



**The State of Hawai`i  
Arthritis Report  
What the BRFSS 2000 Shows**

**State of Hawai`i Department of Health  
Hawai`i Arthritis Control Program**

**SEPTEMBER 2001**

***About the cover:***

The image was originally used to repel life-threatening illnesses. The triangular eyes are prisms which deflect disease causing energy. The ever present serpent oversees the difficult journey toward rebirth.

The sculpture by Kelino Akiwi was inspired by the images of ancient Hawaiian wood carvers. Kelino says, "We must acknowledge the Ancient Ones and learn from the time-honored wisdom of indigenous peoples. Although arthritis is not a life-threatening disease, some forms can be serious. Acknowledging our ancient Hawaiian wisdom to manage arthritis is one belief the Hawai`i Arthritis Control Program values.

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# ALOHA

## Hawai`i Arthritis Control Program

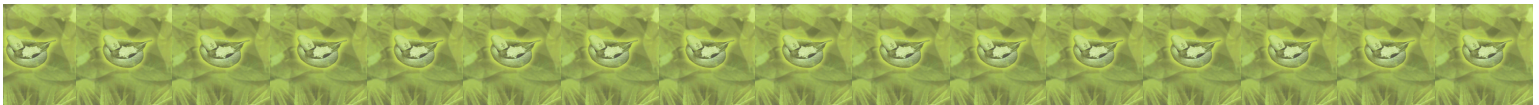
In addition to 37 other states, Hawai`i was one of the fortunate recipients to establish its own Arthritis Control Program in 1999 to increase the awareness of arthritis and other related conditions within the island community. However, unlike many other conventional programs, the Hawai`i Arthritis Control Program chose to integrate medicine of the Eastern and Traditional Native Hawaiian Healing with allopathic medicine (biomedicine or “Western” healthcare). This is based on the belief that because of Hawai`i’s unique diversity, climate, longevity, and demographics, the residents have a unique perception of healthcare. Thus, it is not unusual for Hawai`i residents to seek help in one of the many different healing modalities Complementary Alternative Medicine (CAM) has to offer such as, Traditional Native Hawaiian healing, spiritual and faith healing, acupuncture, massage therapy, chiropractic, Traditional Chinese healing, Reiki, etc.

Below is the Mission Statement of the Hawai`i Arthritis Control Program (also translated Hawaiian and Tagalog):

“To lessen the burden of arthritis for residents of Hawai`i, we, as ohana, value a community based emphasis on unconditional respect for the individual, with caring and compassion, and encouraging self-management of a persons disease through integrative practices and philosophies, with an openness to spirituality.”

The mission statement would not have been possible without the establishment of the Hawai`i Arthritis Control Program Advisory Committee (HACP). Their endless contribution and collaboration of ideas helped the program come to life. The committee is made up of 24 members and were chosen to represent the values and customs of healthcare of the residents of Hawai`i. The group consists of state and local health departments, health professionals and practitioners, physicians, academia, and consumers. Not only are they diverse professionally, but also ethnically in order to further illustrate the unique variety of people residing in Hawai`i. As a result, the HACP strongly believes in integration as the best way to control arthritis for the state of Hawai`i.

Please note that the following pages are data from the Hawai`i State Department of Health 2000 Behavioral Risk Factor Surveillance System (BRFSS). This report is the result of that survey and describes the magnitude and the factors that increase the risk of arthritis. A special mahalo (thank you) goes to Florentina Reyes-Salvail and Ming Qiu Yu who compiled this report to make it possible for all of us to understand the burden of arthritis in Hawai`i.



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## Acknowledgement



We would like to thank the residents of the State of Hawai`i for participating in the Behavioral Risk Factor Surveillance System 2000. Their participation made this Arthritis report possible as well as assist the Department of Health in carrying out its mission of planning, assurance and assessment.

We also would like to thank Claire Hughes, PhD for her lead role in bringing the Hawai`i Arthritis Control Program into reality and a foresight in adding the arthritis module questions in the BRFSS 2000; Colleen Minami, MSN, Acting Branch Chief of Chronic Disease and Management Branch, Patrick Sonoda, Public Health Administrative Officer of Community Health Division, Barbara Yamashita, Chief of Community Health Division, Virginia Pressler, M.D., M.B.A., Deputy Director for Health Resources and Betty Wood, PhD, DOH epidemiologist for their moral support; (Lu)<sup>2</sup> Bagnol, MPH, Arthritis Control Program Project Coordinator for tirelessly working for the betterment of the health condition of the arthritic population and the program's Advisory Committee, **Florentina Reyes-Salvail, M.S.** for her lead in preparing and writing this report, **Ming Qiu Yu, PhD** for data processing including table preparation and graphs that is part of this report and **Xiaowu Lu, PhD** for making this report part of the web.

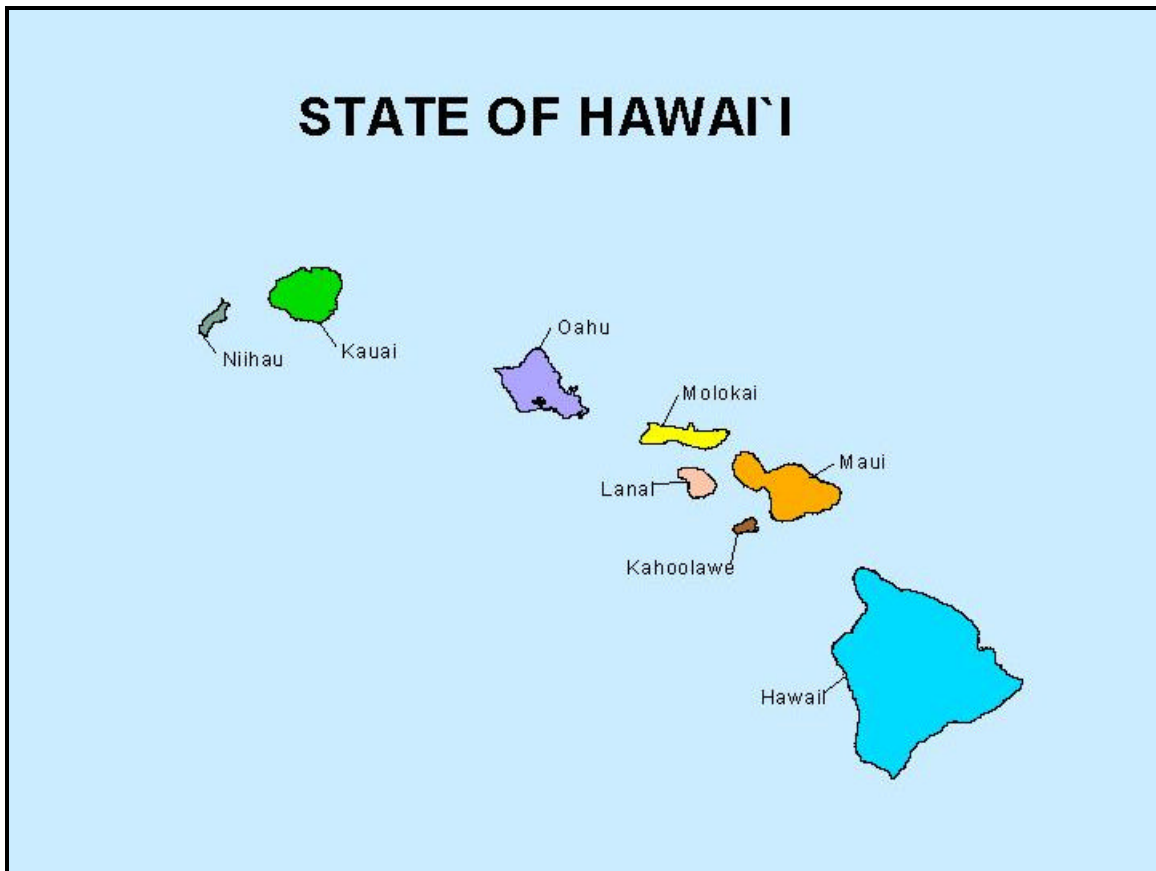


## Highlights of Arthritis in Hawai`i

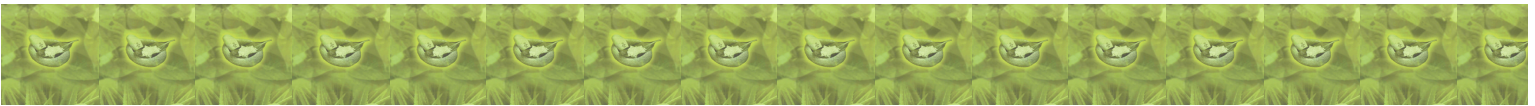
- |   |   |
|---|---|
| <ul style="list-style-type: none"> <li>➤ 23% or nearly 204,000 adults have arthritis             <ul style="list-style-type: none"> <li>○ 14% or about 124,000 were told by a doctor that they have arthritis.</li> <li>○ Nearly 39% of doctor diagnosed arthritic adults are being treated.</li> <li>○ Of the adults with doctor diagnosed arthritis, close to 49,500 or 5% manifest chronic joint pains in the past twelve months but half of these adults or approximately 24,500 are not currently being treated by a doctor for arthritis.</li> </ul> </li> <li>➤ Arthritis prevalence rate increases with age.</li> <li>➤ The females have higher prevalence rates than the males.</li> <li>➤ The Whites have the highest prevalence rate (26.7%) and the Hawaiians are a close second (24.7%) after age-adjustment.</li> <li>➤ There are socio-economic differences as indicated by education, employment and income.</li> <li>➤ Osteoarthritis is the most common type of arthritis. However, rheumatoid arthritis is very common among the Filipino population.</li> <li>➤ About 128,000 adults with arthritis also have other chronic conditions such as diabetes, asthma or being overweight.</li> </ul> | <ul style="list-style-type: none"> <li>➤ Adults with arthritis are just about the same as other adults in the consumption of fruits and vegetables measured in the BRFSS.</li> <li>➤ The percentage of arthritic adults who ever smoke is greater than for those without arthritis (53.3% vs. 41.1%).</li> <li>➤ Nearly 69,000 or 33% of arthritic adults indicated limitation of activities due to joint symptoms.</li> <li>➤ Adults with arthritis whose activities are limited due to chronic symptoms are more likely to be physically inactive (33%). On the other hand, those who indicated no limitation are just about the same as the non-arthritic adults in their level of physical inactivity (24.3% vs. 22.1%).</li> <li>➤ Arthritis affects also mental well being in addition to physical well being. Nearly 31% of the arthritic adults indicated that their mental or both mental and physical health was not good during the past 30 days.</li> <li>➤ Those with arthritis and joint pains are limited in their activities for almost two weeks in the past 30 days (13.5 mean days) in comparison to just about a week for those with no arthritis.</li> <li>➤ More than half of the arthritic adults are still employed (54%). However, about 5% arthritic adults or 9,700 are unable to work.</li> </ul> |
|---|---|

## Introduction

The State of Hawai`i has a total landmass of 6,425 square miles and extends approximately 1,523 miles northwest to southeast from the tiny coral atoll Kure Island down to Cape Kumukahi, the eastern most point of the island of Hawai`i. There are seven inhabited islands in the State. The islands are O`ahu also known as the county of Honolulu, Hawai`i, also known as the Big Island and is the Hawai`i county, Kaua`i and Ni`ihau known as the Kaua`i county and Maui, Lana`i and Moloka`i known as the Maui county. These islands can be reach only by air or boat. The islands are group into counties. According to the 2000 census data, the State has an estimated resident population of 1,211,537. Of this total, 72.3% reside in Honolulu county, 12.3% on Hawai`i county, 4.8% on Kaua`i county, and 10.6% in Maui county. Each of these islands is endowed



with a magnificent, natural environment - clear ocean waters, sandy beaches, unique plants and animal life, and majestic mountains that rise abruptly from the sea. The State is also favored with a mild tropical weather of 60 - 90 degrees all year long. This weather is interspersed at times with tropical hurricanes and changes in trade winds directions. With all these attributes, the State is a



paradise in the Pacific attracting many nationalities from all over the world some for a visit but for others to stay. Many of the nationalities that chose to stay or their children marry with other ethnic nationalities or native Hawaiian. According to the US 2000 Census, more than one in five (21.4%) residents are of mixed ancestry. Of this mix group a large portion are Part Hawaiians. The remaining unmixed proportion (78.6%) consist largely of Caucasian at 24.3%, Japanese at 16.7%, Filipino at 14.1%, Hawaiian at 6.6%, Chinese at 4.7% and other groups of different ethnicities too numerous to mention although small in numbers comprising 12.2%. These diverse cultures brings with them variety of languages and or dialects, religions, cultural practices and beliefs about health and lifestyles.

In sum, the State of Hawai`i's natural geographical beauty and location, natural environment and multi-ethnic residents have a profound impact on the growth of its population and also health. The onset of and severity of chronic health conditions is associated with growing old. The population of the State is aging as reflected in the following table.

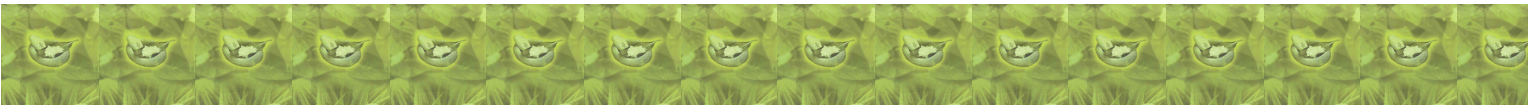
<b>Aging Population Indicator</b>	<b>Census Years, State of Hawai`i</b>			
	1970	1980	1990	2000
Median age in years	25.0	28.3	32.5	35.3
Number age 65 years old and over	43,983	76,150	123,727	160,601
Percent 65 years old and over	5.7	7.9	11.2	13.3
<b>State Total Population</b>	769,913	964,691	1,108,229	1,211,537

As reflected from the preceding table, the median age of the population rose by over ten years from 25 years in 1970 to 35.3 by year 2000. Similarly, the population age 65 years and over grew in absolute numbers and as a percentage of the total State population. The State of Hawai`i must be prepared to face this aging population and the associated health conditions and burdens aging may bring. One of these chronic health conditions is arthritis. The purpose of this report is to give a vivid picture of the state of arthritis in the State in terms of

- prevalence rates by socio-economic-demographic variables.
- most common types of doctor diagnosed arthritis by ethnicity.
- comparison of the population with arthritis in terms of healthful behaviors with those without arthritis







- other existing chronic conditions and
- assessing the impact or effects of arthritis indirectly by comparison with non-arthritic population

All the data and information presented in this report is from the State of Hawai'i Behavioral Risk Factor Surveillance System year 2000 (BRFSS 2000). The Behavioral Risk Factor Surveillance System (BRFSS) is a federally funded surveillance program of the Center for Disease Control (CDC). The State of Hawai'i has been participating in this surveillance since the late 1980's. The survey is state-based random-digit-dialed telephone survey of the non-institutionalized civilian population with respondent adults being aged  $\geq 18$  years. The BRFSS is designed to monitor the prevalence of the major behavioral risks among adults associated with premature morbidity and mortality. In year 2000, the State of Hawai'i Department of Health (DOH) included the recommended BRFSS/CDC arthritis module questions to provide initial data regarding the state of arthritis in the State. The results from these arthritis questions as well as the relationship of the results of these questions with other relevant BRFSS questions are presented in this report. Most of the charts presented in the report are not age adjusted. Age-adjusted results are mentioned in the narrative only when there is a change in patterns. The age-adjusted tables as well as all the tables relating to the charts or figures presented in this report and the arthritis module questions can be found in the appendices.



## Arthritis Defined

In this report the health condition called arthritis is derived from the three questions asked in year 2000 Behavioral Risk Factor Surveillance System (BRFSS), namely:

1. During the past 12 months, have you had pain, aching, stiffness or swelling in or around a joint?
  - a. Yes
  - b. No **Go to 3**
  
2. Were these symptoms present on most days for at least one month?
  - a. Yes
  - b. No
  
3. Have you ever been told by a doctor that you have arthritis?
  - a. Yes
  - b. No **Go to Other State-added Questions**

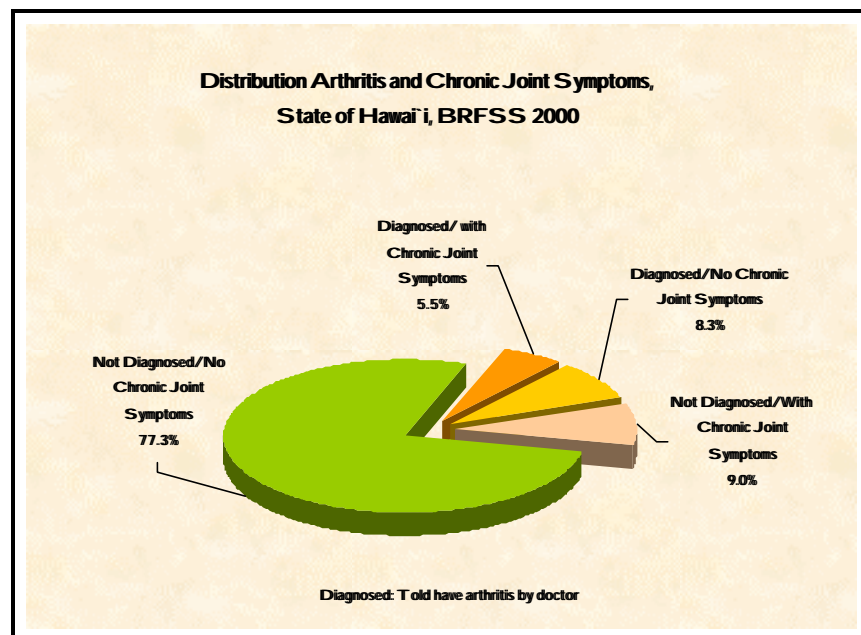
Thus, an adult who responded that he or she have pain or stiffness that are present for most of the days of the month or who have been told by a doctor that he or she have arthritis is considered to have arthritis in this report. This broad arthritis definition will be used throughout the report unless otherwise stated.

## Arthritis Prevalence

### State

Close to 23% of adults have arthritis (22.7%). This translates to about 204,000 arthritic adults.

About 124,000 or 14% reported being told by a doctor that they have arthritis. Of this number, nearly 49,500 or 5% manifest chronic joint pains in the past twelve months.

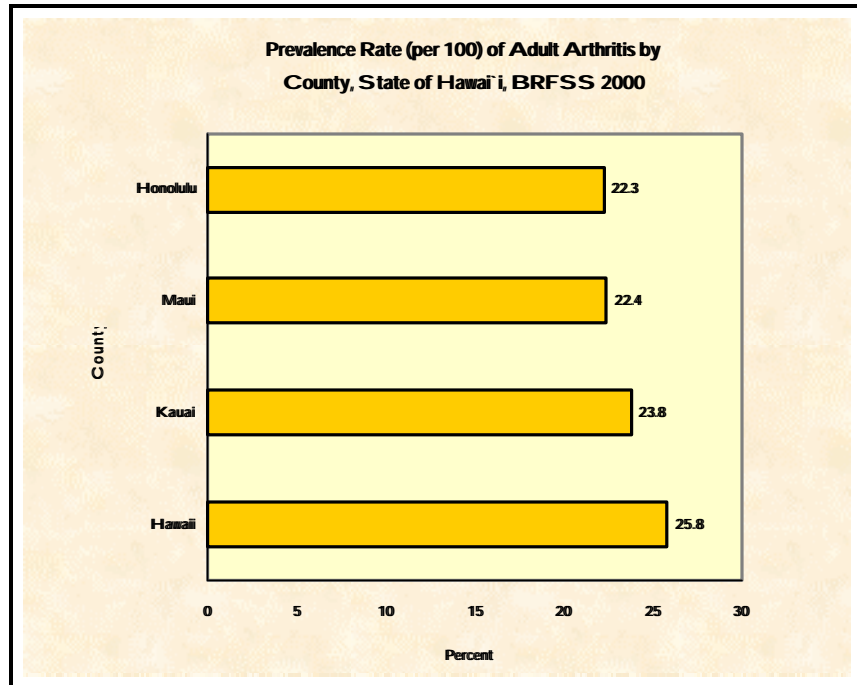


## ***Geographic and Socio-Demographic Arthritis Prevalence***

Anyone can have an arthritic condition. However, there are subgroups of the population who are more prone to have arthritis than others.

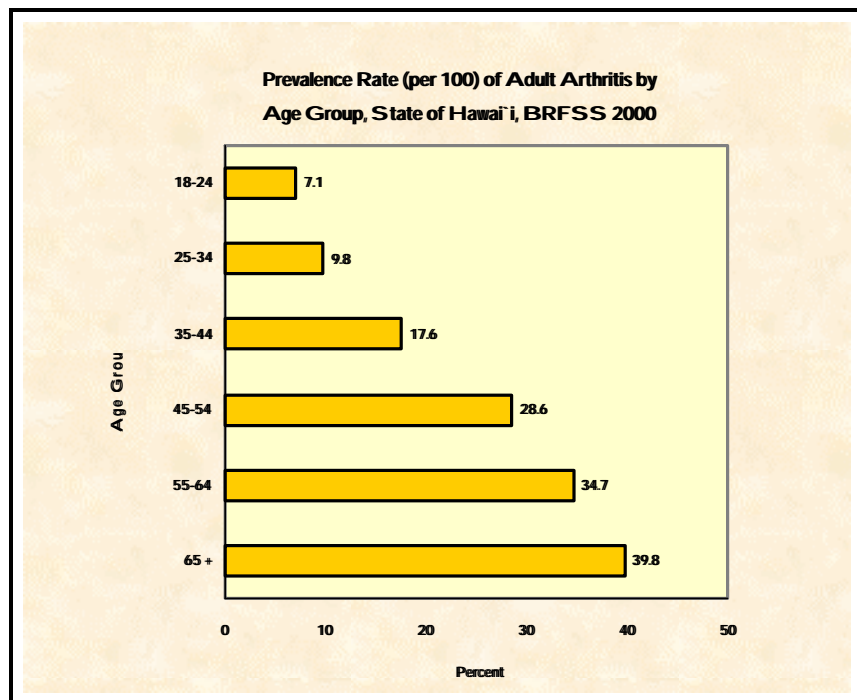
### **County Prevalence**

The prevalence of arthritis is not associated with the county of residence or geographic location. Although, the county of Hawai'i appears to have the highest prevalence rate, this rate is not much different when compared to the other three remaining counties.



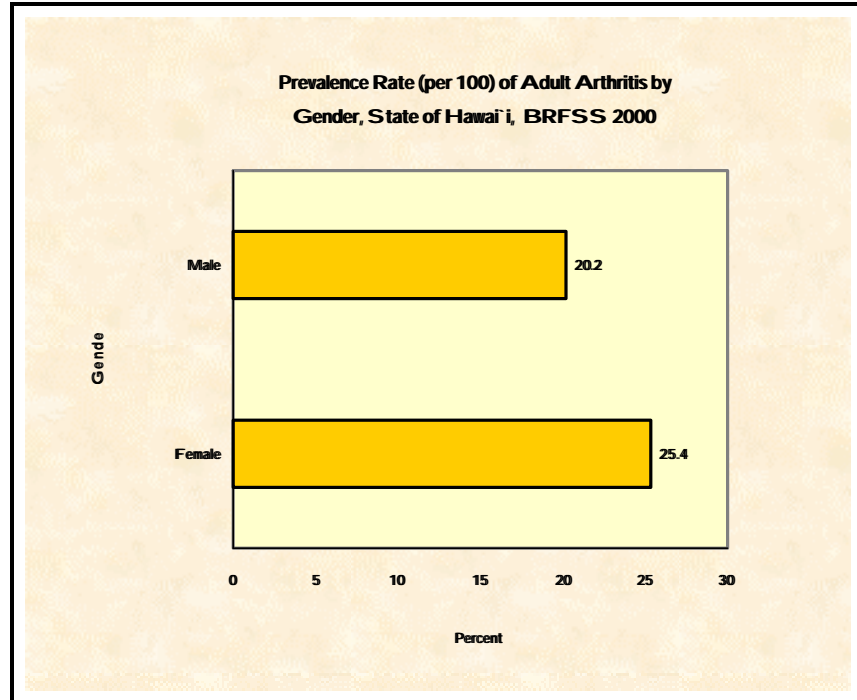
### **Age**

Individuals are likely to be affected by arthritis as they grow older and this relationship is quite significant. In Hawai'i, about one in ten residents who are 25 to 34 years old are arthritic (9.8%). That number increases four times by retirement age. About four in ten residents who are 65 years old and over are arthritic (39.8%).



## Gender

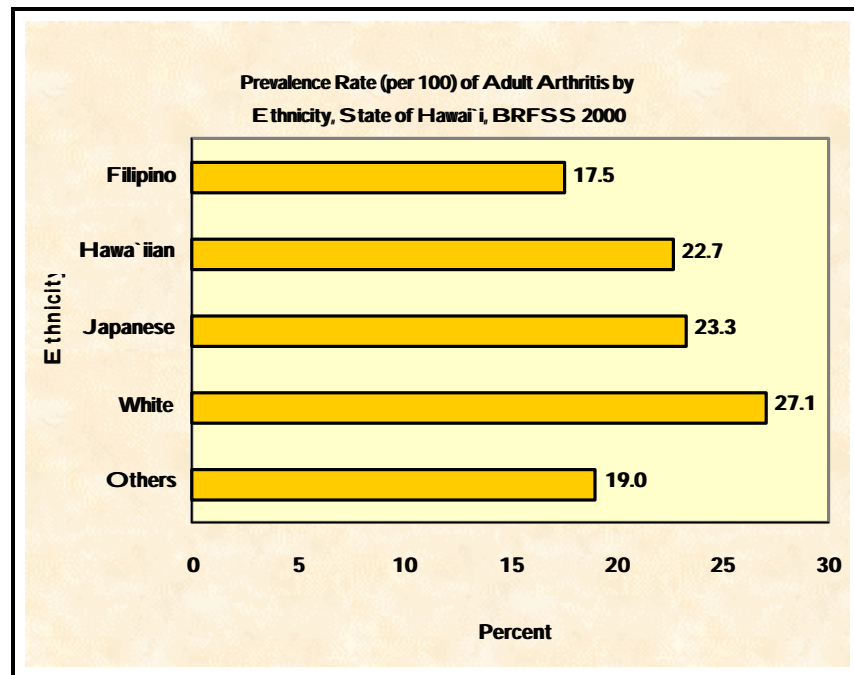
Gender is also significantly associated with the presence of arthritis. Women are more likely to be arthritic than men. One in every four women residents has arthritis in contrast to one in every five men.



## Ethnicity

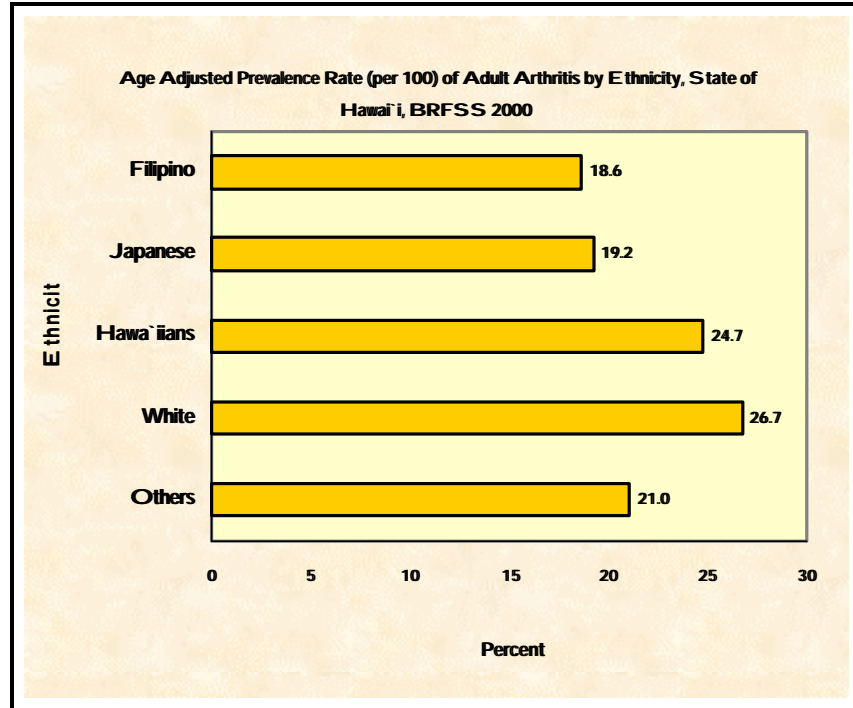
Ethnic origin is also significantly related to presence of arthritis. The Filipinos has the lowest arthritis rate, in contrast, the Whites has the highest rate. This pattern persists even when the rates are age adjusted\* (shown in the next chart).

Hawaiians and the Japanese prevalence rate is about the same as shown in the opposite chart.



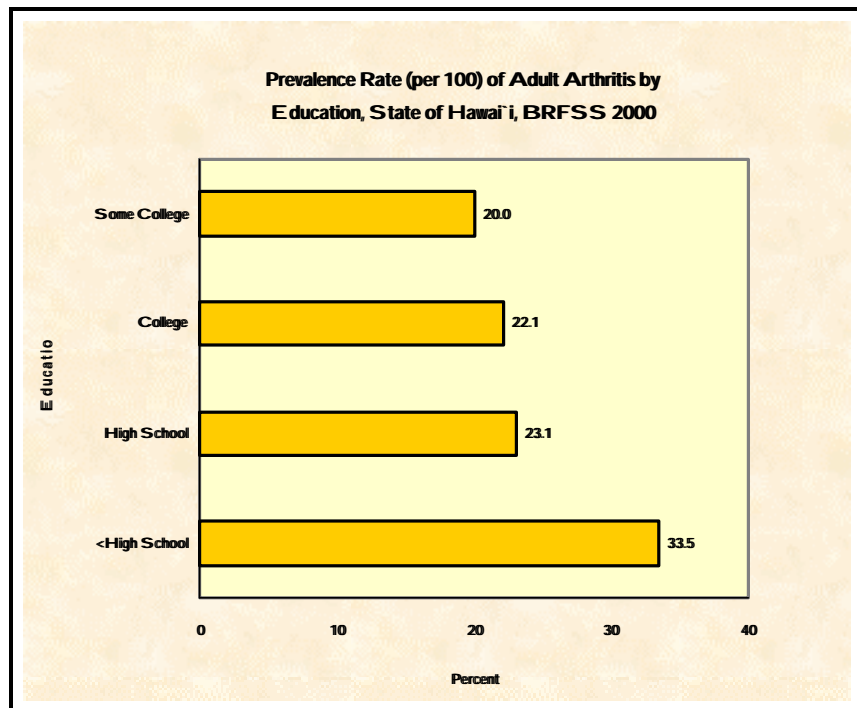
However, with age adjustment\* as shown in the opposite chart, the disparity between these two ethnic groups widens (Hawaiian arthritis rate 24.7% vs. the Japanese rate 19.2%).

\*Age adjustment assumes that all the ethnic groups have the same age distribution based on the State of Hawai'i total age population distribution of census year 2000 as standard.



### Education

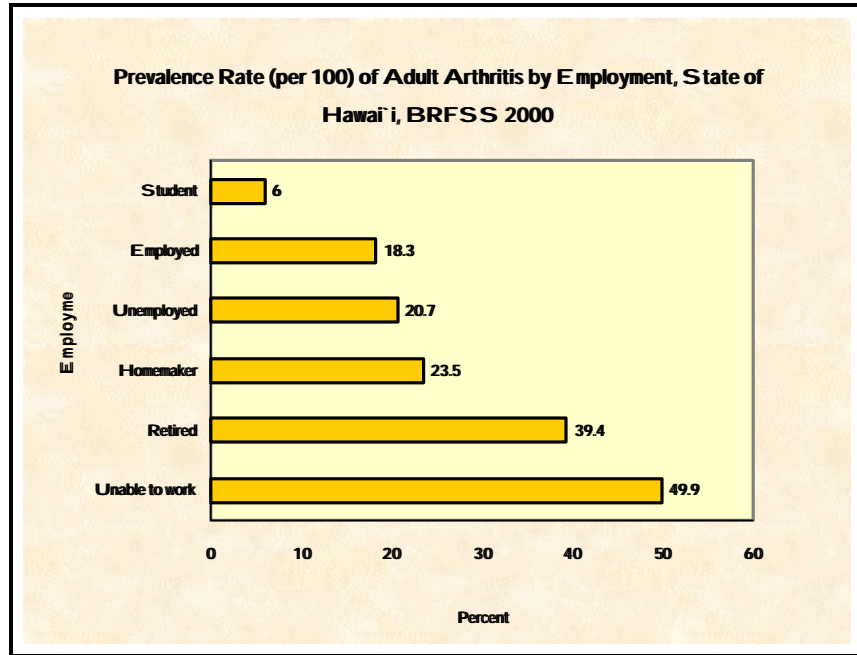
About one in three adults who did not graduate from high school have arthritis. This group of individuals has the highest arthritis rate. The 33.5% when adjusted for age drops to 28.5% indicative that these individuals are older than the others with higher education. However, the rate for this non high school graduates remains the highest.



## Employment

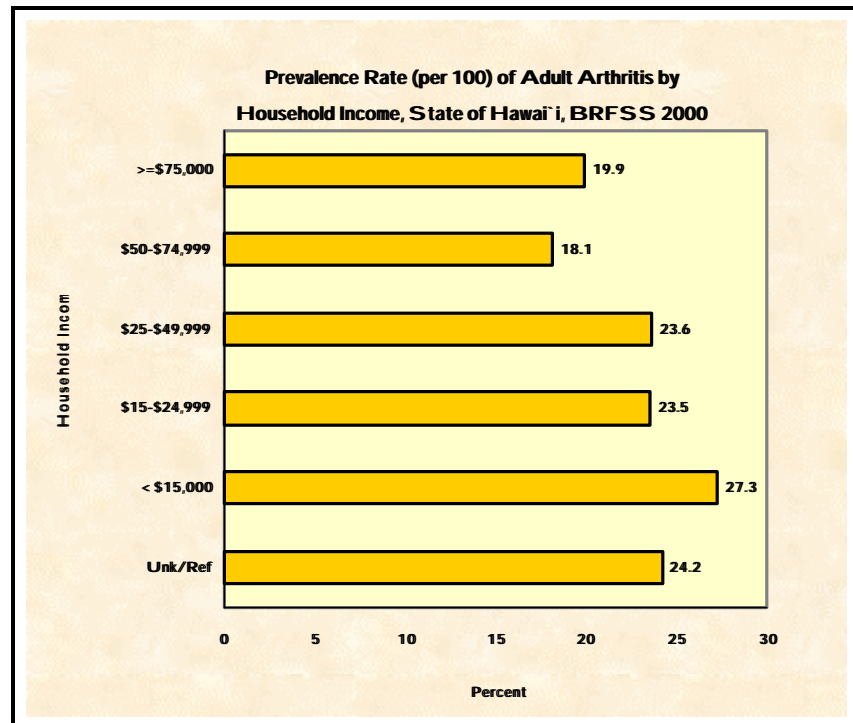
The prevalence rate of arthritis is highest among those unable to work, close to 50%, which translates to about 9,700 adults. With age adjustment, the rate for this group remains the highest at 46.5%. In contrast, the arthritis prevalence rate for those who are gainfully employed remained low at 18% range even with age adjustment.

The retired prevalence rate drops from 39% to 24% with age adjustment. In addition, the age adjusted rate for the unemployed and the retired are about the same.



## Income

Those with income \$50,000 or higher has lower arthritis prevalence rate. In contrast, those with income below \$50,000 have higher rate. Note that the adults with income below \$5,000 have the highest rate and remain so even with age adjustment.

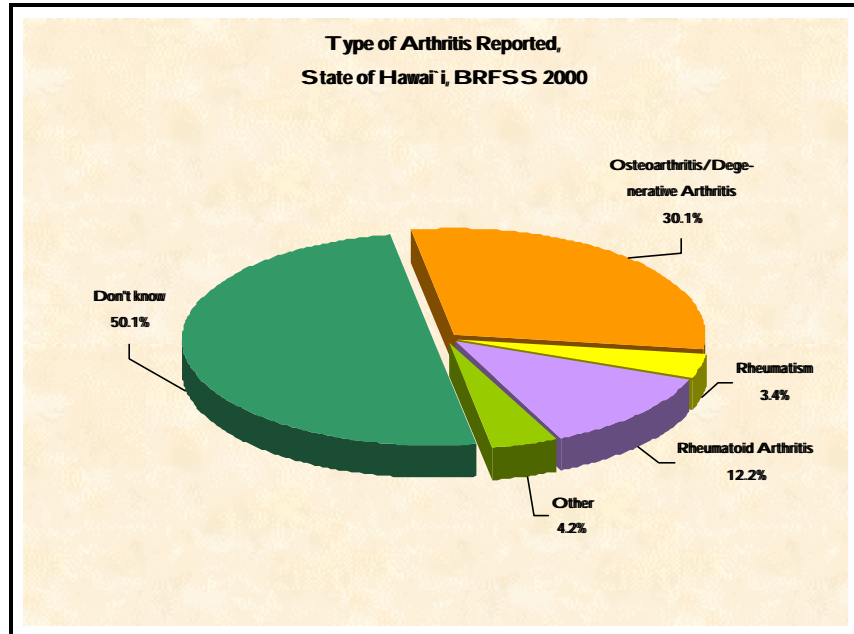


## Those who were diagnosed

### Types of Arthritis

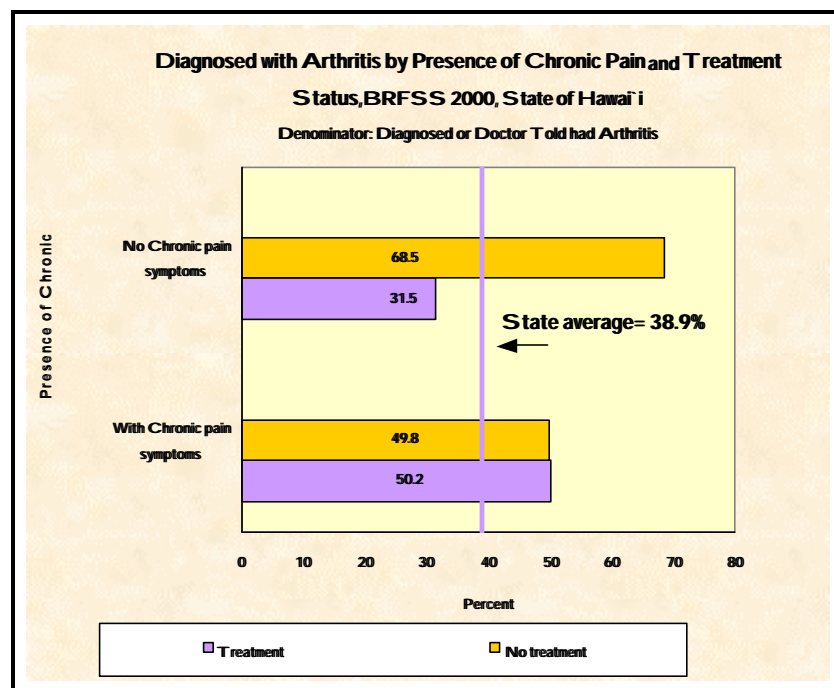
One in every two Hawai'i arthritic residents do not know the type of their arthritis.

The most common type of arthritis in Hawai'i is osteoarthritis.



### Doctor is currently treating arthritis

About two out of every five adults with diagnosed arthritis are currently being treated (38.9%). Adults with no chronic pain symptoms are less likely to be currently being treated for arthritis (68.5%) than those with chronic pain symptoms (68.5%) than those with chronic pain symptoms (50.2%). However, almost half of those with chronic pains are not currently being treated also.

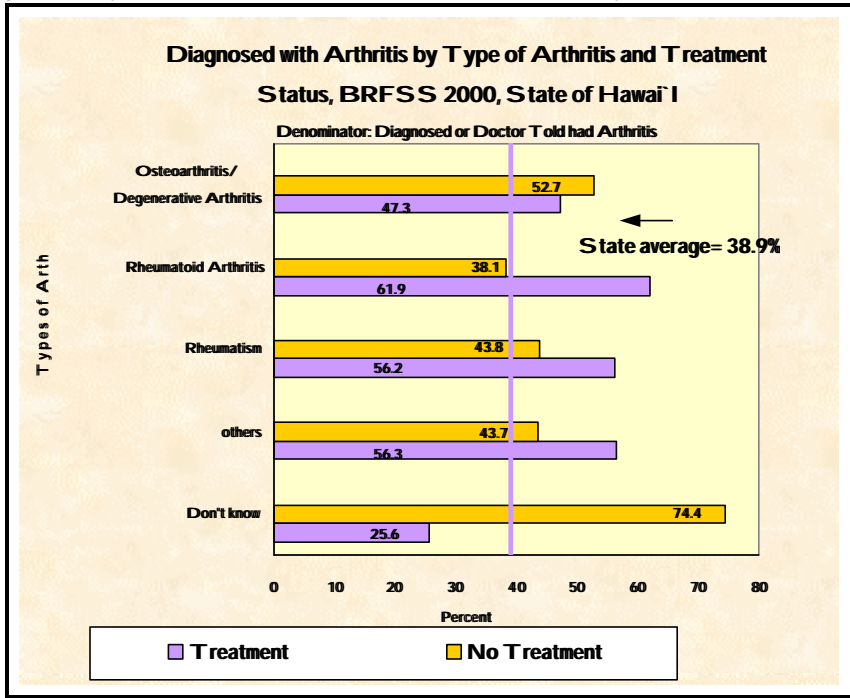


This translates to about 24,500 arthritic adults with chronic pains that are not currently being treated by a doctor. Of these adults nearly 15,700 have limited activities because of this joint pain symptoms. It appears that medical cost or insurance is not related to treatment. The proportions

of adults with health coverage among those currently being treated for arthritis and those who are not being treated are about the same (96.9% vs. 97.3%). Similarly, the proportions who said that there was a time during the last 12 months that they needed to see a doctor but could not because of medical cost is about the same (6.5% vs. 6.8%). The reasons why the adults with arthritis are not currently being treated by a doctor should be explored. It could be that these adults are receiving or seeking alternative non-medical treatment such as acupuncture, herbs, Native Hawaiian medicine, massage therapy, etc. which is a common practice for many Hawai'i residents.

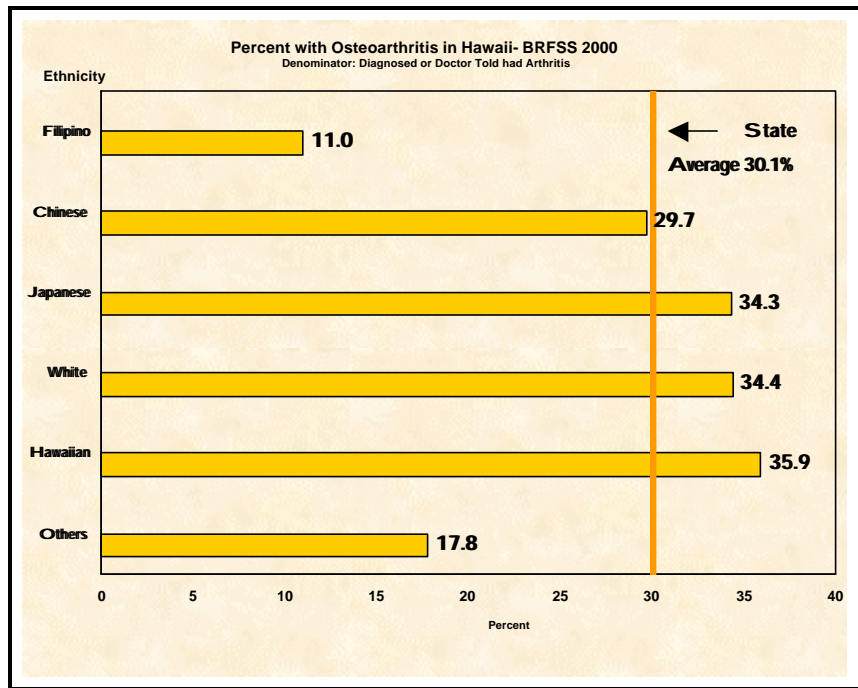
**Current Treatment & Types of arthritis**

Adults who know the type of their arthritis are more likely to receive treatment. Nearly 25% of arthritic adults who do not know what type of arthritis they have are receiving treatment for their condition. In contrast, more than half of those with rheumatism, rheumatoid arthritis and other forms of arthritis are currently being treated.



**Type of Arthritis & Ethnic Differences**

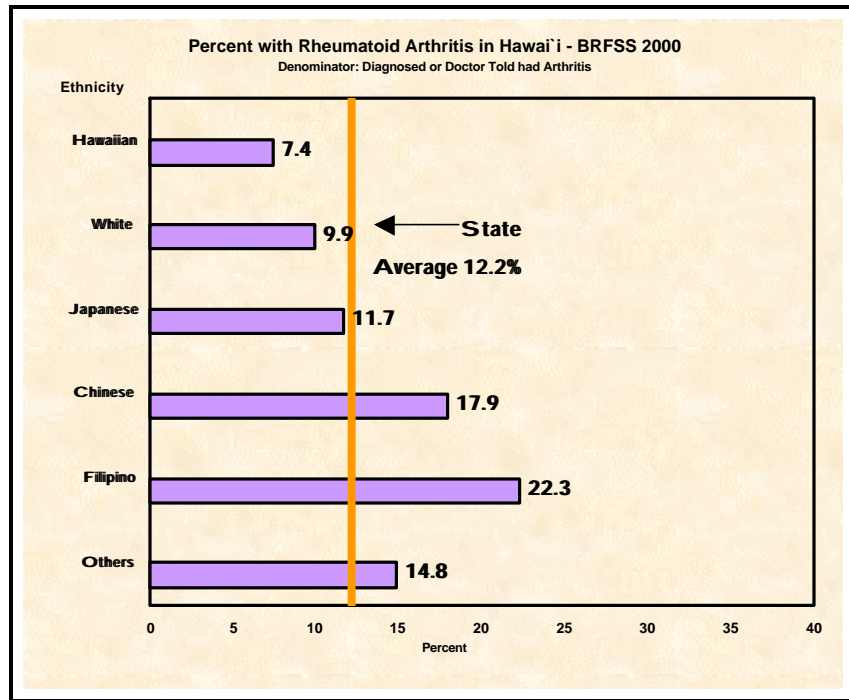
It is interesting to note that the prevalence of different types of arthritis varies with ethnic groups. Osteoarthritis is the most common form of arthritis. There are hardly any differences in osteoarthritis rates among the Japanese, Whites and Hawaiians. It is also quite common among the Chinese.





The Chinese osteoarthritis rate is very close to the State's rate (29.7% vs. 30.1%). In contrast, about one in ten arthritic Filipinos has osteoarthritis (11%). This pattern is reverse when looking at rheumatoid arthritis prevalence.

The Chinese and the Filipinos have rheumatoid arthritis rate higher than the State's rate. However, the Filipinos have the highest prevalence rate for rheumatoid arthritis. More than one in five diagnosed arthritic Filipinos has rheumatoid arthritis (22.3%).

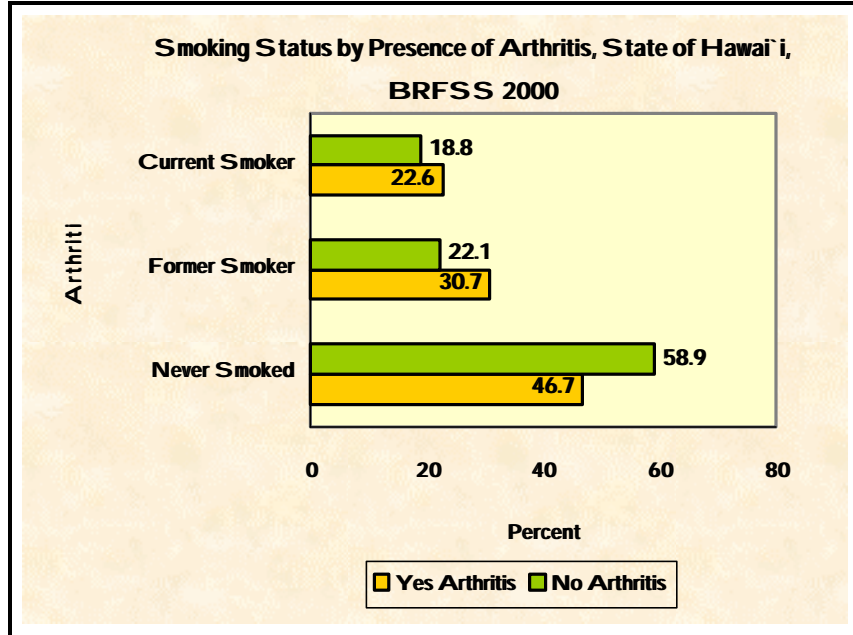


# Arthritis and Healthful Behaviors

The succeeding charts compares the behavior of adults with arthritis and without arthritis to better understand individuals with arthritis and determine appropriate outreach strategy.

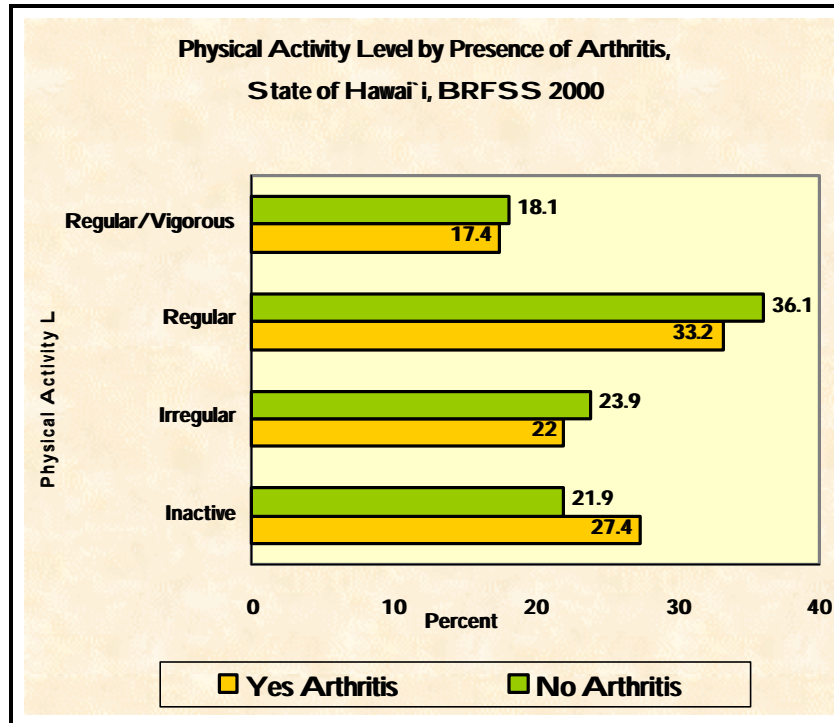
## Smoking

Close to 59% of non-arthritic adults never smoked versus 47% of adults with arthritis. It is comforting to note that many of the arthritic sufferers have quit smoking (former smokers). However, the proportion currently smoking is still higher than non-arthritic adults (22.6% vs. 18.8%).



## Physical Activity

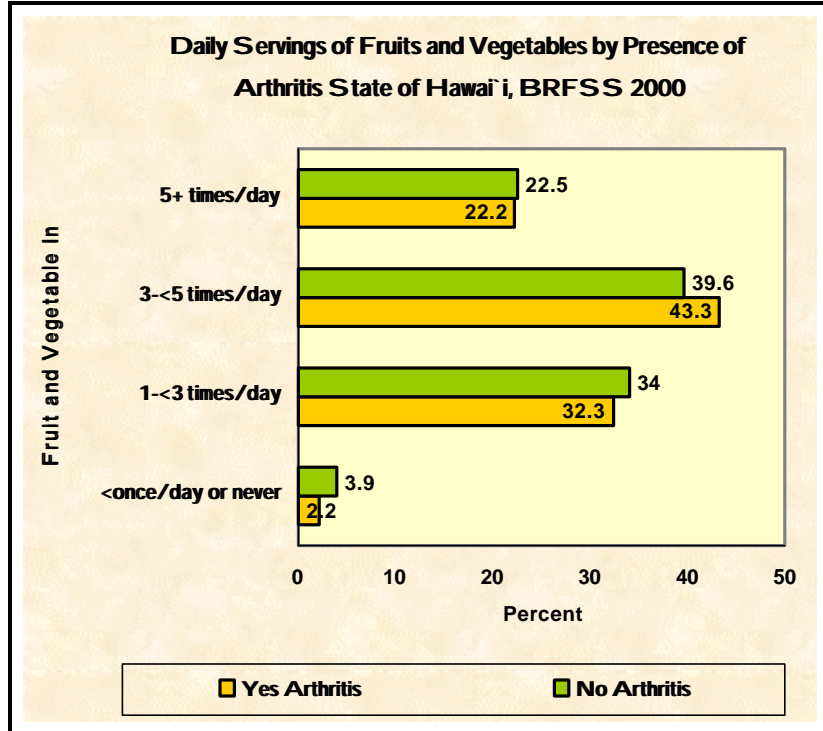
More than one in five arthritic sufferers lead an inactive lifestyle compared to those without arthritis (27.4% vs. 21.9%). However, it is comforting to note that about one in two of these arthritic adults do regular to regular and vigorous physical activity.



## Fruits and Vegetables

Arthritic adults are no different from non-arthritic adults in consumption of fruits and vegetables as listed from the BRFSS questions. However, the specific type of vegetables like eggplant or tomatoes or food items that may exacerbate the arthritis symptoms such as internal organs or tripe which are popular among several ethnic groups in Hawai`i were not asked in the BRFSS. The

inclusion of questions regarding food that may trigger arthritic symptoms should be included to better assessed the diet of arthritic individuals.

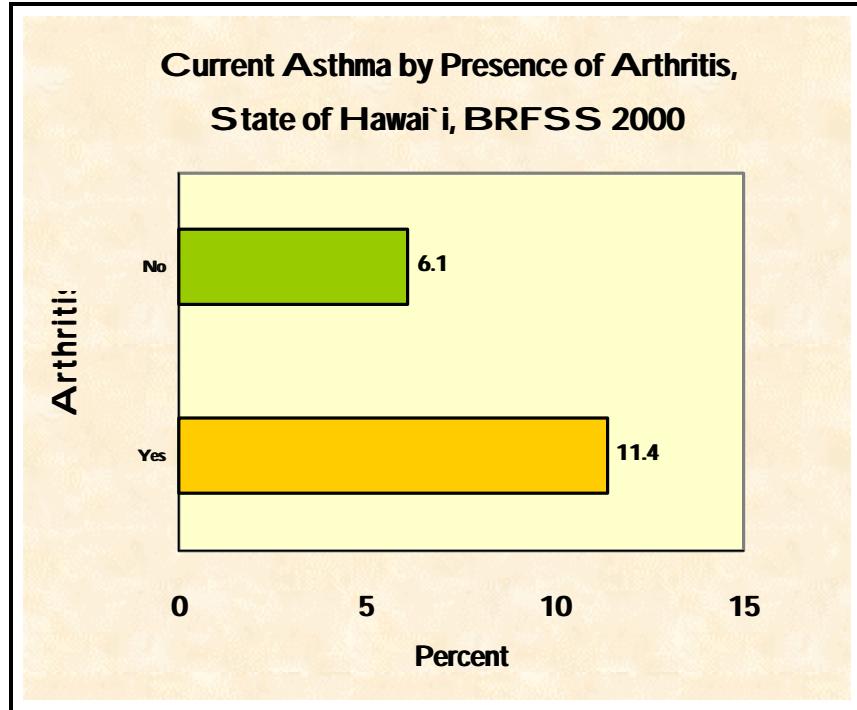


## Arthritis and Other Chronic Conditions

Adults with arthritis may have other chronic conditions. The BRFSS 2000 have information on three chronic conditions namely current asthma, diabetes and overweight. Nearly 14% adults or 128,000 have arthritis and at least have one of these conditions. The association is reflected in Figures

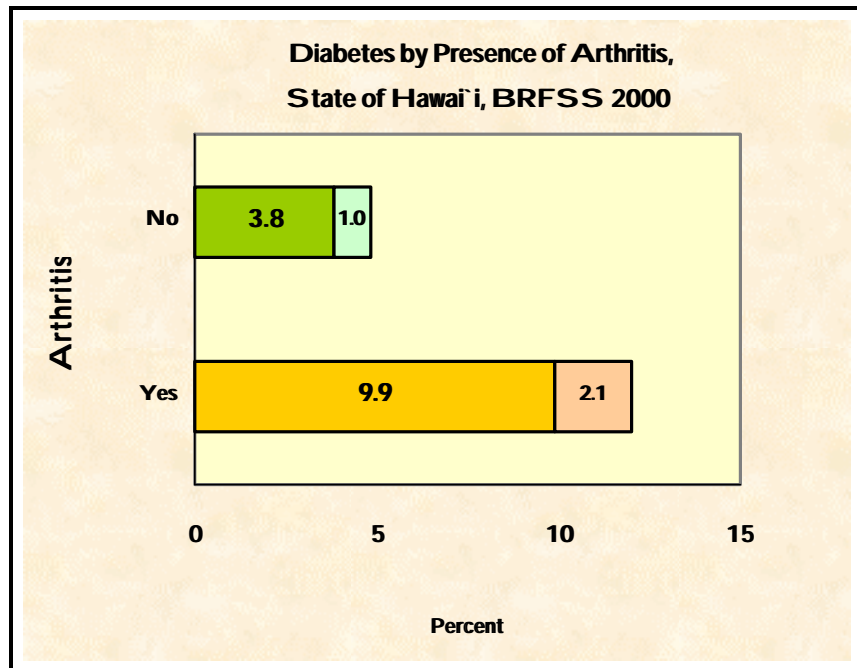
### Asthma

Nearly 11% adults with arthritis also have current asthma. In contrast, only about 6% of adults without arthritis have current asthma.



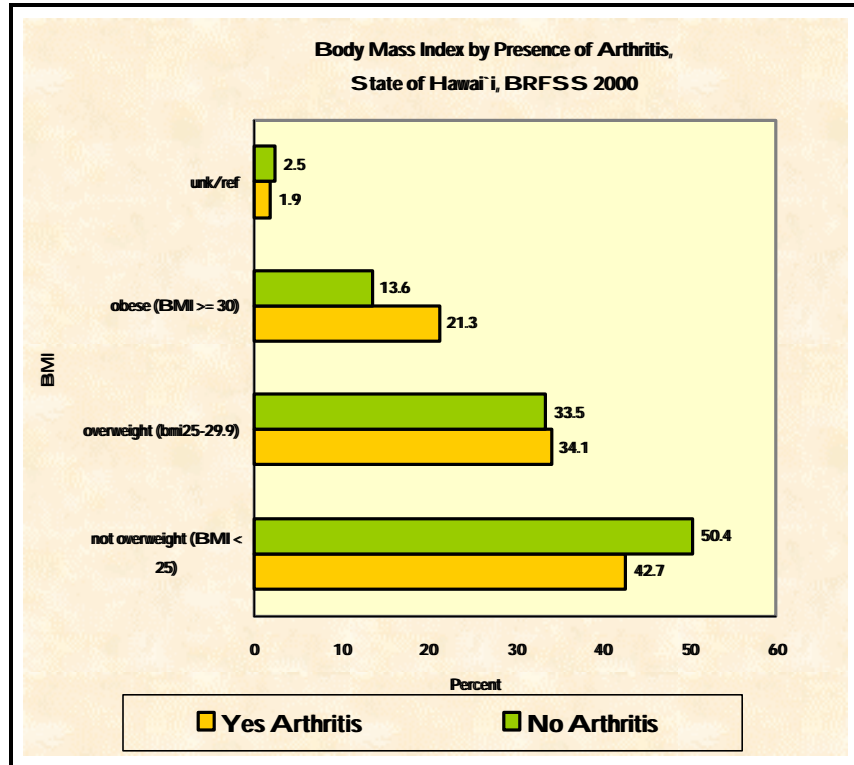
### Diabetes

Among adults with arthritis close to 10% have diabetes and another 2% have diabetes during pregnancy. This percentage is more than double those without arthritis (3.8% and 1% diabetes during pregnancy respectively).



## Overweight and Obese

As can be seen in the opposite figure, 50% of adults without arthritis are not overweight versus 43% of the arthritic adults. The arthritic adults who are overweight are more likely to be obese compared to the non-arthritic adults (21.3% vs. 13.6% respectively).



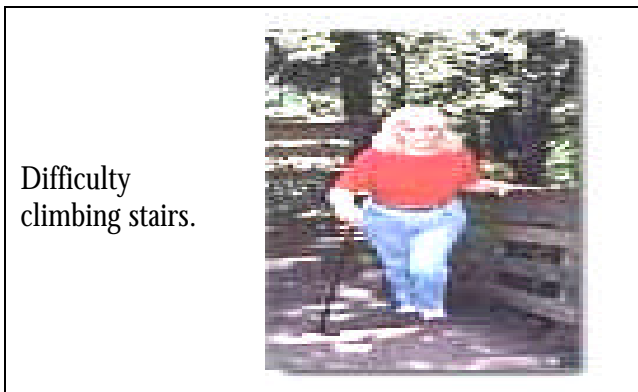
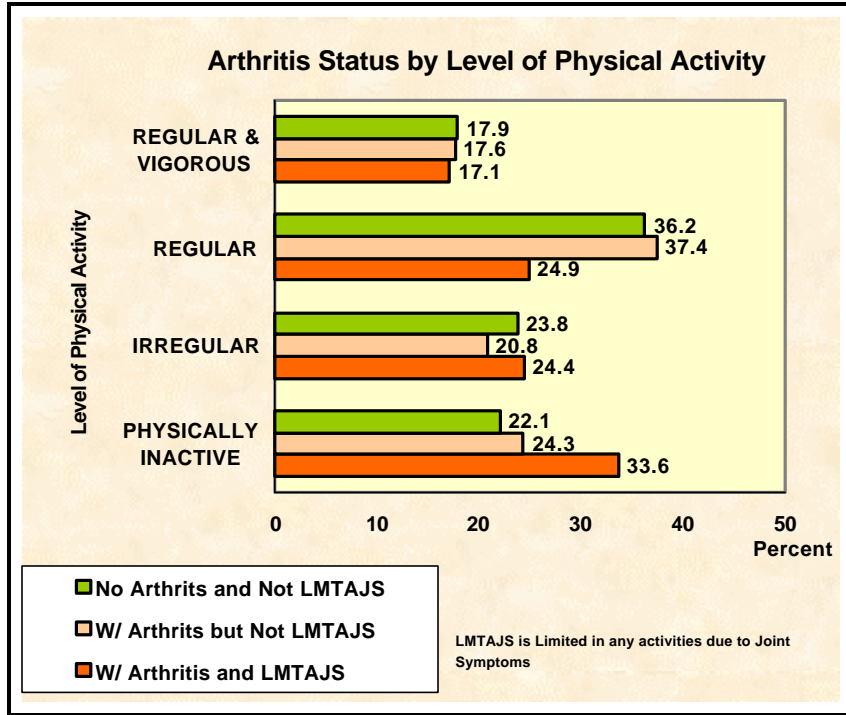
# Arthritis Impact and effects

The disabling effect of arthritis is manifested in not carrying out usual activities or being limited in the amount of work done. This is particularly true for those who suffer from joint symptoms. Nearly 69,000 arthritic adult residents indicated limitation of activities due to joint symptoms (LMTAJS). The succeeding charts illustrate the impact of arthritis on physical activities.

## ...on Physical Activities

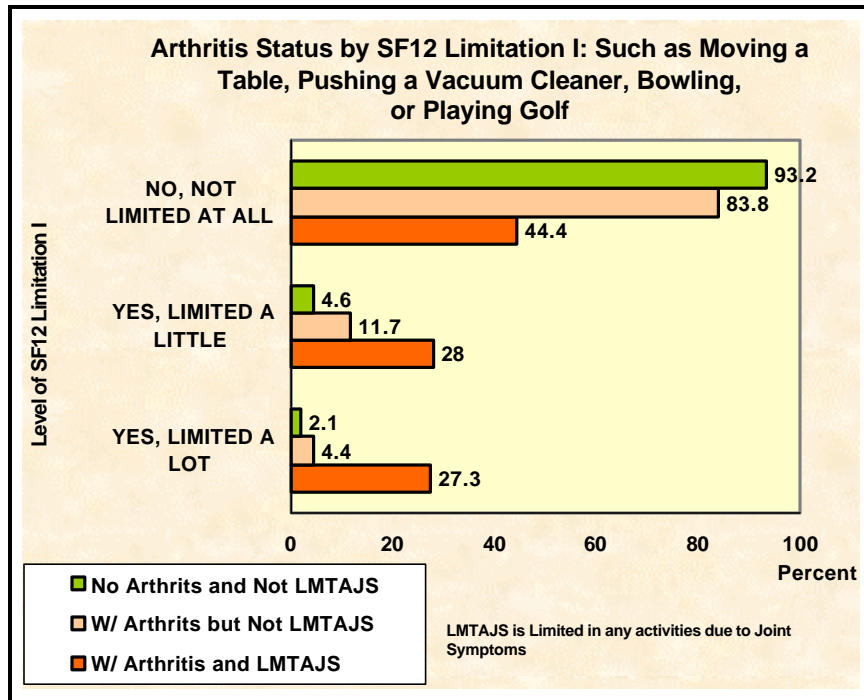
### Not able to do physical activity

The opposite chart and succeeding charts are comparisons of physical activity measures by arthritis status. Physical inactivity for the arthritic adults who indicated that their chronic joint symptoms limited them in their activities is significantly higher (33.6%) than the group with no arthritis (22.1%) or with arthritis but do not have joint symptoms as reason for activity limitation (24.3%). Those with no arthritis and those with arthritis but are not limited in any activities due to joint symptoms (LMTAJS) are not significantly different from each other in their level of physical activity.



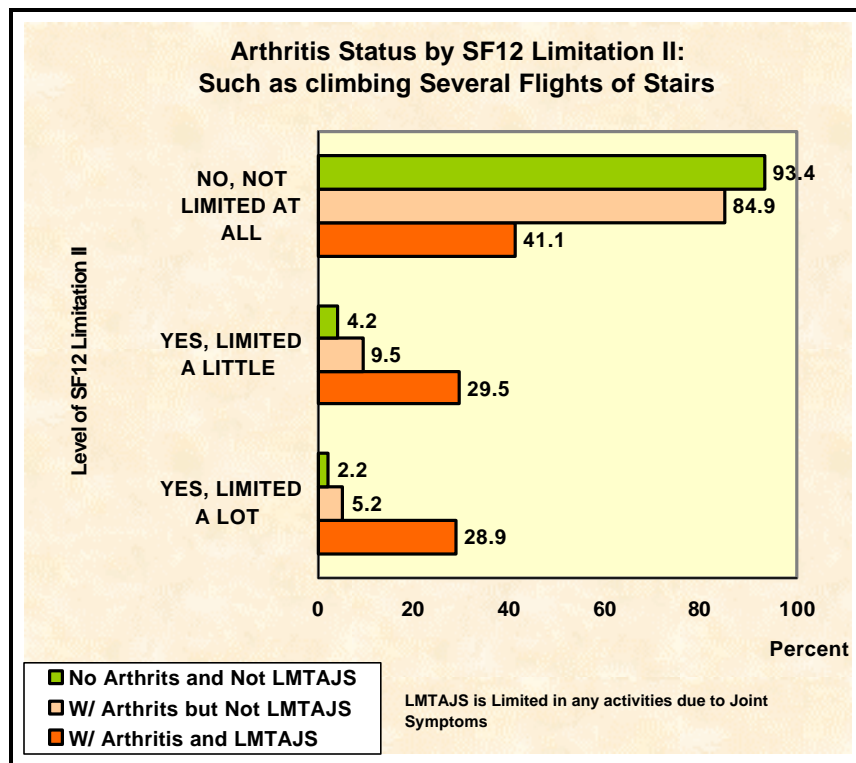
### Limited in doing moderate activities

About 9 out of 20 adults with arthritis and reported that they are limited in doing any kind of activities due to joint symptoms can do moderate activities (44.4%). A few of the adults with arthritis but not LMTAJS also cannot carryout moderate activities. This group of adults may have other health conditions in addition to arthritis.



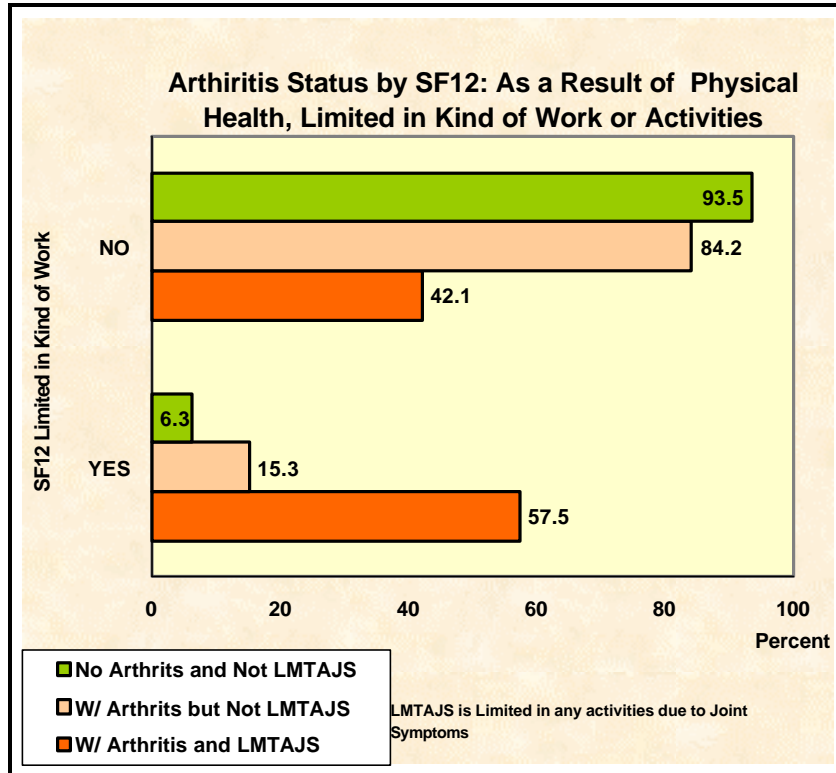
### Limited in climbing several flights of stairs

Arthritic adults with joint symptoms as reason for limitation are also having difficulty climbing several flights of stairs. Among those with joint symptoms, only 41% can climb several flights of stairs compare to those with no arthritis or with arthritis but without joint symptoms as limiting factor for doing any activity (93.4% and 84.9%).



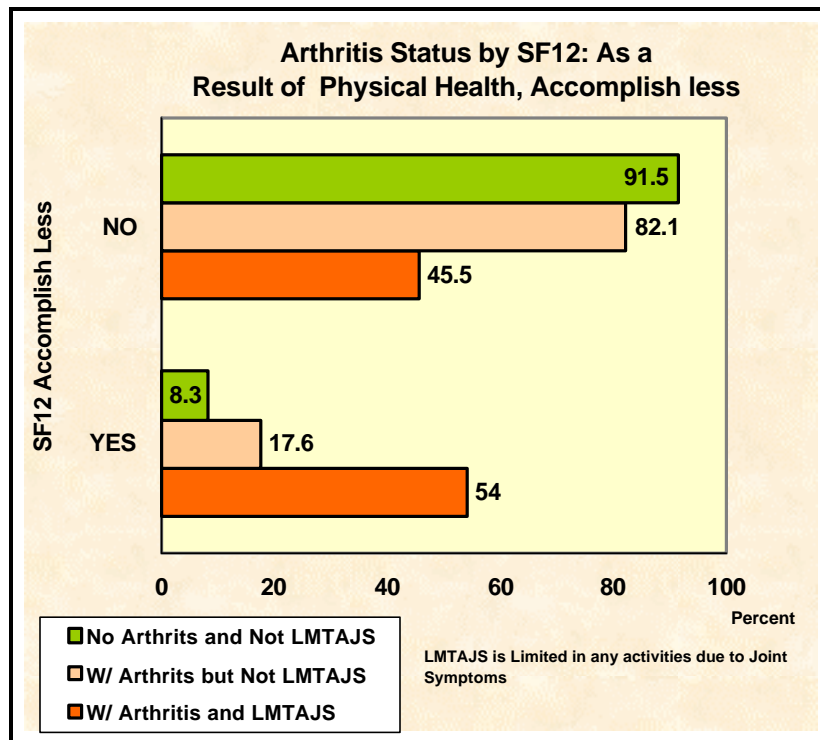
**During the past 4 weeks limited in the kind of work or activities because of physical health**

More than half of arthritic adults who are LMTAJS (57.5%) are more than three times more likely to be limited in the amount or kind of work or activities that they do than those who do not have arthritis (6.3%) or without joint symptoms as reason for activity limitation (15.3%).



**During the past 4 weeks accomplished less regular work due to physical health**

About half of those with arthritis and indicated that joint symptoms limited them in any way in any activities (54%) are likely to accomplish less regular work. In contrast, about 8% can accomplish less regular work among those who do not have arthritis or 18% for adults with arthritis but no joint symptoms as reason for activity limitation.

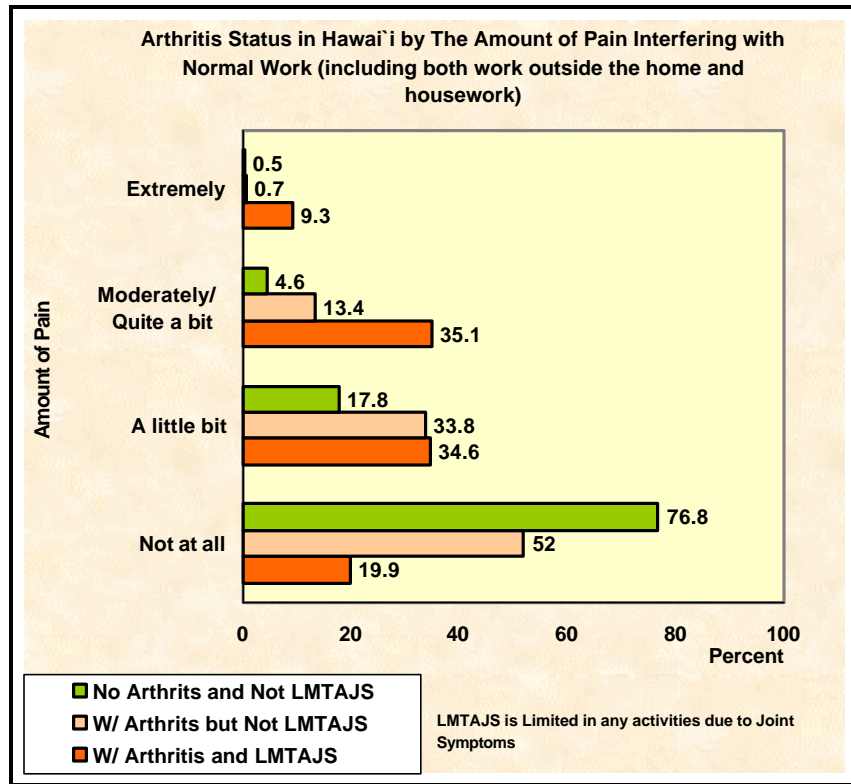




**During the past 4 weeks how much did pain interfere with normal work**

The adults with arthritis are more likely to experience pain as interfering with their normal work compare to those without arthritis. This is even more heightened when the arthritic adults were limited in their activities due to joint symptoms as shown in the opposite chart. Nearly 77% in the non-arthritic adults indicated that pain

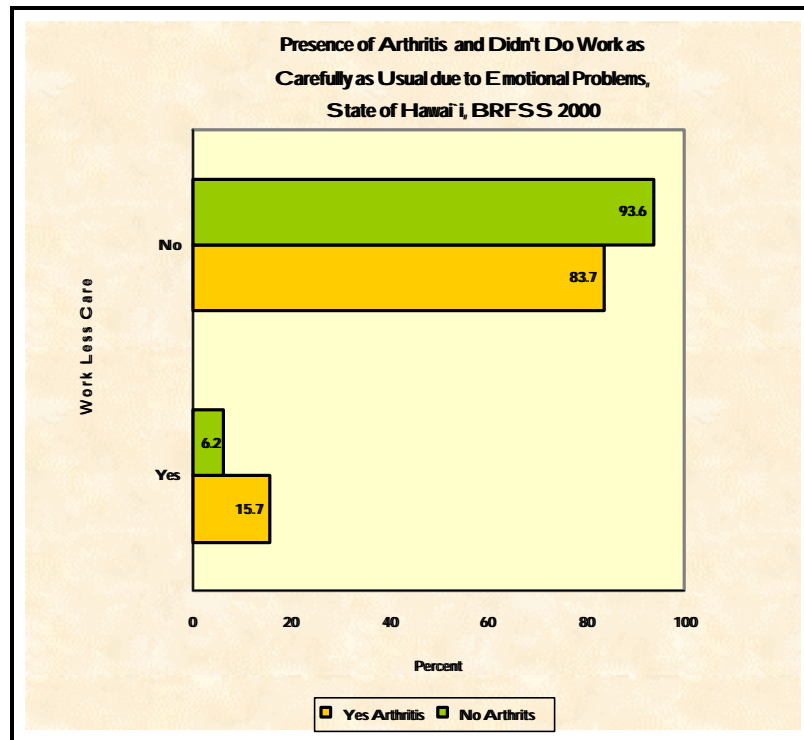
'not at all' interfere in their normal work. In contrast, adults with arthritis have a much lower proportion, 52% for those with no joint symptoms and about 20% for arthritic adults with activity limitations due to joint symptoms. More than one in three adults in this group (35.1%) expressed moderate to quite a bit interference of pain in their normal work and another 9% indicated the interference is extreme. These are much higher proportions than those without joint symptoms.



**...on Mental or Emotional Health**

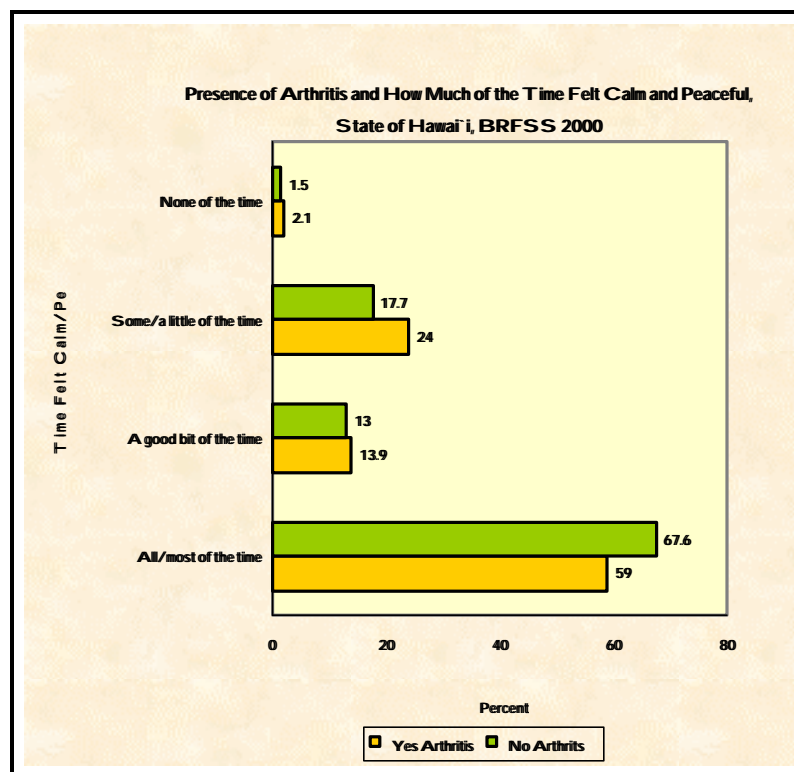
**During the past 4 weeks.....  
Did not do work as carefully as usual due to emotional problems**

Although not a common occurrence, the proportion of adults with arthritis self-reporting that they did not do work as carefully as usual due to emotional health is higher compare to those with no arthritis (15.7% vs. 6.2%).



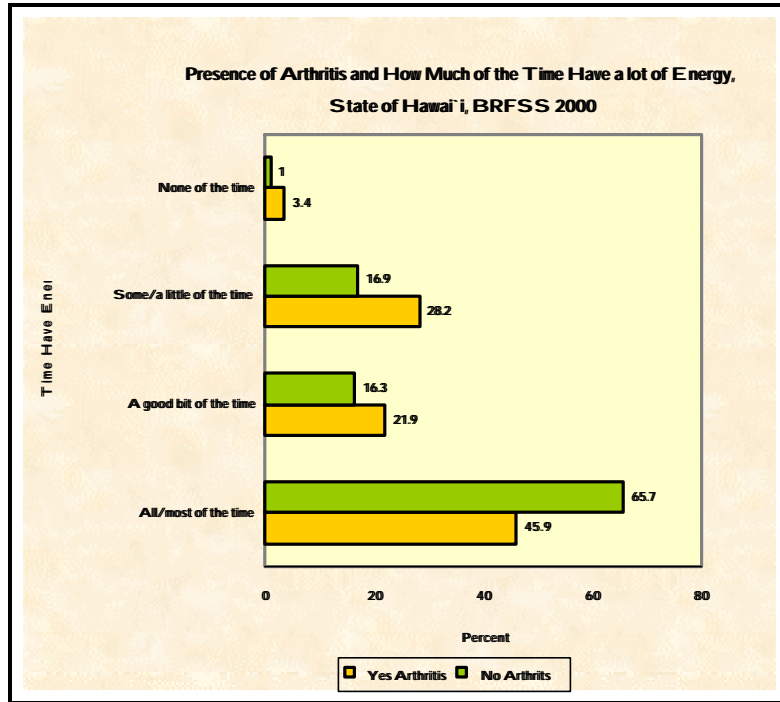
**During the past 4 weeks.....  
How much of the time you felt calm and peaceful**

The proportion of adults feeling calm and peaceful most of the time during the past four weeks is higher among those without arthritis (67.6%) compare to those with arthritis (59%).



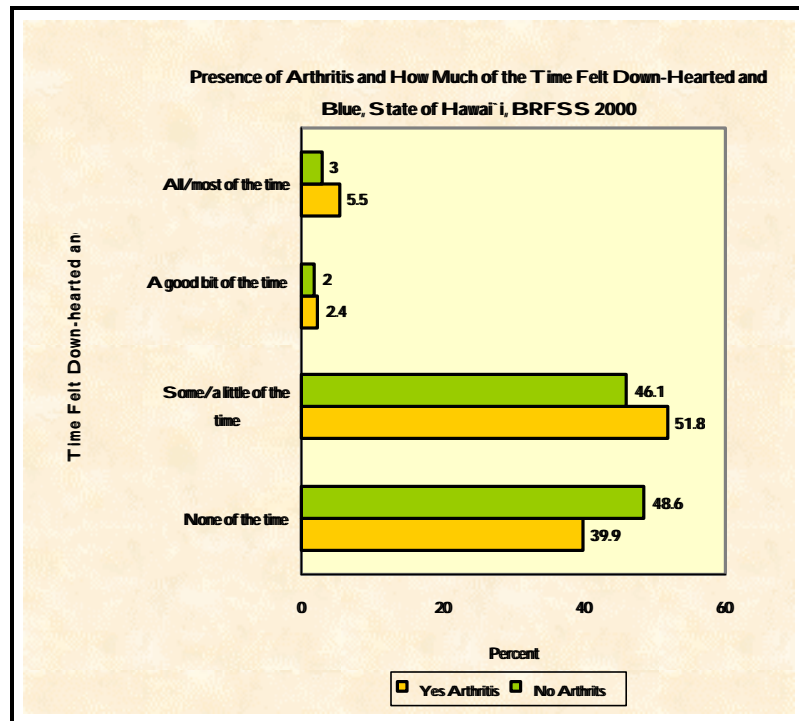
**During the past 4 weeks.....  
How much of the time you have a lot of energy**

Less than half of the adults with arthritis have a lot of energy (45.9%). In contrast, nearly two out of three adults without arthritis have a lot of energy most of the time (65.7%).



**During the past 4 weeks.....  
How much of the time you felt downhearted and blue**

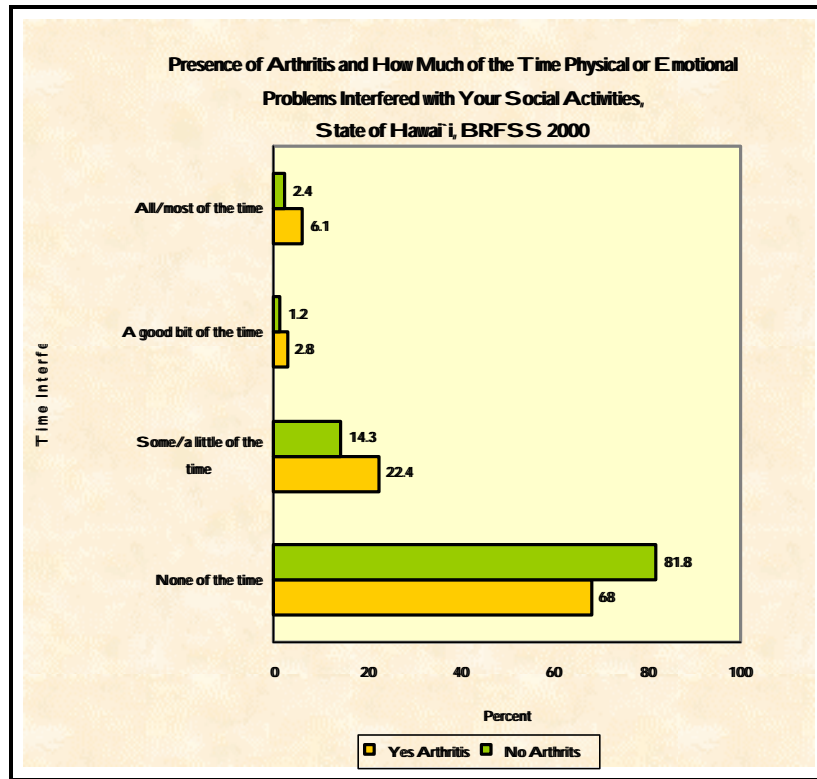
Less than 50% of the adults self-reported that they are downhearted and blue 'none of the time'. The adults with arthritis are more likely to be downhearted and blue some or a little of the times than those who do not have arthritis (51.8% vs. 46.1%).



## Overall effects on physical or emotional/mental health

**During the past 4 weeks.....  
How much of the time physical or emotional problems interfered with your social activities**

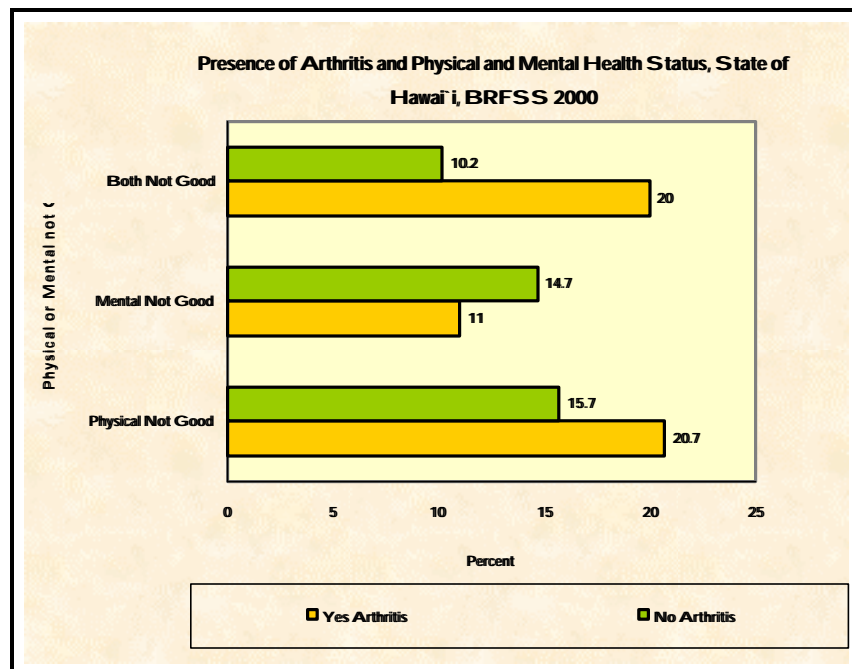
While physical and emotional problems do not interfere with social activities of the majority of the adults, it appears to be interfering with the social activities of arthritic adults than non-arthritic adults. Nearly 82% non-arthritic adults self-reported *none of the time* vs. 68% of the arthritic adults.



## Health Status During the Past 30 days

Over all, those with arthritis are likely to have physical health that is not good during the past 30 days compare to those with no arthritis (20.7% vs. 15.7%). Those with arthritis are also more likely to experience **both** physical and mental health that is not good compare to those with no arthritis

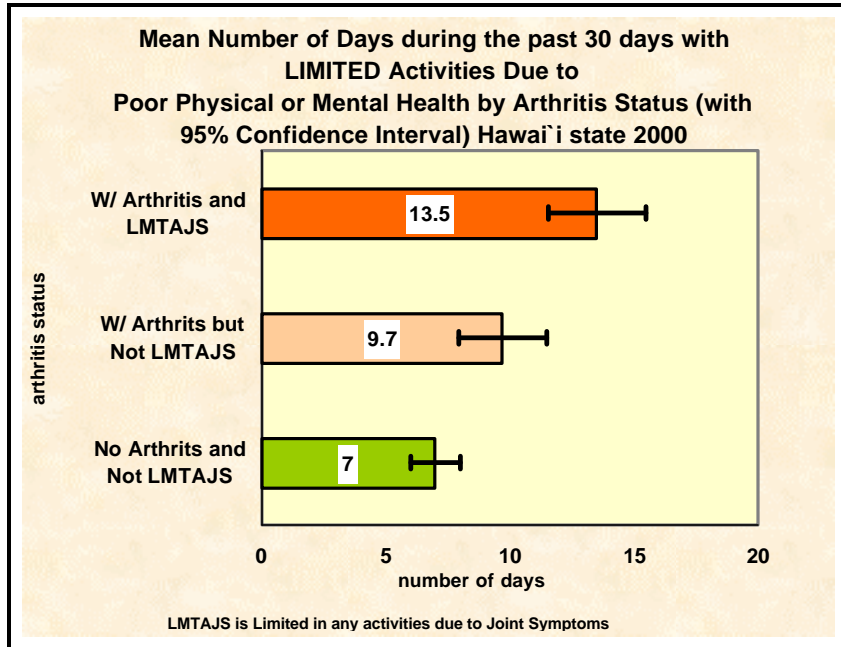
(20% vs. 10.2%). Thus, the effect of arthritis may not only be physical limitations and physical pain but may also be mental. The percentage of adults with arthritis who self-reported that their



mental health is not good during the past 30 days is 31%, higher than those with no arthritis (24.9%).

**Days of Limited Activities**

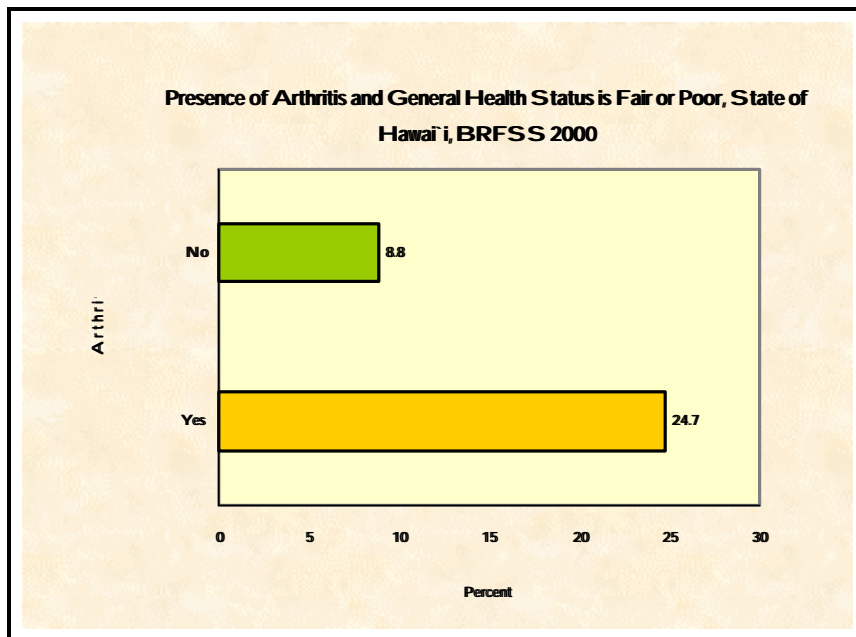
The question “*During the past 30 days for how many days did poor physical health or mental health keep you from doing your usual activities, such as self-care, work, or recreation?*” and the arthritis question, “*Are you now limited in any way in any activities because of joint symptoms?*” is jointly analyzed. Those who have joint symptoms are not able to do usual activities in almost two weeks (13.5 days).



The impact of arthritis can be summarized in this chart.

**Self-reported general health status**

In reply to the question ‘*Would you say your general health is (excellent, very good, good, fair, poor)?*’, about 25% of the arthritic adults indicated that their general health is fair or poor (24.7%) versus less than 10% of the non-arthritic adults (8.8%).





## Conclusions and Recommendations

This report showed that the adult prevalence of arthritis in Hawai`i is 23%, which translates to about 204,000 adults age 18 years old and over. More than half of the arthritic adults are still employed (54%). Only 14% of the adults were told by a doctor that they have arthritis and only about 2 out every five diagnosed arthritics are currently being treated. In addition, half of those who are doctor diagnosed and are being treated also have chronic joint pains but the other half with chronic joint pains is not currently being treated. In order for the Hawai`i Arthritis Control Program to reach out for these individuals, it is important to know the reasons why these arthritic individuals with chronic joint pains are not being treated or seeking treatment (approximately 24,500 adults). Knowing the reasons for non-treatment particularly for those with joint pain symptoms is even more important considering that this group of individuals are highly limited in their activities as illustrated in the **Impact** section of this report. It appears that medical cost or health insurance is not related to doctor arthritis treatment. Given the fact that the State residents are multi-ethnic, there can be a number of reasons. It could be that the arthritic adults who are in pain are receiving or seeking alternative non-medical treatment such as acupuncture, massage, herbal medicine, or Native Hawaiian medicine. It could also be that these individuals rather buy over the counter painkiller like Tylenol. It could also be that some will rather endure the pain and wait for it to go away than see a medical doctor since arthritis is not a life and death situation. Finally, it could also be that they cannot find an arthritis doctor (there are 14 board-certified rheumatologist in the state; all practice on Oahu. Once to twice a month, a few physicians go to just a couple of the neighbor islands), or it could be a language barrier. The reasons for not being treated should be part of the arthritis module questions. It is a goal to add to the 2002 BRFSS arthritis modules, "Do you use any Complementary Alternative Medicine to manage your arthritis?"

There are differences in the management of arthritis depending on the types of arthritis. However, half of those with doctor-diagnosed arthritis do not know what type of arthritis they have. Thus, there is a need to educate the population about the different types or forms of arthritis.

Certain types of arthritis are more common to certain ethnic groups. Osteoarthritis is the most common form of arthritis and very common among the Whites, the Hawaiians and Japanese. Rheumatoid arthritis is very common among the Filipinos. This pattern may be attributed to heredity or to food items that are consumed. The comparison of servings of fruits and vegetables consumed (as measured from the BRFSS fruits and vegetables composite index, *\_firtindx*) by the arthritic adults and non-arthritic adults indicates no significant difference in the two groups. However, there are certain fruits and vegetables, those belonging to the nightshade family that may trigger arthritic pain. The nightshade group of fruits and vegetables is not asked in the BRFSS. In addition to nightshade vegetables, there are certain food items that may trigger arthritic pain such as tripe, kidney and other internal organs as well as shellfish food like shrimps and crabs, common foods consumed in Hawai`i. It is recommended that questions relating to consumption of nightshade vegetables as well as animal internal meat organs and/or food sensitivities and allergies be part of the arthritis module questions.

There are nearly 128,000 arthritic adults (about 14%) who also have at least one of the chronic conditions asked in the BRFSS such as diabetes, asthma or being overweight/obese. In addition, the arthritic adults are more likely to have inactive lifestyle mainly because of their joint pains as

illustrated in the **Impact** section. The joint pains may probably explain why the arthritic adults are more likely to be former or current smokers than non-arthritic adults. However, one will never know which comes first, the unhealthy behavior or the arthritis condition.

There are socio-economic-demographic differences in the arthritis prevalence rates even when the data is adjusted for age using the US 2000 Census for Hawai'i (see Appendix C). The females generally have higher rates than the males; the Whites and the Hawaiians have higher rates than all the other ethnic groups. The high school graduates or higher education have lower rates than non-high school graduates; those with income \$ 50,000 or more have lower rates than those with income less than \$50,000; and those who are employed have lower rates than the unemployed, retirees, unable to work or students/homemaker.

The effects of arthritis are not only on the physical aspect but also on the emotional or mental health aspect as shown in the **Impact** section. In sum, it affects the quality of life particularly of those in their mid-life or approaching the sunset of their lives. During the past 30 days time frame, arthritic sufferers are limited in their activities due to poor physical or mental health for almost 14 days or two weeks in comparison to just about a week for those without arthritis. It is imperative that the palliative care or education to manage and control arthritis pain is made available for the arthritic individuals and their caregiver so that they have a better quality of life. In line with this education process, one of the ways is through the Internet. There is this Internet site <http://arthritis.about.com/> that covers a wide variety of topics relating to arthritis.

The Hawai'i Arthritis Control Program and its diverse Advisory Committee, under the Department of Health's Community Health Division and Chronic Disease Management and Control Branch, has developed a State plan which is a companion document to this report. It is hope that this report lends support to the cycle of planning, evaluation, and assessment of the Arthritis Control Program and informational to the general public.

<p>Aquatic exercise is easier on the joints. To strengthen the joints and muscles, engaged in aquatic exercise.</p>		<p>Swimming is a good exercise particularly for arthritic person.</p>	
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Suggested Citation: Reyes-Salvail, Florentina, Yu, Ming Qiu and Lu, Xiaowu, "The State of Hawai'i Arthritis Report What the BRFSS 2000 Shows", Arthritis Control Program, Community Health Division, Health Resources Administration, Department of Health. September 2001.

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## Appendix A – Arthritis Module Questions

### Module 14: Arthritis

- M14.1. During the past 12 months, have you had pain, aching, stiffness or swelling in or around a joint?
- a. Yes
  - b. No **Go to M 14.4**
- M14.2. Were these symptoms present on most days for at least one month?
- a. Yes
  - b. No
- M14.3. Are you now limited in any way in any activities because of joint symptoms?
- a. Yes
  - b. No
- M14.4. Have you ever been told by a doctor that you have arthritis?
- a. Yes
  - b. No
- M14.5. What type of arthritis did the doctor say you have?
- a. Osteoarthritis/degenerative arthritis
  - b. Rheumatism
  - c. Rheumatoid Arthritis
  - d. Lyme disease
  - e. Other
  - f. Never saw a doctor
- M14.6. Are you currently being treated by a doctor for arthritis?
- a. Yes
  - b. No



## Appendix B - Glossary of Terms

**Level of physical activity** refers to adults who exercise and the categories are as follows:

**Physically inactive** are those who did not do any exercise as measure from the question

During the past month, did you participate in any physical activities or exercises such as running, calisthenics, golf, gardening, or walking for exercise?

This is also described as no leisure-time physical activity reported during the past month.

The rest of this categories are derived from the whole set of exercise questions. See the CDC web site for the BRFSS 2000 questionnaire <http://www.cdc.gov/nccdphp/brfss/pdf-ques/2000brfss.pdf>.

**Irregular** activity is any physical activity or pair of activities done for less than 20 minutes or less than three times per week during the past month.

**Regular** activity is any physical activity or pair of activities done for a total of 20 minutes or more three times or more per week during the past month, but less than 50% of functional capacity.

**Regular** and **vigorous** activity is any physical activity or pair of activities that require rhythmic contraction of large muscle groups at 50% or more of functional capacity for a total of 20 minutes or more three times or more per week during the past month.

**BMI** stands for body mass index. It is computed as weight is kilograms divided by heights in meters squares ( $W/H^{**2}$ ).

**Overweight** are those with BMI from 25.0 to 29.9.

**Obese** are those with BMI from 30 to higher.

**\_frtindx** is a derived variables from a series of fruits and vegetables questions asked in the BRFSS 2000. To see the questions go to this Internet site <http://www.cdc.gov/nccdphp/brfss/pdf-ques/2000brfss.pdf>.

**\_FRTINDX** (Index of fruit and vegetable consumption)

Less than 1 per day or never: Respondents reporting they never consume fruits or vegetables or consume less than 1 serving per day

1 to less than 3 times per day: Respondents reporting they consume 1 to less than 3 servings of fruits and vegetables per day.

3 to less than 5 times per day: Respondents reporting they consume 3 to less than 5 servings of fruits and vegetables per day.

5 or more times per day: Respondents reporting they consume 5 or more servings of fruits and vegetables per day.

NA/Refused: Respondents who “don’t know” or “refused” to answer all of the fruit and vegetable questions prohibiting calculation of the daily servings level.



## Appendix C – Tables



**Table 1. A. Prevalence of Arthritis by Demographics: weighted percentage, 95% CI, sample size, estimated population, and age adjusted percentage, BRFSS 2000**

Characteristics	%Weighted	95% CI			Numerator		%Weighted Age Adjusted*
					Sample Size	Estimated Population	
<b>Age Group</b>							
18-24	7.1	4.7	10.5	33	7,664	7.1	
25-34	9.8	7.7	12.4	99	16,849	9.8	
35-44	17.6	15.0	20.5	257	33,033	17.6	
45-54	28.6	25.2	32.1	373	44,688	28.6	
55-64	34.7	29.6	40.1	273	40,505	34.7	
65 +	39.8	36.1	43.6	475	59,956	39.8	
Unk/Ref	-	-	-	-	-	-	
<b>SEX</b>							
Male	20.2	18.3	22.3	596	91,735	20.9	
Female	25.4	23.4	27.5	926	112,430	24.4	
<b>ETHNICITY</b>							
WHITE	27.1	24.8	29.5	668	73,558	26.7	
HAWAIIAN	22.7	18.9	27.0	222	32,679	24.7	
FILIPINO	17.5	13.6	22.2	140	23,793	18.6	
JAPANESE	23.3	20.5	26.3	314	46,945	19.2	
OTHERS	19.0	16.0	22.5	178	27,190	21.0	
<b>EDUCATION</b>							
<High School	33.5	26.6	41.1	164	24,104	28.5	
High School	23.1	20.6	25.7	479	66,918	23.9	
Some College	20.0	17.8	22.4	409	51,773	21.4	
College	22.1	19.7	24.7	465	60,580	21.6	
Unk/Ref	-	-	-	-	-	-	
<b>EMPLOYMENT</b>							
EMPLOYED	18.3	16.7	20.0	789	110,725	18.6	
UNEMPLOYED	20.7	13.8	29.8	41	5,999	24.3	
HOMEMAKER	23.5	18.4	29.6	76	11,564	30.0	
STUDENT	6.0	2.8	12.3	9	1,723	26.0	
RETIRED	39.4	35.8	43.0	519	64,114	24.2	
UNABLE TO WORK	49.9	34.9	64.9	85	9,680	46.5	
REFUSED	-	-	-	-	-	-	
<b>INCOME</b>							
< \$15,000	27.3	23.3	31.7	246	25,054	29.0	
\$15-\$24,999	23.5	19.7	27.8	206	25,662	23.8	
\$25-\$49,999	23.6	20.9	26.6	452	63,699	24.2	
\$50-\$74,999	18.1	15.1	21.6	170	22,792	17.6	
>=\$75,000	19.9	16.6	23.6	173	25,912	18.5	
Unk/Ref	24.2	20.9	27.8	275	41,046	23.2	
<b>MARITAL STATUS</b>							
Married	24.1	22.2	26.2	782	125,409	22.6	
Unmarried	20.8	18.9	22.9	735	77,992	24.2	
Unk/Ref	-	-	-	-	-	-	
<b>COUNTY</b>							
Honolulu	22.3	20.5	24.2	669	147,104	22.1	
Hawaii	25.8	23.3	28.5	422	26,869	24.5	
Kauai	23.8	20.0	28.2	146	9,860	22.7	
Maui	22.4	19.5	25.6	285	20,332	21.9	
<b>All</b>	<b>22.8</b>	<b>21.4</b>	<b>24.2</b>	<b>1,522</b>	<b>204,165</b>	<b>22.4</b>	

\* Age group and County were adjusted to U. S. year 2000 census population, the other variables were adjusted to Hawai'i state year 2000 census population.

- The numerator less than 5 or the denominator less than 50 are not shown.

**Table 1. B. Prevalence of NO Arthritis by Demographics: weighted percentage, 95% CI, sample size, estimated population, and age adjusted percentage, BRFSS 2000**

Characteristics	%Weighted	95% CI			Numerator		%Weighted Age Adjusted*
					Sample Size	Estimated Population	
<b>Age Group</b>							
18-24	92.9	89.5	95.3	420	100,964	92.9	
25-34	90.2	87.6	92.3	876	154,916	90.2	
35-44	82.4	79.5	85.0	1102	154,619	82.4	
45-54	71.5	67.9	74.8	932	111,845	71.5	
55-64	65.3	59.9	70.4	469	76,330	65.3	
65 +	60.2	56.4	63.9	656	90,713	60.2	
Unk/Ref	-	-	-	-	-	-	-
<b>SEX</b>							
Male	79.8	77.7	81.7	2080	361,622	79.1	
Female	74.6	72.5	76.6	2398	330,505	75.6	
<b>ETHNICITY</b>							
WHITE	72.9	70.5	75.2	1584	198,201	73.3	
HAWAIIAN	77.3	73.0	81.1	708	111,321	75.3	
FILIPINO	82.5	77.8	86.4	598	112,012	81.4	
JAPANESE	76.7	73.7	79.5	951	154,803	80.8	
OTHERS	81.0	77.5	84.0	637	115,791	79.0	
<b>EDUCATION</b>							
<High School	66.6	58.9	73.4	285	47,960	71.5	
High School	76.9	74.3	79.4	1369	223,327	76.1	
Some College	80.0	77.6	82.2	1359	206,945	78.6	
College	77.9	75.3	80.3	1457	213,135	78.4	
Unk/Ref	-	-	-	-	-	-	-
<b>EMPLOYMENT</b>							
EMPLOYED	81.7	80.0	83.3	3222	494,796	81.4	
UNEMPLOYED	79.3	70.2	86.2	122	23,043	75.7	
HOMEMAKER	76.5	70.4	81.6	232	37,600	70.0	
STUDENT	94.1	87.7	97.2	128	27,227	74.0	
RETIRED	60.7	57.0	64.2	700	98,810	75.8	
UNABLE TO WORK	50.1	35.1	65.1	68	9,728	53.6	
REFUSED	-	-	-	-	-	-	-
<b>INCOME</b>							
< \$15,000	72.7	68.3	76.7	505	66,764	71.0	
\$15-\$24,999	76.5	72.2	80.3	595	83,482	76.3	
\$25-\$49,999	76.4	73.4	79.1	1380	205,962	75.9	
\$50-\$74,999	81.9	78.4	84.9	665	102,972	82.4	
>=\$75,000	80.1	76.4	83.4	620	104,486	81.5	
Unk/Ref	75.8	72.2	79.1	713	128,459	76.8	
<b>MARITAL STATUS</b>							
Married	75.9	73.8	77.8	2398	394,427	77.4	
Unmarried	79.2	77.1	81.1	2071	297,004	75.8	
Unk/Ref	-	-	-	-	-	-	-
<b>COUNTY</b>							
Honolulu	77.7	75.8	79.5	2132	513,160	77.9	
Hawaii	74.2	71.5	76.7	1028	77,168	75.5	
Kauai	76.2	71.8	80.0	436	31,517	77.3	
Maui	77.6	74.4	80.5	882	70,282	78.1	
<b>All</b>	<b>77.2</b>	<b>75.8</b>	<b>78.6</b>	<b>4,478</b>	<b>692,126</b>	<b>77.6</b>	

\* Age group and County were adjusted to U. S. year 2000 census population, the other variables were adjusted to Hawai'i state year 2000 census population.

- The numerator less than 5 or the denominator less than 50 are not shown.

**Table 2. A. Prevalence of Arthritis by Health Characteristics: weighted percentage, 95% CI, sample size, estimated population, and age adjusted percentage, BRFSS 2000**

Characteristics	%Weighted	95% CI		Numerator		%Weighted Age Adjusted*
				Sample Size	Estimated Population	
<b>General Health</b>						
Excellent/Very good	39.4	36.0	42.9	614	80,422	44.2
Good	35.8	32.4	39.4	540	73,003	33.7
Fair/Poor	24.7	21.8	27.9	364	50,336	22.0
Unk/Ref	-	-	-	-	-	-
<b>Physical &amp; mental health</b>						
Not Good	51.7	48.1	55.3	839	105,547	55.4
Good	47.4	43.8	51.0	671	96,736	44.0
Unk/ref	0.9	0.4	1.9	12	1,882	0.7
<b>Physical/mental health</b>						
Physical Not Good	20.7	18.1	23.5	338	42,186	20.5
Mental Not Good	11.0	9.1	13.3	180	22,538	13.5
Both Not Good	20.0	17.5	22.8	321	40,824	21.3
Phy&Men Both Good	47.4	43.8	51.0	671	96,736	44.0
Unk/ref	0.9	0.4	1.9	12	1,882	0.7
<b>Fruit &amp; vegetable index</b>						
<once/day or never	2.2	1.5	3.2	41	4,440	2.2
1-<3 times/day	32.3	28.9	35.9	453	65,980	36.9
3-<5 times/day	43.3	39.8	46.9	646	88,342	41.7
5+ times/day	22.2	19.6	25.0	382	45,403	19.2
Unk/Ref	-	-	-	-	-	-
<b>Fruit &amp; vegetable serving</b>						
<1 servings/day	2.2	1.5	3.2	41	4,440	2.2
1-2 servings/day	12.2	10.1	14.7	161	24,854	14.6
2-5 servings/day	64.3	61.0	67.5	951	131,194	64.7
5-8 servings/day	18.2	15.8	20.9	304	37,117	15.8
>8 servings/day	3.2	2.4	4.3	65	6,560	2.7
Unk/ref	-	-	-	-	-	-
<b>Smoking status</b>						
Current Smoker	22.6	19.6	25.9	312	46,097	26.9
Former Smoker	30.7	27.6	33.9	508	62,741	26.9
Never Smoked	46.7	43.2	50.3	701	95,287	46.2
Unk/Ref	-	-	-	-	-	-
<b>Diabetes</b>						
Yes	9.9	8.0	12.3	142	20,172	7.7
Yes, during pregnancy	2.1	1.3	3.3	30	4,278	2.4
No	87.9	85.4	90.0	1,348	179,522	89.8
Unk/Ref	-	-	-	-	-	-
<b>Had or have asthma</b>						
Yes	14.7	12.3	17.4	210	30,006	15.6
No	85.3	82.6	87.7	1,312	174,159	84.4
Unk/Ref	-	-	-	-	-	-
<b>All</b>	<b>100.0</b>			<b>1,522</b>	<b>204,165</b>	<b>100.0</b>
<b>Have asthma now</b>						
Yes	11.4	8.6	14.7	155	23,321	12.0

- The numerator less than 5 or the denominator less than 50 are not shown.

\* Age was adjusted to Hawai'i state year 2000 census population.

**Table 2. B. Prevalence of NO Arthritis by Health Characteristics: weighted percentage, 95% CI, sample size, estimated population, and age adjusted percentage, BRFSS 2000**

Characteristics	%Weighted	95% CI		Numerator		%Weighted Age Adjusted*
				Sample Size	Estimated Population	
<b>General Health</b>						
Excellent/Very good	57.6	55.6	59.5	2592	398,633	56.4
Good	33.6	31.7	35.5	1478	232,771	34.3
Fair/Poor	8.8	7.7	10.0	407	60,580	9.4
Unk/Ref	-	-	-	-	-	-
<b>Physical &amp; mental health</b>						
Not Good	40.6	38.7	42.6	1848	281,033	39.4
Good	58.9	56.9	60.8	2605	407,434	60.1
Unk/ref	0.5	0.3	0.9	25	3,659	0.6
<b>Physical/mental health</b>						
Physical Not Good	15.7	14.2	17.3	680	108,653	15.6
Mental Not Good	14.7	13.3	16.2	653	101,569	14.0
Both Not Good	10.2	9.1	11.4	515	70,811	9.8
Phy&Men Both Good	58.9	56.9	60.8	2605	407,434	60.1
Unk/ref	0.5	0.3	0.9	25	3,659	0.6
<b>Fruit &amp; vegetable index</b>						
<once/day or never	3.9	3.2	4.8	161	27,080	3.8
1-<3 times/day	34.0	32.1	35.9	1420	235,627	33.1
3-<5 times/day	39.6	37.7	41.6	1863	273,894	40.4
5+ times/day	22.5	20.9	24.2	1033	155,411	22.8
Unk/Ref	-	-	-	-	-	-
<b>Fruit &amp; vegetable serving</b>						
<1 servings/day	3.9	3.2	4.8	161	27,080	3.8
1-2 servings/day	13.3	12.0	14.7	546	92,372	12.8
2-5 servings/day	61.4	59.5	63.3	2797	425,153	61.9
5-8 servings/day	17.6	16.2	19.1	807	121,863	17.9
>8 servings/day	3.7	3.0	4.5	166	25,544	3.7
Unk/ref	-	-	-	-	-	-
<b>Smoking status</b>						
Current Smoker	18.8	17.2	20.5	826	130,107	18.2
Former Smoker	22.1	20.5	23.8	1097	153,263	23.4
Never Smoked	58.9	56.9	60.8	2542	407,588	58.2
Unk/Ref	0.2	0.1	0.4	13	1,168	0.2
<b>Diabetes</b>						
Yes	3.8	3.2	4.5	194	26,318	4.4
Yes, during pregnancy	1.0	0.7	1.4	43	6,602	0.9
No	95.2	94.4	95.9	4,239	658,807	94.6
Unk/Ref	-	-	-	-	-	-
<b>Had or have asthma</b>						
Yes	10.4	9.2	11.7	434	71,750	10.0
No	89.6	88.3	90.8	4,043	620,246	90.0
Unk/Ref	-	-	-	-	-	-
<b>All</b>	<b>100.0</b>			<b>4,478</b>	<b>692,126</b>	<b>100.0</b>
<b>Have asthma now</b>						
Yes	6.1	4.8	7.6	262	41,970	6.2

- The numerator less than 5 or the denominator less than 50 are not shown.

\* Age was adjusted to Hawai'i state year 2000 census population.

**Table 3. A. Prevalence of Arthritis by Physical activity and BMI, weighted percentage, 95% CI, sample size, estimated population, and age adjusted percentage, BRFSS 2000**

Characteristics	%Weighted	95% CI		Numerator		%Weighted Age Adjusted*
				Sample Size	Estimated Population	
<b>LEISURE TIME PHYSICAL ACTIVITY</b>						
Yes-leisure act.	72.6	69.1	75.8	1,109	148,189	73.2
No-leisure act.	27.4	24.2	30.9	413	55,976	26.8
<b>PHYSICAL ACTIVITY LEVEL</b>						
Inactive	27.4	24.2	30.9	413	55,976	26.8
Irregular	22.0	19.4	24.9	337	44,913	21.4
Regular	33.2	29.9	36.7	480	67,708	36.2
Regular/Vigorous	17.4	15.0	20.0	292	35,568	15.7
<b>All</b>	<b>100.0</b>			<b>1,522</b>	<b>204,165</b>	<b>100.0</b>
<b>BMI data removed pregnant women</b>						
<b>BMI 4 group</b>						
bmi<25/NOT overweight	42.7	39.3	46.2	660	86,865	42.8
bmi25-29.9/overweight	34.1	30.9	37.5	527	69,312	33.6
bmi>=30/obese	21.3	18.1	24.9	292	43,280	22.3
UNK/REF	1.9	1.3	2.9	38	3,885	1.3
<b>BMI 3 group</b>						
bmi<30/NOT obese	76.8	73.2	80.1	1,187	156,177	76.4
bmi>=30/obese	21.3	18.1	24.9	292	43,280	22.3
UNK/REF	1.9	1.3	2.9	38	3,885	1.3
<b>All</b>	<b>100.0</b>			<b>1,517</b>	<b>203,342</b>	<b>100.0</b>

\* Age was adjusted to Hawai'i state year 2000 population.

**Table 3. B. Prevalence of NO Arthritis by Physical activity and BMI, weighted percentage, 95% CI, sample size, estimated population, and age adjusted percentage, BRFSS 2000**

Characteristics	%Weighted	95% CI		Numerator		%Weighted Age Adjusted*
				Sample Size	Estimated Population	
<b>LEISURE TIME PHYSICAL ACTIVITY</b>						
Yes-leisure act.	78.1	76.5	79.7	3,521	540,636	77.8
No-leisure act.	21.9	20.3	23.5	957	151,490	22.2
<b>PHYSICAL ACTIVITY LEVEL</b>						
Inactive	21.9	20.3	23.5	957	151,490	22.2
Irregular	23.9	22.3	25.6	1,099	165,362	23.9
Regular	36.1	34.2	38.0	1,600	250,182	35.3
Regular/Vigorous	18.1	16.6	19.7	822	125,092	18.6
<b>All</b>	<b>100.0</b>			<b>4,478</b>	<b>692,126</b>	
<b>BMI data removed pregnant wom</b>						
<b>BMI 4 group</b>						
bmi<25/NOT overweight	50.4	48.4	52.4	2,296	344,337	50.4
bmi25-29.9/overweight	33.5	31.6	35.4	1,433	228,846	33.8
bmi>=30/obese	13.6	12.2	15.1	597	92,799	13.5
UNK/REF	2.5	1.8	3.5	94	17,070	2.4
<b>BMI 3 group</b>						
bmi<30/NOT obese	83.9	82.2	85.4	3,729	573,183	84.2
bmi>=30/obese	13.6	12.2	15.1	597	92,799	13.5
UNK/REF	2.5	1.8	3.5	94	17,070	2.4
<b>All</b>	<b>100.0</b>			<b>4,420</b>	<b>683,053</b>	<b>100.0</b>

\* Age was adjusted to Hawai'i state year 2000 population.



**Table 4. A. Prevalence of Arthritis by SF12 Questions: weighted percentage, 95% CI, sample size, estimated population, and age adjusted percentage, BRFSS 2000**

Characteristics	%Weighted	95% CI		Numerator		%Weighted Age Adjusted*
				Sample Size	Estimated Population	
<b>Limited Moderate Activities I</b>						
Yes, limited a lot	12.1	10.2	14.3	216	24,694	10.6
Yes limited a little	17.2	14.7	20.0	238	35,066	15.1
No, not limited at all	70.5	67.3	73.5	1,066	143,967	74.1
UNK/REF	-	-	-	-	-	-
<b>Limited Moderate Activities II</b>						
Yes, limited a lot	13.2	11.2	15.5	236	26,934	10.5
Yes limited a little	16.3	13.8	19.1	218	33,190	14.4
No, not limited at all	70.2	66.9	73.3	1,063	143,249	74.9
UNK/REF	0.4	0.1	1.2	5	792	0.2
<b>Accomplished Less due to Physical Health</b>						
Yes	29.9	26.8	33.2	456	60,985	27.7
No	69.8	66.5	72.9	1,060	142,509	72.1
UNK/REF	0.3	0.1	1.0	6	671	0.3
<b>Limited in Work due to Physical Health</b>						
Yes	29.5	26.4	32.8	459	60,159	28.1
No	70.1	66.8	73.2	1,058	143,050	71.6
UNK/REF	0.5	0.2	1.3	5	956	0.3
<b>Accomplished Less due to Emotional Problems</b>						
Yes	17.8	15.3	20.7	269	36,282	19.8
No	81.6	78.7	84.2	1,244	166,638	79.5
UNK/REF	0.6	0.3	1.3	9	1,246	0.7
<b>Worked Less Carefully due to Emotional Problems</b>						
Yes	15.7	13.3	18.5	233	31,995	16.6
No	83.7	80.9	86.2	1,283	170,826	82.9
UNK/REF	0.7	0.3	1.6	6	1,344	0.4
<b>Pain Interfered with Normal Work</b>						
Not at all	41.2	37.7	44.8	628	84,119	39.7
A little bit	34.0	30.7	37.5	476	69,492	36.4
Moderately/quite a bit	20.7	18.1	23.5	338	42,259	20.6
Extremely	3.6	2.6	4.9	74	7,325	3.0
UNK/REF	0.5	0.2	1.6	6	970	0.3

**Table 4. A. Prevalence of Arthritis by SF12 Questions: weighted percentage, 95% CI, sample size, estimated population, and age adjusted percentage, BRFSS 2000, cont.**

Characteristics	%Weighted	95% CI		Numerator		%Weighted Age Adjusted*
				Sample Size	Estimated Population	
<b>Felt: Calm and Peaceful</b>						
All/most of the time	59.0	55.4	62.5	901	120,508	55.4
A good bit of the time	13.9	11.8	16.2	228	28,388	14.3
Some/a little of the time	24.0	20.8	27.5	345	49,090	27.3
None of the time	2.1	1.4	3.1	37	4,304	2.4
UNK/REF	0.9	0.5	1.8	11	1,875	0.7
<b>Felt: Have a lot of Energy</b>						
All/most of the time	45.9	42.4	49.5	695	93,786	45.4
A good bit of the time	21.9	18.8	25.3	322	44,745	21.2
Some/a little of the time	28.2	25.2	31.4	432	57,601	28.9
None of the time	3.4	2.4	4.7	62	6,919	4.1
UNK/REF	0.5	0.2	1.1	11	1,114	0.5
<b>Felt: Down-hearted and Blue</b>						
All/most of the time	5.5	4.0	7.6	81	11,308	5.6
A good bit of the time	2.4	1.7	3.4	55	4,805	2.4
Some/a little of the time	51.8	48.2	55.3	787	105,684	53.9
None of the time	39.9	36.4	43.5	591	81,390	37.8
UNK/REF	0.5	0.2	1.1	8	977	0.3
<b>Physical Health or Emotional Problems interfered with Social Activities</b>						
All/most of the time	6.1	4.6	8.0	108	12,537	5.5
A good bit of the time	2.8	1.9	4.2	44	5,720	2.8
Some/a little of the time	22.4	19.7	25.3	350	45,696	24.9
None of the time	68.0	64.7	71.1	1,008	138,866	66.2
UNK/REF	0.7	0.4	1.4	12	1,347	0.6
<b>All</b>	<b>100</b>			<b>1,522</b>	<b>204,165</b>	

- The numerator less than 5 or the denominator less than 50 are not shown.

\* Age was adjusted to Hawai'i state year 2000 census population.

**Table 4. B. Prevalence of NO Arthritis by SF12 Questions: weighted percentage, 95% CI, sample size, estimated population, and age adjusted percentage, BRFSS 2000**

Characteristics	%Weighted	95% CI		Numerator		%Weighted Age Adjusted*
				Sample Size	Estimated Population	
<b>Limited Moderate Activities I</b>						
Yes, limited a lot	2.2	1.6	3.1	103	14,949	2.4
Yes limited a little	4.9	4.1	5.8	218	33,661	5.2
No, not limited at all	92.9	91.7	93.9	4,154	643,253	92.4
UNK/REF	-	-	-	-	-	-
<b>Limited Moderate Activities II</b>						
Yes, limited a lot	2.3	1.6	3.3	100	15,782	2.6
Yes limited a little	4.2	3.5	5.0	215	29,204	4.6
No, not limited at all	93.4	92.2	94.4	4,156	646,192	92.8
UNK/REF	0.1	0.0	0.3	7	948	0.1
<b>Accomplished Less due to Physical Health</b>						
Yes	8.5	7.4	9.8	390	58,867	8.8
No	91.3	90.0	92.4	4,079	631,798	91.0
UNK/REF	0.2	0.1	0.5	9	1,461	0.2
<b>Limited in Work due to Physical Health</b>						
Yes	6.7	5.7	7.8	337	46,138	7.1
No	93.2	92.1	94.2	4,133	645,100	92.8
UNK/REF	0.1	0.0	0.3	8	889	0.1
<b>Accomplished Less due to Emotional Problems</b>						
Yes	7.1	6.2	8.1	358	48,896	7.0
No	92.7	91.7	93.6	4,107	641,686	92.8
UNK/REF	0.2	0.1	0.4	13	1,545	0.2
<b>Worked Less Carefully due to Emotional Problems</b>						
Yes	6.2	5.3	7.2	304	43,021	6.1
No	93.6	92.6	94.5	4,162	647,882	93.7
UNK/REF	0.2	0.1	0.4	12	1,223	0.2
<b>Pain Interfered with Normal Work</b>						
Not at all	76.5	74.8	78.2	3,431	529,246	76.5
A little bit	17.9	16.4	19.5	775	123,924	17.8
Moderately/quite a bit	4.9	4.1	5.8	233	33,604	5.0
Extremely	0.5	0.3	0.8	29	3,158	0.5
UNK/REF	0.3	0.1	0.7	10	2,194	0.3

**Table 4. B. Prevalence of NO Arthritis by SF12 Questions: weighted percentage, 95% CI, sample size, estimated population, and age adjusted percentage, BRFSS 2000, cont.**

Characteristics	%Weighted	95% CI		Numerator		%Weighted Age Adjusted*
				Sample Size	Estimated Population	
<b>Felt: Calm and Peaceful</b>						
All/most of the time	67.6	65.7	69.5	3,035	467,638	68.4
A good bit of the time	13.0	11.7	14.4	620	90,255	12.7
Some/a little of the time	17.7	16.2	19.3	747	122,517	17.2
None of the time	1.5	1.1	2.1	65	10,403	1.5
UNK/REF	0.2	0.1	0.4	11	1,314	0.2
<b>Felt: Have a lot of Energy</b>						
All/most of the time	65.7	63.8	67.5	2,876	454,712	65.5
A good bit of the time	16.3	14.9	17.8	776	112,745	16.2
Some/a little of the time	16.9	15.5	18.4	764	116,885	17.0
None of the time	1.0	0.7	1.4	51	6,621	1.1
UNK/REF	0.2	0.1	0.4	11	1,164	0.2
<b>Felt: Down-hearted and Blue</b>						
All/most of the time	3.0	2.4	3.8	137	21,058	2.9
A good bit of the time	2.0	1.5	2.7	89	13,728	1.9
Some/a little of the time	46.1	44.1	48.1	2,140	319,096	45.3
None of the time	48.6	46.6	50.6	2,098	336,655	49.7
UNK/REF	0.2	0.1	0.4	14	1,589	0.2
<b>Physical Health or Emotional Problems interfered with Social Activities</b>						
All/most of the time	2.4	1.9	3.1	116	16,507	2.5
A good bit of the time	1.2	0.8	1.8	52	8,231	1.1
Some/a little of the time	14.3	13.0	15.7	685	98,741	13.8
None of the time	81.8	80.2	83.3	3,613	565,981	82.2
UNK/REF	0.4	0.2	0.8	12	2,667	0.4
<b>All</b>	<b>100</b>			<b>4,478</b>	<b>692,126</b>	<b>100.0</b>

- The numerator less than 5 or the denominator less than 50 are not shown.

\* Age was adjusted to Hawai'i state year 2000 census population.

**Table 5. A. Prevalence of Limitation in activities due to joint symptom and arthritis by SF12 and Physical Activity, weighted percentage, 95% CI, sample size, estimated population, and age adjusted percentage, BRFSS 2000**

Characteristics	A: With Joint Symptom and Arthritis					
	%Weighted	95% CI		Numerator		%Weighted Age Adjusted*
				Sample Size	Estimated Population	
<b>Limited Moderate Activities I</b>						
YES, LIMITED A LOT	27.3	22.8	32.3	169	18,741	25.2
YES, LIMITED A LITTLE	28.0	23.0	33.6	138	19,232	24.2
NO, NOT LIMITED AT ALL	44.4	38.9	50.1	234	30,523	50.4
UNK/REF	-	-	-	-	-	-
<b>Limited Moderate Activities II</b>						
YES, LIMITED A LOT	28.9	24.2	34.1	178	19,839	24.8
YES, LIMITED A LITTLE	29.5	24.3	35.4	132	20,298	25.2
NO, NOT LIMITED AT ALL	41.1	35.7	46.7	229	28,278	49.9
UNK/REF	-	-	-	-	-	-
<b>Accomplished Less due to Physical Health</b>						
YES	54.0	48.4	59.5	279	37,143	49.1
NO	45.5	40.0	51.1	260	31,249	50.6
UNK/REF	-	-	-	-	-	-
<b>Limited in Work due to Physical Health</b>						
YES	57.5	51.9	62.9	308	39,498	53.6
NO	42.1	36.7	47.7	233	28,946	46.1
UNK/REF	-	-	-	-	-	-
<b>Pain Interfered with Normal Work</b>						
Not at all	19.9	15.7	24.8	99	13,673	19.7
A little bit	34.6	29.3	40.3	168	23,774	33.0
Moderately/ Quite a bit	35.1	30.0	40.6	204	24,154	38.5
Extremely	9.3	6.8	12.5	68	6,359	8.2
UNK/REF	-	-	-	-	-	-
<b>PHYSICAL ACTIVITY LEVEL</b>						
PHYSICALLY INACTIVE	33.6	28.5	39.1	183	23,094	35.0
IRREGULAR	24.4	19.9	29.5	127	16,784	21.8
REGULAR	24.9	20.3	30.2	135	17,102	26.5
REGULAR & VIGOROUS	17.1	13.2	21.9	97	11,747	17
<b>All</b>	<b>100.0</b>			<b>542</b>	<b>68,728</b>	<b>100.0</b>

- The numerator less than 5 or the denominator less than 50 are not shown.

\* Age was adjusted to Hawai'i state year 2000 census population.

**Table 5. B. Prevalence of Limitation in activities due to joint symptom and arthritis by SF12 and Physical Activity, weighted percentage, 95% CI, sample size, estimated population, and age adjusted percentage, BRFSS 2000**

Characteristics	B: No Joint Symptom, with Arthritis					
	%Weighted	95% CI		Numerator		%Weighted Age Adjusted*
				Sample Size	Estimated Population	
<b>Limited Moderate Activities I</b>						
YES, LIMITED A LOT	4.4	3.0	6.3	47	5,953	3.5
YES, LIMITED A LITTLE	11.7	9.2	14.8	100	15,834	10.6
NO, NOT LIMITED AT ALL	83.8	80.4	86.7	832	113,444	85.8
UNK/REF	-	-	-	-	-	-
<b>Limited Moderate Activities II</b>						
YES, LIMITED A LOT	5.2	3.7	7.2	58	7,094	3.7
YES, LIMITED A LITTLE	9.5	7.2	12.4	86	12,892	8.8
NO, NOT LIMITED AT ALL	84.9	81.6	87.7	834	114,971	87.3
UNK/REF	-	-	-	-	-	-
<b>Accomplished Less due to Physical Health</b>						
YES	17.6	14.6	21.0	177	23,842	17.0
NO	82.1	78.7	85.1	800	111,260	82.8
UNK/REF	-	-	-	-	-	-
<b>Limited in Work due to Physical Health</b>						
YES	15.3	12.5	18.6	151	20,661	15.6
NO	84.2	80.9	87.0	825	114,104	84.1
UNK/REF	-	-	-	-	-	-
<b>Pain Interfered with Normal Work</b>						
Not at all	52.0	47.4	56.5	529	70,446	49.3
A little bit	33.8	29.6	38.3	308	45,718	37.7
Moderately/ Quite a bit	13.4	10.8	16.5	134	18,105	12.3
Extremely	0.7	0.2	2.4	6	966	0.6
UNK/REF	-	-	-	-	-	-
<b>PHYSICAL ACTIVITY LEVEL</b>						
PHYSICALLY INACTIVE	24.3	20.3	28.8	230	32,882	22.9
IRREGULAR	20.8	17.6	24.4	210	28,129	20.8
REGULAR	37.4	33.1	41.9	345	50,605	40.8
REGULAR & VIGOROUS	17.6	14.7	20.9	195	23,821	16
<b>All</b>	<b>100.0</b>			<b>980</b>	<b>135,437</b>	<b>100.0</b>

- The numerator less than 5 or the denominator less than 50 are not shown.

\* Age was adjusted to Hawai'i state year 2000 census population.

**Table 5. C. Prevalence of Limitation in activities due to joint symptom and arthritis by SF12 and Physical Activity, weighted percentage, 95% CI, sample size, estimated population, and age adjusted percentage, BRFSS 2000**

Characteristics	C: No Joint Symptom, No Arthritis					
	%Weighted	95% CI		Numerator		%Weighted Age Adjusted*
				Sample Size	Estimated Population	
<b>Limited Moderate Activities I</b>						
YES, LIMITED A LOT	2.1	1.4	3.0	97	14,554	2.3
YES, LIMITED A LITTLE	4.6	3.9	5.5	209	31,664	5.0
NO, NOT LIMITED AT ALL	93.2	92.0	94.2	4,107	637,030	92.7
UNK/REF	-	-	-	-	-	-
<b>Limited Moderate Activities II</b>						
YES, LIMITED A LOT	2.2	1.5	3.2	94	15,137	2.5
YES, LIMITED A LITTLE	4.2	3.5	5.0	208	28,754	4.6
NO, NOT LIMITED AT ALL	93.4	92.2	94.4	4,108	638,735	92.8
UNK/REF	0.1	0.0	0.3	6	885	0
<b>Accomplished Less due to Physical Health</b>						
YES	8.3	7.2	9.6	372	56,503	8.6
NO	91.5	90.2	92.6	4,034	625,421	91.2
UNK/REF	0.2	0.1	0.5	10	1,588	0
<b>Limited in Work due to Physical Health</b>						
YES	6.3	5.3	7.4	316	43,314	6.8
NO	93.5	92.4	94.5	4,092	639,308	93.1
UNK/REF	0.1	0.0	0.3	8	889	0
<b>Pain Interfered with Normal Work</b>						
Not at all	76.8	75.0	78.5	3,407	525,104	76.8
A little bit	17.8	16.3	19.4	753	121,438	17.7
Moderately/ Quite a bit	4.6	3.8	5.5	218	31,468	4.7
Extremely	0.5	0.3	0.8	27	3,100	0.4
UNK/REF	0.4	0.2	0.8	11	2,401	0
<b>PHYSICAL ACTIVITY LEVEL</b>						
PHYSICALLY INACTIVE	22.1	20.5	23.8	950	151,079	22.4
IRREGULAR	23.8	22.2	25.5	1,079	162,847	23.8
REGULAR	36.2	34.3	38.2	1,577	247,091	35.3
REGULAR & VIGOROUS	17.9	16.4	19.5	810	122,493	18
<b>All</b>	<b>100.0</b>			<b>4,416</b>	<b>683,511</b>	

- The numerator less than 5 or the denominator less than 50 are not shown.

\* Age was adjusted to Hawai'i state year 2000 census population.

Table 6. Mean Number of days activities limited due to poor physical or mental health by Arthritis Status , BRFSS 2000					
Arthritis Status	Mean	95% CI		Numerator	
				Sample Size	Estimated Population
Joint symptom w/ Arthritis	13.5	6.5	7.5	227	27,099
No joint symptom w/ Arthritis	9.7	8.8	10.6	198	25,071
No joint symptom & No Arthritis	7	12.5	14.5	678	100,473



Table 7. Arthritis told by doctor vs. Demographic Characteristics, BRFSS 2000  
 (weighted percentages row 100%, 95% confidence interval, sample size, and estimated population)

Characteristics	Yes			No			Sample size			Estimated Population		
	%Weighted	95% CI		%Weighted	95% CI		Yes	No	Total	Yes	No	Total
<b>AGE GROUP</b>												
18-24	1.4	0.6	3.3	98.6	96.7	99.4	7	446	453	1,481	107,147	108,628
25-34	4.2	2.8	6.3	95.8	93.7	97.2	39	935	974	7,274	164,110	171,384
35-44	7.0	5.6	8.8	93.0	91.2	94.4	110	1,249	1,359	13,149	174,502	187,652
45-54	15.0	12.5	17.9	85.0	82.1	87.5	209	1,093	1,302	23,429	132,701	156,130
55-64	25.0	20.3	30.3	75.0	69.7	79.7	194	546	740	29,145	87,388	116,532
65+	32.6	29.1	36.3	67.4	63.7	70.9	385	743	1,128	49,032	101,315	150,347
Unk/Ref	-	-	-	-	-	-	-	-	-	-	-	-
<b>GENDER</b>												
MALE	11.1	9.6	12.7	88.9	87.3	90.4	331	2,339	2,670	50,127	402,062	452,189
FEMALE	16.7	15.0	18.5	83.3	81.5	85.0	616	2,704	3,320	73,691	368,694	442,386
<b>ETHNICITY</b>												
WHITE	17.0	15.1	19.0	83.0	81.0	84.9	433	1,817	2,250	46,115	225,318	271,434
HAWAIIAN	13.0	10.1	16.5	87.0	83.5	89.9	134	791	925	18,554	124,289	142,843
FILIPINO	11.5	8.1	16.2	88.5	83.8	91.9	85	651	736	15,609	120,039	135,648
JAPANESE	14.2	12.0	16.7	85.8	83.3	88.0	202	1,063	1,265	28,625	173,122	201,747
OTHERS	10.4	8.1	13.3	89.6	86.7	91.9	93	721	814	14,916	127,988	142,904
<b>EDUCATION</b>												
<High School	24.8	18.5	32.3	75.3	67.7	81.5	123	324	447	17,776	54,043	71,819
High School	14.4	12.3	16.7	85.6	83.3	87.7	286	1,559	1,845	41,651	248,232	289,883
Some College	11.8	10.1	13.8	88.2	86.2	89.9	251	1,514	1,765	30,449	227,673	258,123
College	12.3	10.6	14.1	87.8	85.9	89.4	283	1,637	1,920	33,460	239,741	273,201
Unk/Ref	-	-	-	-	-	-	-	-	-	-	-	-
<b>EMPLOYMENT</b>												
Employed	9.1	7.8	10.5	90.9	89.5	92.2	399	3,608	4,007	54,916	549,862	604,778
Unemployed	11.9	6.7	20.3	88.1	79.7	93.3	22	140	162	3,442	25,541	28,983
Student/Homemaker	10.2	7.3	13.9	89.8	86.1	92.7	51	394	445	7,946	70,168	78,114
Retired/Unable to Work	31.5	28.3	34.9	68.5	65.1	71.7	472	895	1,367	57,155	124,264	181,419
Unk/Ref	-	-	-	-	-	-	-	-	-	-	-	-

Table 7. Arthritis told by doctor vs. Demographic Characteristics, BRFSS 2000, cont.  
 (weighted percentages row 100%, 95% confidence interval, sample size, and estimated population)

Characteristics	Yes			No			Sample size			Estimated Population		
	%Weighted	95% CI		%Weighted	95% CI		Yes	No	Total	Yes	No	Total
<b>HOUSEHOLD INCOME</b>												
< \$15,000	18.0	14.8	21.8	82.0	78.2	85.2	170	579	749	16,490	75,023	91,514
\$15-\$24,999	15.8	12.7	19.6	84.2	80.4	87.3	138	661	799	17,202	91,425	108,626
\$25-\$49,999	14.4	12.1	17.1	85.6	82.9	87.9	270	1,560	1,830	38,806	230,552	269,359
\$50-\$74,999	10.1	7.8	12.9	89.9	87.1	92.2	94	740	834	12,658	113,046	125,704
>=\$75,000	10.8	8.5	13.7	89.2	86.3	91.5	103	690	793	14,066	116,333	130,398
Unk/Ref	14.6	12.0	17.5	85.4	82.5	88.0	172	813	985	24,597	144,378	168,974
<b>MARITAL STATUS</b>												
Married	15.0	13.4	16.8	85.0	83.2	86.6	480	2,696	3,176	77,951	441,199	519,150
Unmarried	12.2	10.8	13.8	87.8	86.2	89.2	465	2,335	2,800	45,755	328,211	373,966
Unk/Ref	-	-	-	-	-	-	-	-	-	-	-	-
<b>COUNTY</b>												
HONOLULU	13.6	12.1	15.2	86.4	84.8	87.9	406	2,389	2,795	89,378	569,492	658,870
HAWAII	15.7	13.8	17.8	84.3	82.2	86.2	271	1,179	1,450	16,318	87,719	104,037
KAUAI	15.2	12.2	18.9	84.8	81.1	87.8	95	485	580	6,254	34,835	41,089
MAUI	13.1	10.9	15.7	86.9	84.3	89.1	175	990	1,165	11,868	78,710	90,578
<b>ALL</b>	<b>13.8</b>	<b>12.7</b>	<b>15.1</b>	<b>86.2</b>	<b>84.9</b>	<b>87.3</b>	<b>947</b>	<b>5,043</b>	<b>5,990</b>	<b>123,819</b>	<b>770,756</b>	<b>894,575</b>

-The numerator less than 5 or denominator less than 50 are not shown.

Table 8. Arthritis told by doctor vs. Health Characteristics, BRFSS 2000

(weighted percentages column 100%, 95% confidence interval, sample size, and estimated population)

	Yes			No			Sample Size			Estimated Population		
	%Weighted	95%		%Weighted	95%		Yes	No	Total	Yes	No	Total
<b>GENERAL HEALTH</b>												
Exc./very good	35.8	31.7	40.1	56.3	54.4	58.2	363	2,839	3,202	44,294	433,931	478,225
Good	37.1	32.6	41.9	33.6	31.8	35.4	340	1,674	2,014	45,965	259,060	305,025
Fair/poor	26.8	22.9	31.2	10.1	9.0	11.3	240	529	769	33,156	77,623	110,779
Unk/Ref	-	-	-	-	-	-	-	-	-	-	-	-
<b>PHYSICAL &amp; MENTAL HEALTH</b>												
Not Good	49.4	44.8	54.0	42.1	40.3	44.0	498	2,182	2,680	61,121	324,160	385,281
Good	49.3	44.7	53.9	57.4	55.5	59.3	439	2,834	3,273	61,083	442,671	503,754
Unk/Ref	1.3	0.6	3.0	0.5	0.3	0.9	10	27	37	1,615	3,925	5,541
<b>PHYSICAL/MENTAL HEALTH</b>												
Physical no good	22.8	19.4	26.6	15.9	14.5	17.4	227	790	1,017	28,195	122,360	150,555
Mental no good	8.1	6.1	10.8	14.8	13.5	16.2	83	750	833	10,069	114,038	124,107
Phy&Ment no good	18.5	15.4	22.1	11.4	10.3	12.6	188	642	830	22,857	87,762	110,618
Phy&Ment both Good	49.3	44.7	53.9	57.4	55.5	59.3	439	2,834	3,273	61,083	442,671	503,754
Unk/Ref	1.3	0.6	3.0	0.5	0.3	0.9	10	27	37	1,615	3,925	5,541
<b>FRUIT &amp; VEGETABLE INDEX</b>												
<once/day or never	1.1	0.6	1.9	3.9	3.2	4.7	14	186	200	1,310	29,905	31,215
1-2 times/day	29.7	25.3	34.5	34.3	32.5	36.1	251	1,621	1,872	36,743	264,727	301,470
3-4 times/day	44.7	40.2	49.3	39.7	37.9	41.6	420	2,085	2,505	55,404	306,067	361,470
5+ times/day	24.5	21.1	28.2	22.0	20.5	23.6	262	1,150	1,412	30,362	169,944	200,306
Unk/Ref	-	-	-	-	-	-	-	-	-	-	-	-
<b>FRUIT &amp; VEGETABLE SERVING</b>												
<1 servings/day	1.1	0.6	1.9	3.9	3.2	4.7	14	186	200	1,310	29,905	31,215
1-2 servings/day	11.1	8.5	14.4	13.4	12.2	14.7	86	621	707	13,721	103,504	117,225
2-5 servings/day	64.4	60.1	68.5	61.7	59.9	63.5	595	3,148	3,743	79,682	475,762	555,445
5-8 servings/day	19.9	16.8	23.4	17.4	16.1	18.8	210	898	1,108	24,643	133,829	158,472
>8 servings/day	3.6	2.5	5.2	3.6	3.0	4.3	42	189	231	4,463	27,641	32,104
Unk/Ref	-	-	-	-	-	-	-	-	-	-	-	-

Table 8. Arthritis told by doctor vs. Health Characteristics, BRFSS 2000, cont.

(weighted percentages column 100%, 95% confidence interval, sample size, and estimated population)

	Yes			No			Sample Size			Estimated Population		
	%Weighted	95%		%Weighted	95%		Yes	No	Total	Yes	No	Total
<b>SMOKING STATUS</b>												
CURRENT SMOKER	18.7	15.3	22.6	19.8	18.3	21.4	161	974	1,135	23,192	152,591	175,784
FORMER SMOKER	32.8	28.8	37.1	22.7	21.2	24.3	331	1,272	1,603	40,609	175,151	215,760
NEVER SMOKED	48.5	43.9	53.1	57.3	55.4	59.2	455	2,783	3,238	60,018	441,806	501,824
Unk/Ref	-	-	-	0.2	0.1	0.3	-	14	14	-	1,208	1,208
<b>HAD/HAVE ASTHMA</b>												
Yes	15.0	11.8	18.8	10.7	9.6	11.9	132	507	639	18,522	82,391	100,913
No	85.0	81.2	88.2	89.3	88.1	90.4	815	4,535	5,350	105,297	688,235	793,532
Unk/Ref	-	-	-	-	-	-	-	-	-	-	-	-
<b>DIABETES</b>												
Yes	12.1	9.4	15.5	4.0	3.4	4.7	101	233	334	14,936	31,194	46,130
Yes, during pregnancy.	2.3	1.3	4.2	1.0	0.7	1.4	19	54	73	2,882	7,999	10,881
No	85.5	81.9	88.5	94.9	94.1	95.6	825	4,754	5,579	105,808	731,165	836,974
Unk/Ref	-	-	-	-	-	-	-	-	-	-	-	-
<b>All</b>	100			100			947	5,043	5,990	123,819	770,756	894,575

- The numerator less than 5 or denominator less than 50 are not shown.

Table 9. Arthritis told by doctor vs. Physical Activities, BRFSS 2000  
(weighted percentages column 100%, 95% confidence interval, sample size, estimated population)

Characteristics	Yes			No			Sample Size			Estimated Population		
	%Weighted	95%		%Weighted	95%		Yes	No	Total	Yes	No	Total
<b>LEISURE TIME PHYSICAL ACTIVITY</b>												
Yes-leisure act.	71.9	67.1	76.3	77.6	76.0	79.1	690	3,933	4,623	89,021	598,322	687,342
No-leisure act.	28.1	23.7	32.9	22.4	20.9	24.0	257	1,110	1,367	34,798	172,435	207,233
<b>PHYSICAL ACTIVITY LEVEL</b>												
Inactive	28.1	23.7	32.9	22.4	20.9	24.0	257	1,110	1,367	34,798	172,435	207,233
Irregular	22.2	18.8	26.1	23.7	22.2	25.3	200	1,234	1,434	27,431	182,404	209,835
Regular	32.0	27.9	36.4	36.0	34.2	37.8	294	1,783	2,077	39,574	277,788	317,362
Regular&Vigorous	17.8	14.9	21.1	17.9	16.5	19.4	196	916	1,112	22,016	138,130	160,146
<b>All</b>	<b>100.0</b>			<b>100.0</b>			<b>947</b>	<b>5,043</b>	<b>5,990</b>	<b>123,819</b>	<b>770,756</b>	<b>894,575</b>
<b>BMI data removed pregnant women</b>												
<b>BODY MASS INDEX (I)</b>												
bmi<25/NOT overweight	44.2	39.8	48.7	49.4	47.5	51.3	426	2,523	2,949	54,743	375,635	430,378
bmi25-29.9/overweight	32.9	28.9	37.2	33.8	32.0	35.6	326	1,633	1,959	40,721	257,210	297,931
bmi>=30/obese	21.0	16.7	26.0	14.4	13.1	15.8	171	716	887	25,970	109,445	135,415
Unk/Ref	1.8	1.0	3.2	2.5	1.8	3.4	23	109	132	2,284	18,671	20,955
<b>BODY MASS INDEX (II)</b>												
bmi<30/NOT obese	77.2	72.2	81.5	83.2	81.6	84.7	752	4,156	4,908	95,464	632,844	728,309
bmi>=30/obese	21.0	16.7	26.0	14.4	13.1	15.8	171	716	887	25,970	109,445	135,415
Unk/Ref	1.8	1.0	3.2	2.5	1.8	3.4	23	109	132	2,284	18,671	20,955
<b>All</b>	<b>100.0</b>			<b>100.0</b>			<b>946</b>	<b>4,981</b>	<b>5,927</b>	<b>123,718</b>	<b>760,960</b>	<b>884,678</b>

Table 10. Arthritis told by doctor vs. SF 12 questions, BRFSS 2000

(weighted percentages column 100%, 95% confidence interval, sample size, and estimated population)

Characteristics	Yes			No			Sample Size			Estimated Population		
	%Weighted	95%		%Weighted	95%		Yes	No	Total	Yes	No	Total
<b>Limited Moderate Activities I</b>												
Yes, limited a lot	13.8	11.2	16.9	2.9	2.3	3.8	150	168	318	17,063	22,503	39,566
Yes limited a little	19.2	15.9	23.1	5.7	4.9	6.6	159	293	452	23,804	44,084	67,888
No, not limited at all	66.8	62.4	70.9	91.3	90.1	92.3	637	4,578	5,215	82,720	703,699	786,419
UNK/REF	-	-	-	-	-	-	-	-	-	-	-	-
<b>Limited Moderate Activities II</b>												
Yes, limited a lot	16.6	13.8	20.0	2.9	2.2	3.7	176	159	335	20,591	22,047	42,638
Yes limited a little	17.2	13.9	20.9	5.2	4.5	6.1	141	288	429	21,235	40,321	61,556
No, not limited at all	65.6	61.2	69.7	91.8	90.6	92.8	625	4,589	5,214	81,201	707,440	788,641
UNK/REF	0.6	0.2	2.0	0.1	0.1	0.3	5.0	7.0	12.0	792.0	948.0	1740.0
<b>Accomplished Less due to Physical Health</b>												
Yes	33.3	29.1	37.7	10.0	8.9	11.3	301	539	840	41,186	77,371	118,558
No	66.5	62.1	70.6	89.7	88.5	90.9	643	4,492	5,135	82,330	691,555	773,885
UNK/REF	-	-	-	0.2	0.1	0.5	-	12.0	15.0	-	1830.0	2132.0
<b>Limited in Work due to Physical Health</b>												
Yes	32.7	28.6	37.1	8.4	7.4	9.5	307	484	791	40,507	64,512	105,019
No	66.7	62.4	70.8	91.5	90.3	92.5	636	4,550	5,186	82,639	705,071	787,711
UNK/REF	-	-	-	0.2	0.1	0.3	-	9.0	13.0	-	1173.0	1845.0
<b>Accomplished Less due to Emotional Problems</b>												
Yes	17.5	14.3	21.3	8.1	7.2	9.1	164	458	622	21,712	62,363	84,075
No	81.8	78.0	85.1	91.7	90.6	92.6	777	4,569	5,346	101,274	706,436	807,710
UNK/REF	0.7	0.3	1.6	0.3	0.1	0.5	6.0	16.0	22.0	832.0	1958.0	2790.0
<b>Worked Less Carefully due to Emotional Problems</b>												
Yes	14.9	11.9	18.5	7.2	6.3	8.2	147	386	533	18,443	55,754	74,197
No	84.3	80.6	87.3	92.6	91.6	93.5	795	4,644	5,439	104,341	713,469	817,810
UNK/REF	0.8	0.3	2.1	0.2	0.1	0.4	5	13	18	1,035	1,532	2,567

Table 10. Arthritis told by doctor vs. SF 12 questions, BRFSS 2000, cont.

(weighted percentages column 100%, 95% confidence interval, sample size, and estimated population)

Characteristics	Yes			No			Sample Size			Estimated Population		
	%Weighted	95%		%Weighted	95%		Yes	No	Total	Yes	No	Total
<b>Pain Interfered with Normal Work</b>												
Not at all	42.7	38.1	47.3	72.7	71.0	74.4	398	3,660	4,058	52,810	560,417	613,228
A little bit	31.6	27.5	36.0	19.9	18.4	21.5	282	964	1,246	39,121	153,390	192,511
Moderately/quite a bit	21.1	17.8	24.9	6.4	5.6	7.3	212	356	568	26,178	49,089	75,267
Extremely	3.8	2.6	5.7	0.7	0.5	1.1	49	53	102	4,740	5,666	10,406
UNK/REF	0.8	0.2	2.6	0.3	0.1	0.6	6.0	10.0	16.0	970.0	2194.0	3165.0
<b>Felt: Calm and Peaceful</b>												
All/most of the time	61.6	56.8	66.1	66.3	64.5	68.1	591	3,340	3,931	76,244	511,270	587,514
A good bit of the time	12.8	10.4	15.8	13.3	12.1	14.5	129	716	845	15,897	102,149	118,047
Some/a little of the time	22.5	18.2	27.4	18.6	17.1	20.1	195	895	1,090	27,856	143,262	171,118
None of the time	2.3	1.4	3.7	1.5	1.1	2.1	24	78	102	2,814	11,893	14,707
UNK/REF	0.8	0.4	1.7	0.3	0.1	0.5	8.0	14.0	22.0	1007.0	2182.0	3189.0
<b>Felt: Have a lot of Energy</b>												
All/most of the time	46.3	41.8	50.9	63.6	61.8	65.4	444	3,121	3,565	57,307	490,355	547,662
A good bit of the time	23.9	19.7	28.8	16.6	15.3	18.0	202	895	1,097	29,624	127,806	157,430
Some/a little of the time	25.8	22.2	29.8	18.4	17.0	19.8	253	940	1,193	31,929	141,737	173,666
None of the time	3.6	2.3	5.5	1.2	0.9	1.6	42	71	113	4,444	9,096	13,540
UNK/REF	0.4	0.2	1.0	0.2	0.1	0.4	6.0	16.0	22.0	515.0	1763.0	2277.0
<b>Felt: Down-hearted and Blue</b>												
All/most of the time	5.5	3.5	8.7	3.3	2.7	4.0	48	169	217	6,844	25,445	32,289
A good bit of the time	2.6	1.6	4.1	2.0	1.5	2.6	37	106	143	3,190	15,205	18,395
Some/a little of the time	48.2	43.7	52.8	47.2	45.4	49.1	455	2,466	2,921	59,706	363,971	423,677
None of the time	43.4	38.8	48.1	47.2	45.3	49.1	402	2,285	2,687	53,732	363,916	417,648
UNK/REF	0.3	0.1	0.7	0.3	0.2	0.5	5.0	17.0	22.0	347.0	2219.0	2566.0
<b>Physical Health or Emotional Problems interfered with Social Activities</b>												
All/most of the time	6.3	4.2	9.1	2.8	2.2	3.4	67	156	223	7,736	21,231	28,967
A good bit of the time	2.8	1.6	4.8	1.3	0.9	1.9	26	69	95	3,399	10,324	13,723
Some/a little of the time	21.0	17.7	24.6	15.3	14.0	16.6	214	819	1,033	25,975	117,869	143,845
None of the time	69.5	65.3	73.5	80.2	78.7	81.6	635	3,980	4,615	86,078	617,949	704,027
UNK/REF	0.5	0.2	1.5	0.4	0.2	0.8	5.0	19.0	24.0	630.0	3383.0	4013.0
<b>All</b>	100.0			100.0			947	5,043	5,990	123,819	770,756	894,575

- The numerator less than 5 or the denominator less than 50 are not shown.

