of concepts (person, place, thing, or idea). If something or someone is assessed to be dangerous, a “flight or fight” fear response ensues. Sometimes we can consciously re-decide the fear is unwarranted, but often we let our emotions override rationale. From a survival standpoint, this is a necessary trait and one that is hard-wired into human beings. Sigmund Freud recognized that our unconscious was vastly more powerful than the conscious. Modern research not only confirms that, but suggests Freud still underestimated the power of the unconscious!

### *Is Bias the Same as Prejudice?*

Social psychologists use the word prejudice to describe people who report and approve negative attitudes toward other groups. Most people who show an implicit preference for one group (eg, White people) over another (eg, Black people) are not prejudiced by this definition.<sup>101</sup> The challenge is that even knowing that we are inherently biased, we may not be able to help ourselves. Our implicit biases are not endorsed and may even be contradictory to what one consciously believes. So, no, we would not say that such people are prejudiced. It is important to know, however, that implicit biases can predict behavior. When we relax our active efforts to be egalitarian, our implicit biases can lead to discriminatory behavior, so it is critical to be mindful of this possibility if we want to avoid prejudice and discrimination.<sup>101</sup>

### *Identifying Implicit Biases – The Implicit Association Test (IAT)*

The Implicit Association Test (IAT) was created and maintained by Project Implicit, founded as a multi-university research collaboration in 1998 by three scientists - Tony Greenwald (*University of Washington*),

Mahzarin Banaji (*Harvard University*), and Brian Nosek (*University of Virginia*). In 2001, it was incorporated as a non-profit to foster dissemination and application of implicit social cognition. The tests are free, online, and available to everyone at <https://implicit.harvard.edu/implicit/selectatest.html>. Table 3 describes the 14 tests available.

The IAT is a widely used measure of implicit social cognition that measures relative association strengths between two pairs of concepts.<sup>102</sup> It has become widely accepted as a measure of implicit social cognition because it captures evaluations that are related but distinct from self-report,<sup>103</sup> and has predictive validity across a variety of topics.<sup>104</sup> In the Weight IAT, the concepts are thin people, fat people, good words, and bad words; test takers are required to quickly categorize pictures of overweight and thin people and value-laden words as they appear on a computer screen by pressing one of two computer keys. In one condition, participants categorize pictures of overweight people and “good” words with one key and pictures of thin people and “bad” words with the other key. In a second condition, the key assignments are reversed, pictures of thin people and “good” words are categorized with one key and pictures of overweight people and “bad” words are categorized with the other key. The difference in the average response time between the two conditions is an indicator of the relative association strength or bias toward one group rather than the other.

**Table 3 – Types of Implicit Association Tests (IAT)<sup>105</sup>**

<b>Weight IAT</b>	<i>Weight</i> ( <b>‘Fat - Thin’ IAT</b> ). This IAT requires the ability to distinguish faces of people who are obese and people who are thin. It often reveals an automatic preference for thin people relative to fat people.
<b>Presidents IAT</b>	<i>Presidents</i> ( <b>‘Presidential Popularity’ IAT</b> ). This IAT requires the ability to recognize photos of Barack Obama and one or more previous presidents.
<b>Arab-Muslim IAT</b>	<i>Arab-Muslim</i> ( <b>‘Arab Muslim - Other People’ IAT</b> ). This IAT requires the ability to distinguish names that are likely to belong to Arab-Muslims versus people of other nationalities or religions.
<b>Age IAT</b>	<i>Age</i> ( <b>‘Young - Old’ IAT</b> ). This IAT requires the ability to distinguish old from young faces. This test often indicates that Americans have automatic preference for young over old.
<b>Disability IAT</b>	<i>Disability</i> ( <b>‘Disabled - Abled’ IAT</b> ). This IAT requires the ability to recognize symbols representing abled and disabled individuals.
<b>Gender-Science IAT</b>	<i>Gender - Science</i> . This IAT often reveals a relative link between liberal arts and females and between science and males.
<b>Skin-tone IAT</b>	<i>Skin-tone</i> ( <b>‘Light Skin - Dark Skin’ IAT</b> ). This IAT requires the ability to recognize light and dark-skinned faces. It often reveals an automatic preference for light-skin relative to dark-skin.
<b>Religion IAT</b>	<i>Religion</i> ( <b>‘Religions’ IAT</b> ). This IAT requires some familiarity with religious terms from various world religions.
<b>Native IAT</b>	<i>Native American</i> ( <b>‘Native - White American’ IAT</b> ). This IAT requires the ability to recognize White and Native American faces in either classic or modern dress, and the names of places that are either American or Foreign in origin.
<b>Race IAT</b>	<i>Race</i> ( <b>‘Black - White’ IAT</b> ). This IAT requires the ability to distinguish faces of European and African origin. It indicates that most Americans have an automatic preference for White over Black.
<b>Weapons IAT</b>	<i>Weapons</i> ( <b>‘Weapons - Harmless Objects’ IAT</b> ). This IAT requires the ability to recognize White and Black faces, and images of weapons or harmless objects.
<b>Sexuality IAT</b>	<i>Sexuality</i> ( <b>‘Gay - Straight’ IAT</b> ). This IAT requires the ability to distinguish words and symbols representing gay and straight people. It often reveals an automatic preference for straight relative to gay people.
<b>Gender-Career IAT</b>	<i>Gender - Career</i> . This IAT often reveals a relative link between family and females and between career and males.
<b>Asian IAT</b>	<i>Asian American</i> ( <b>‘Asian - European American’ IAT</b> ). This IAT requires the ability to recognize White and Asian-American faces, and images of places that are either American or Foreign in origin.

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## *Addressing Unconscious Bias*

Our implicit biases reflect the attitudes, beliefs, stereotypes and prejudicial associations we have for particular groups. Implicit bias may predict discrimination behavior even among individuals who have no intention to discriminate.<sup>106</sup> It is very possible to have an implicit preference that you don't want. One solution is to seek experiences that could reverse or undo the patterns that created the unwanted preference (eg, avoid television shows that reinforce negative stereotypes of groups you may have; read materials that oppose your implicit group preferences; interact and learn about people who counter your implicit stereotypes, etc.). You can work to remain alert to the existence of the unwanted implicit preference to make sure that it doesn't influence your overt behavior. You can also try consciously planned actions that will compensate for your implicit preferences (eg, if you have an implicit preference for thin people, you can make an effort to meet obese individuals and become more familiar with them as individuals rather than just "obese people"). Research shows that implicit preferences are quite malleable so it is possible to manage and change them if you want to.<sup>101</sup>

Howard Ross, a nationally recognized expert on diversity, leadership, and organizational change, identifies seven steps to identify and address unconscious bias:<sup>107</sup>

1. Recognize that you – and all other human beings - have biases.
2. Identify what those biases are.
3. Dissect your biases.
4. Decide which of your biases you will address first.
5. Look for common interest groups.
6. Be mindful of bias kick back.

## *Biases Against Obese Individuals and Racial/Ethnic Minorities*

Unconscious biases about obese individuals or African Americans or Hispanics/Latinos may be an under-recognized barrier to professionals engaging in weight management or appropriate communications about weight with these populations. Unfortunately, these implicit biases are very real, not uncommon, and must be addressed if counseling these patients is to be effective.

### Obesity Bias

Weight stigma in healthcare settings leads to poor quality of care for overweight patients.<sup>108</sup> Studies have consistently documented weight bias among health-care providers, including negative stereotypes by physicians, nurses, medical students, dietitians, psychologists, and fitness professionals. Providers typically report views that obese patients are lazy, lacking in self-control, undisciplined, and noncompliant with treatment,<sup>109</sup> and that these personality characteristics are the central causes of obesity rather than genetic or environmental factors.<sup>110</sup> Providers also report having less respect for their patients as a patient's body mass index (BMI) increases, believe that treatment efforts will be futile, and find treating obesity to be professionally unfulfilling.<sup>110</sup> A 2012 study by Sabin and associates compared implicit and explicit attitudes about weight among a large convenience sample of the general population (N = 359,261), and a large sub-sample of MDs (N = 2,284) who chose to take the Weight Implicit Association Test (IAT).<sup>105</sup> The vast majority of the people who take the Web-based test exhibit a strong preference for thin people and associate the fat people with negative words. The researchers found that implicit and explicit anti-fat bias is as pervasive among MDs as it is among most people in society.<sup>111</sup>

In socially sensitive areas such as race, sexuality, disability, age, and culture, implicit attitudes are often stronger than self-reported attitudes.<sup>112</sup> However, for weight bias, both implicit and explicit anti-fat attitudes are very strong, with self-reported attitudes slightly stronger. Strong explicit attitudes suggest that individuals, including medical doctors, may feel that it is socially acceptable to express negative attitudes about overweight people.<sup>111</sup>



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## Strategies to Overcome Bias Against Obese Individuals

Healthcare professionals can employ a variety of strategies to help reduce weight stigma and improve attitudes. They can start by becoming aware of their own biases, developing empathy, and working to address the needs and concerns of obese patients. Experts say there are several steps health professionals can take to create a more supportive and welcoming environment for obese patients:<sup>51</sup>

1. Consider that patients may have had negative experiences with other physicians or health professionals regarding their weight. Approach patients with sensitivity.
2. Recognize the complex etiology of obesity and communicate this to colleagues and patients to avoid stereotypes that obesity is attributable to personal willpower.
3. Recognize that many patients have tried to lose weight repeatedly.
4. Emphasize behavior changes rather than just the number on the scale.
5. Offer concrete advice — start an exercise program, eat at home, etc. — rather than simply saying, “You need to lose weight.”
6. Acknowledge the difficulty of lifestyle changes.
7. Recognize that small weight losses can result in significant health gains.

Thousands of health professionals have taken a free online continuing medical education course offered by the Yale University Rudd Center for Food Policy and Obesity titled: Weight bias in clinical settings: Improving health care delivery for obese patients.<sup>113</sup>

It is also useful to identify one’s own bias. Asking the following questions can be helpful in this regard:<sup>51</sup>

1. Do I make assumptions based only on weight regarding a person’s character, intelligence, professional success, health status, or lifestyle behaviors?
2. Am I comfortable working with people of all shapes and sizes?
3. Do I give appropriate feedback to encourage healthful behavior change?
4. Am I sensitive to the needs and concerns of obese individuals?
5. Do I treat the individual or only the condition?

As discussed previously, the free online validated survey tool, the Weight Implicit Association Test (IAT), is an excellent resource for uncovering an implicit weight bias.<sup>105</sup>

### Race Bias

In socially sensitive areas such as interracial attitudes and beliefs, implicit attitudes are a better predictor of discriminatory behavior than is self-report.<sup>104</sup> The IAT has been used in health disparities research with physicians to measure implicit attitudes about race. One study found that physicians hold implicit race bias, similar to others in society,<sup>114</sup> and recent research is showing that these attitudes affect medical care.<sup>115</sup> In a cross-sectional study of 40 primary care clinicians and 269 patients in urban community-based practices, Cooper and associates measured clinicians’ implicit general race bias and race and compliance stereotyping with 2 implicit association tests and related them to audiotape measures of visit communication and patient ratings. Results indicated that among Black patients, general race bias was associated with more clinician



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verbal dominance, lower patient positive affect, and poorer ratings of interpersonal care; race and compliance stereotyping was associated with longer visits, slower speech, less patient centeredness, and poorer ratings of interpersonal care.<sup>115</sup>

### *Changing Behavior: The Role of Micro-Affirmations*

In 1973, Dr. Mary Rowe, a faculty member at MIT, coined the terms “micro-inequities and micro-affirmations” and defined them as such:<sup>116</sup>

- Micro-inequities: “apparently small events which are often ephemeral and hard-to-prove, events which are covert, often unintentional, frequently unrecognized by the perpetrator, which occur wherever people are perceived to be ‘different.’”
- Micro-affirmations: “apparently small acts, which are often ephemeral and hard-to-see, events that are public and private, often unconscious but very effective, which occur wherever people wish to help others to succeed.”

Dr. Rowe notes that many micro-inequities are unconscious biases and that if someone tries to always affirm others in an appropriate and consistent way (eg, using micro-affirmations), one has a good chance of preventing unconscious slights by blocking a behavior one wants to prevent. According to Dr. Rowe, “micro-affirmations are tiny acts of opening doors to opportunity, gestures of inclusion and caring, and graceful acts of listening. Micro-affirmations lie in the practice of generosity” and “include the myriad details of fair, specific, timely, consistent and clear feedback that help a person build on strength and correct weakness.” Small things are especially important with respect to feelings and it is important to remember that *attitudes may follow behavior just as behavior may follow attitudes*.<sup>116</sup>

### *Using Teaching Strategies that Reflect Differences in Learning Styles and Principles of Adult Education*

A core concept in learning theory is that individuals differ in how they learn. Learning style is an individual’s natural or habitual pattern of acquiring and processing information in learning situations. In addition, effective adult education is fundamentally different from educating children. Adults are not just “old children,” and they justifiably resent being treated like children. This applies to all facets of their treatment, including education about lifestyle changes to cope with obesity and OA.

### *Learning Styles Inventory*

Learning styles can be influenced by past experiences, education, work and the learning situation. It is important to recognize that they are not fixed but may be adapted according to context and what is being learned. Nevertheless most people still favor one style of learning.

The emergence of numerous learning style models over the past 25 years has brought increasing attention to the idea that students learn in diverse ways and that one approach to teaching does not work for every student or even most students.<sup>117</sup> Many learning style models have Learning Styles Inventories (usually questionnaires) to assess an individual’s “category” of learning style. One of the most common and widely-used categorizations of the various types of learning styles is Fleming’s VARK model (free VARK questionnaire is available at <http://www.vark-learn.com>) that categorizes individual learning preferences into the following categories:<sup>118</sup>

- Visual learners: prefer charts, diagrams, brochures, pictures, etc.;
- Auditory learners: like to explain new ideas to others, discuss topics with educators, use stories and jokes, attend lectures and discussion groups, etc.;
- Read/Write learners: prefer lists, essays, reports, printed handouts;
- Kinesthetic learners: like field trips, hands-on activities like using measuring instruments and making recipes, using their senses, etc.

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As a consequence of research into learning styles, most group educators use a multimodal teaching strategy that incorporates elements of all four of these learning preferences whenever possible.

### *Principles of Adult Learning*

In the late 1960s, American adult learning pioneer Malcolm Knowles popularized the term “andragogy” (Greek: “man-leading”) to American audiences as “the art and science of helping adults learn.” It was contrasted with pedagogy (Greek: “child-leading”). Compared to pedagogy, andragogy uses approaches to learning that are problem-based and collaborative rather than didactic, and also emphasizes more equality between the teacher and learner. His work was a significant factor in reorienting adult educators from ‘educating people’ to ‘helping them learn.’<sup>119-121</sup>

Malcolm Knowles stated that “individuals take the initiative, with or without the help of others, in diagnosing their learning needs, formulating learning goals, identifying human and material resources for learning, choosing and implementing appropriate learning strategies, and evaluating learning outcomes.”<sup>120</sup>

As described by Malcolm Knowles, the following principles apply to adult learning:<sup>120;121</sup>

- 1. Adults are autonomous and self-directed** – educators must actively involve adult participants in the learning process. Adult learners resist learning when they feel others are imposing information, ideas, or actions on them.

As a healthcare educator, you can:

- Develop rapport with the patient to optimize your approachability and encourage asking of questions and exploration of concepts.
- Show interest in the patient’s thoughts and opinions. Actively and carefully listen to any questions asked.
- Provide regular constructive and specific feedback (both positive and negative).
- Review goals and acknowledge goal completion.
- Acknowledge the preferred learning style of the patient and modify your instruction accordingly.

- 2. Adults have accumulated a foundation of life experiences and knowledge** – educators need to connect learning to this knowledge/experience base. To an adult, experience is not something that “happens” to an individual, it “is” the individual. To ignore or devalue the adult’s experiences is perceived by the adult as ignoring or devaluing the “person” of the adult. Adults like to be given opportunity to use their existing foundation of knowledge and experience to apply it to their new learning experiences.

As a healthcare educator, you can:

- Find out about your patient’s interests and past experiences.
- Assist in drawing on those experiences when problem-solving, reflecting, and applying reasoning processes.
- Facilitate reflective learning opportunities that can also assist the patient to examine existing biases or habits based on life experiences and move the patient toward a new understanding of information presented.

- 3. Adults are goal-oriented and usually know what they want to attain** – Adults become ready to learn when they experience a need to learn it in order to cope more satisfyingly with real-life tasks or problems.

As a healthcare educator, you can:

- Provide meaningful learning experiences that are clearly linked to patient goals.
- Provide real case-studies as a basis from which to learn about effectiveness of the information you’re providing.
- Ask questions that motivate reflection and inquiry.

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**4. Adults are relevancy-oriented** – Adult learners want to know the relevance of what they are learning to what they want to achieve.

As a healthcare educator, you can:

- Explain how even modest weight loss among people with knee OA has been shown to produce meaningful improvements in physical function, self-reported disability, pain symptoms and quality of life. Overweight and obese adults with knee OA who lose just one pound gain a four-fold reduction in knee joint load.<sup>19</sup>

**5. Adults are practical** – Educators should focus on the aspects of the information most achievable and easily implemented by their patient.

As a healthcare educator, you can:

- Clearly explain your clinical reasoning when prioritizing your patient’s clinical needs.
- Be explicit about how what the patient is learning is useful and applicable to the patient’s medical condition.
- Promote active participation by allowing patients to try things rather than observe. For example, you can provide plenty of practice opportunity in menu planning and exercise strategies in order to promote development of skill, confidence, and competence.

**6. As do all learners, adults should be shown respect** – Educators should acknowledge the wealth of experiences that adult participants bring to the discussion.

As a healthcare educator, you can show respect by:

- Taking genuine interest in your patient.
- Not assuming you know why the patient is obese.
- Exhibiting cultural humility as well as cultural competence.
- Acknowledging the wealth of experiences that the patient brings to the discussion.
- Regarding your patient as a colleague who is equal in life experience.
- Encouraging expression of ideas and feedback at every opportunity.

The implication of these principles of learning styles and adult education is that certain instructional designs produce more effective learning outcomes for adults than other designs. For example, adults crave programs that offer the possibility of experimentation and creativity. Learning also should be as task-centered as possible, giving adults the ability to solve problems that they frequently face in their lives, to realize their goals, and to bring about change for their own needs.

Remember too – adults may be fatigued. Therefore, they appreciate any teaching devices that add interest and a sense of liveliness such as audio-visual aids, change of pace, and sense of humor!

### *Improving Communication in Order to Enhance Shared Decision-Making*

In order to engage patients and families in shared decision-making, it is imperative to create a culture of trust. In 1983, Berlin and Fowkes<sup>122</sup> proposed a teaching framework to enhance cross-cultural communication between patients and providers that they designated as the LEARN model. The intent of LEARN is to help clinicians focus on patients’ perceptions and comprehension of their illness and to understand patients’ viewpoints and preferences toward the goal of reaching a shared understanding in making decisions about treatment. The LEARN model may help identify and address barriers to weight management.

<b>L</b>	Listen with sympathy and understanding to the patient’s perception of the problem; maintain eye contact throughout and use appropriate gestures such as nodding or light touching to indicate you are listening (ie, practice ‘active listening’).
<b>E</b>	Explain your perceptions of the problem (ie, practice active listening).
<b>A</b>	Acknowledge and discuss the differences and similarities.
<b>R</b>	Recommend treatment.
<b>N</b>	Negotiate agreement.

Remember, people of all cultures want to be treated in ways that:

- ✓ Maintain individuality
- ✓ Maintain dignity
- ✓ Maintain autonomy
- ✓ Have their beliefs respected

### *Resources for Healthcare Professionals*

A new tool for healthcare professionals is a free guidebook and DVD, which address the impact of overweight and obesity on health and offer tips on how to introduce the topic of weight into healthcare practices. The resource, “Excess Weight and Your Health — A Guide to Effective, Healthy Weight Loss,” was launched on April 15, 2013 by the American College of Physicians and the Obesity Action Coalition. The coalition is a Florida-based nonprofit that represents individuals affected by obesity. Healthcare professionals, including nurses, can request a free copy of the guidebook and DVD by visiting the group’s website (<http://www.obesityaction.org/oacacpdvd>).<sup>123</sup>

## ASSESS YOUR KNOWLEDGE

Based on your understanding of challenges for healthcare providers in treating obese Hispanic/Latina and African American women with OA, please answer the following questions.

1. Obese individuals:
  - A. Generally have learned to accept their negative body self-image.
  - B. Often experience implicit anti-obesity bias from doctors and nurses.
  - C. Are usually lazy and lack motivation to lose weight.
  - D. All of the above.
2. The concept of using the ability to acknowledge gaps in one's knowledge and an openness to new ideas, contradictory information, and advice in order to develop cultural competence is called:
  - A. Cultural humility.
  - B. Acculturation.
  - C. Cultural mastery.
  - D. Micro-affirmations.
3. It's important to identify and address implicit biases because they can predict discriminatory behavior if not managed and changed.
  - A. True
  - B. False.

### FEEDBACK

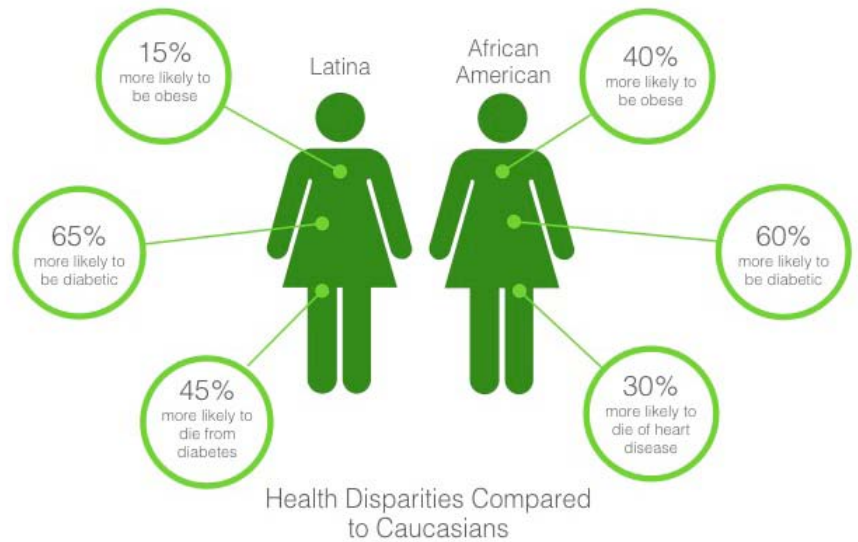
1. B – Often experience implicit anti-obesity bias from doctors and nurses. Many studies, based on the Weight IAT, have confirmed that anti-obesity bias is as prevalent in health professionals as in the general population.
2. A – Cultural humility. Cultural humility provides a supportive framework for developing cultural competence by using the ability to acknowledge gaps in one's knowledge and an openness to new ideas, contradictory information, and advice.
3. A – True. Implicit bias may predict discrimination behavior even among individuals who have no intention to discriminate. Implicit biases are quite malleable once there is a desire to change.



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## Summary

The patients most at risk for disability from osteoarthritis are obese African American and Hispanic/Latina women because their symptoms of OA are more severe than those of Whites and their obesity exacerbates their OA condition. Addressing obesity among various racial/ethnic populations requires an understanding not only of the biological causes of obesity, but also of the culture, values, resources, and environments that influence eating and physical activity behaviors and choices. A physically inactive, obese, and immobile body can head down a path toward chronic disease and illness, medication dependency, disability, anxiety, and depression. Just as obesity can lead to OA, particularly in the knee, so can OA lead to obesity when patients avoid exercise because of arthritic pain.



To break this cycle, healthcare providers should intervene to encourage increased physical activity and weight loss. Patient-based factors can be addressed by improvements in culturally competent patient education programs aimed at increasing patient knowledge on how to access care, actively participate in medical decision-making, and follow through on medical treatment plans (eg, medications, diet, and exercise). Providers will contribute to the elimination of healthcare disparities through improvements in both cultural “competency” and communication with patients that is enhanced by recognition of cultural factors, health literacy, learning styles, and principles of adult education. Importantly, providers should assess for the presence of unconscious biases against obese individuals or racial/ethnic groups and make conscious efforts to mitigate those biases before they present barriers to treatment.

## Resources

[Michelle Obama’s Health Initiative, President’s Challenge](#)

[American Psychological Association](#)

[American Physical Therapy Association – For the Public](#)

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## Glossary

<b>Cultural Competency</b>	A set of congruent behaviors, attitudes, and policies that come together in a system, agency, or among professionals that enables effective work in cross-cultural situations.
<b>Cultural Humility</b>	A supportive framework for developing cultural competence by using the ability to acknowledge gaps in one's knowledge and an openness to new ideas, contradictory information, and advice.
<b>Health Literacy</b>	The degree to which individuals have the capacity to obtain, process, and understand basic health information and services needed to make appropriate health decisions.
<b>Health-Disparity Populations</b>	Populations with a significant disparity in the overall rate of disease incidence, prevalence, morbidity, mortality, or survival rates in the population as compared to the health status of the general population. As such racial and ethnic minorities (i.e., African Americans, American Indians and Alaska Natives, Asians, Hispanics, and Native Hawaiians and Other Pacific Islanders), low socioeconomic status, and rural persons are currently designated as health disparity populations.
<b>Learning Style</b>	An individual's natural or habitual pattern of acquiring and processing information in learning situations.
<b>Learning Style Inventory</b>	Typically a questionnaire used to assess one's preference for learning or processing information. Different models of learning styles have different categorizations.
<b>Musculoskeletal Conditions</b>	Include joint diseases such as osteoarthritis and rheumatoid arthritis; back and neck pain; osteoporosis and fragility fractures; soft tissue rheumatism; injuries due to sports and in the workplace; and trauma commonly related to road traffic accidents.

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