

Alaska Arthritis and Osteoporosis Plan



A Public Health Approach

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The following organizations endorse the Alaska Arthritis and Osteoporosis Plan:

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Alaska Physical Therapy Association

Alaska Occupational Therapy Association
<http://www.akota.org>

Alaska Primary Care Association
<http://www.alaskapca.org>

Alaska State Hospital and Nursing Home Association
<http://www.ashnha.com>

Arthritis Foundation, Washington/Alaska Chapter
<http://www.arthritis.org>

Lupus Foundation of America Alaska Chapter, Inc.
<http://www.lupus.org>

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Impact of Arthritis and Osteoporosis

Arthritis and osteoporosis are serious chronic conditions that deeply affect the lives of many people in Alaska. The prevalence of arthritis in Alaska's 1990 overall population was estimated to be 10% or 54,000 people. Of those, approximately 8,000 were estimated to have some sort of activity limitation because of arthritis. This estimate was the lowest of any state in the United States, because Alaska's population of people over the age of 65 was, and continues to be, smaller than other states. However, the results of a nationally standardized survey in the year 2000 showed similar percentages of people that reported having chronic joint symptoms or doctor-diagnosed arthritis in Alaska compared to the other 35 states.



Of the people in the 2000 Alaska Behavioral Risk Factor Surveillance System (BRFSS) who reported having a doctor's diagnosis of arthritis, there were an equal number of women and men affected (50.6% were women and 49.4% were men). This is vastly different than the 35 other states where 61.5% were women and 38.5% were men. Arthritis prevalence increases with age. While Alaska's population is younger than most other states, the proportion of Alaskans aged 65 and older has increased faster than in any other state, and this segment of the population will have pronounced growth in the coming decades.

The 2000 Alaska BRFSS telephone survey showed that the percentage of people who report doctor-diagnosed arthritis was similar between Alaska Natives and whites (the sample sizes of other racial categories were too small to provide reliable estimates). U.S. prevalence estimates show similar rates between African American, American Indian, Eskimo and Aleut, and white populations, with lower rates among Asian and Pacific Islander populations.

Being overweight or obese increases the likelihood that a person will develop osteoarthritis, especially in weight-bearing joints such as the hips and knees. According to 2000 Alaska BRFSS data, 59% of Alaskan adults reported being overweight or obese, an alarming increase since 1991 when 49% reported being overweight or obese. Regular physical activity maintains muscle strength and joint health, but 20% of the 2000 Alaska BRFSS respondents and 29% of respondents with doctor-diagnosed arthritis reported no leisure time physical activity.

Arthritis, particularly osteoarthritis, may develop in joints that have been injured. Joint injury can occur at work or at home, in physical labor, in sports, or in daily activities. Three of Alaska's important industries, logging, commercial fishing (both harvesting fish and fish processing), and transportation, are industries that have high incidences of occupational injury.



Osteoporosis affects an estimated 5 to 8 million people in the United States, affecting 13% to 18% of women over the age of 50 and 3% to 6% of men in the same age group. Applying these national estimates to Alaska's 2000 population, approximately 15,000 Alaskans aged 50 and older have osteoporosis. Osteoporosis is more prevalent among women, and prevalence also increases with age.

Mission

The Alaska Arthritis Program was established in September 1999 by a Cooperative Agreement between the Centers for Disease Control and Prevention (CDC) and the State of Alaska. The Arthritis Program receives direction and support from the Alaska Arthritis Advisory Group. This group first met in September 2000 and helped develop this Alaska Arthritis and Osteoporosis Plan. This document outlines strategies to decrease the impact of arthritis and osteoporosis in Alaska.



The mission of the Alaska Arthritis Advisory Group is to improve the lives of Alaskans through partnerships in public education, prevention, early diagnosis, and management of arthritis and related diseases.

Goals and Strategies

Goal 1 – Improve the quality of life for Alaskans living with arthritis and osteoporosis.

- Develop and maintain a registry of arthritis medication resources for health care providers and people with arthritis.
- Increase the number of Alaskans participating in exercise or self-management programs to reduce arthritis symptoms.
- Develop an Alaska arthritis and osteoporosis resource guide.
- Organize a support and education group for people with arthritis who lead physically active lifestyles in the Anchorage area.
- Develop a strategic plan for creating an “Arthritis and Osteoporosis Resource Center.”
- Establish an Arthritis Medication Support Program.
- Distribute information about osteoporosis and fracture prevention to agencies and organizations that serve older Alaskans.
- Increase the number of risk assessments for osteoporosis and falls in assisted living facilities.

Goal 2 – Promote collaboration among health providers, community organizations, government agencies, and professional organizations.

- Link all organizations represented in the Advisory Group on web pages.
- Share model programs throughout the state.
- Explore legislative approaches to improve the environment in Alaska for people with or at risk for arthritis and osteoporosis and develop priorities for local and state policy/legislation development.
- Establish an Arthritis Speakers Bureau.

Goal 3 – Increase the public’s awareness and knowledge of arthritis and osteoporosis and the importance of early diagnosis.

- Distribute education materials as widely as possible.
- Conduct a health communication campaign using appropriate channels to increase awareness.
- Promote use of newly developed arthritis and osteoporosis learning stations at health fairs.

Goal 4 – Improve health care providers’ communication with clients about self-management techniques and available resources.

- Increase health care providers’ awareness of arthritis and osteoporosis resources.

Goal 5 – Educate providers about proper diagnosis and treatment of arthritis and osteoporosis.

- Establish a regular schedule of continuing education opportunities for health care providers in larger population centers.
- Explore other ways to deliver continuing education to providers, especially to those in rural settings.

Goal 6 – Monitor the impact of arthritis and osteoporosis in Alaska over time using as many reliable data sources as possible.

- Ensure standard and consistent use of data terms.
- Monitor the quality of life for Alaskans with arthritis and osteoporosis.
- Monitor the prevalence of risk factors for arthritis and osteoporosis.
- Develop current and future estimates of arthritis and osteoporosis prevalence in Alaska.
- Estimate the costs associated with arthritis and osteoporosis.



Introduction

The Alaska Arthritis Advisory Group and the Alaska Arthritis Program, Section of Epidemiology, Alaska Department of Health and Social Services, are proud to present the *Alaska Arthritis and Osteoporosis Plan: a Public Health Approach*. This document outlines strategies to decrease the impact of arthritis and osteoporosis in Alaska.

In 1999 the Arthritis Foundation, the Association of State and Territorial Health Officials, and the Centers for Disease Control and Prevention collaborated to develop a public health approach to arthritis. The resulting document, the *National Arthritis Action Plan*, provides nationwide goals and strategies to lessen the burden of arthritis. One outcome of the national plan was the availability of federal funds to create state arthritis programs. The Alaska Arthritis Program was established in September 1999 by a cooperative agreement between the Centers for Disease Control and Prevention (CDC) and the State of Alaska. In September of 2000, the Arthritis Advisory Group was formed to direct and support the state program, and this group developed the structure and content of the *Alaska Arthritis and Osteoporosis Plan*.

What is Arthritis?

Arthritis is a term that is associated with over 100 different diseases or conditions that can cause swelling, pain, and loss of motion in or around joints.

Osteoarthritis, also known as degenerative joint disease, is by far the most common type of arthritis. Osteoarthritis is caused by damage to cartilage in the joint: the damage can be a result of an injury or repetitive use. Bony spurs may form on the bone ends around the joint. It most often affects the hands, feet, knees, and hips.¹

Rheumatoid arthritis usually affects more than one joint, causing inflammation (swelling) in the lining of joints, which can result in chronic pain and loss of movement. It often affects joints in the hands, wrists, shoulders, hips, knees, and feet. Rheumatoid arthritis can also cause inflammation in the linings of the body's internal organs. Rheumatoid arthritis is an autoimmune response in which the body's defense system attacks joint tissue, causing inflammation and joint damage. However, the cause of this autoimmune disease is unknown.²

Fibromyalgia is considered by many to be a type of arthritis. It affects muscles, ligaments and tendons (fibers that connect bones to bones, and muscles to bones, respectively). Fibromyalgia is a rheumatic disease but affects muscles and soft tissues instead of joints. Diagnosis of fibromyalgia is difficult: currently there are no established criteria for making a diagnosis. The cause of fibromyalgia is unknown.³



Lupus (systemic lupus erythematosus or SLE) is another autoimmune disease that affects joints, muscles and internal organs. It can affect different organs and systems, such as the central nervous system, the heart, lungs, kidneys, muscles, and joints. The disease ranges from mild to severe and is characterized by periods of "flares" with weight loss, fever, fatigue, aching, and weakness. The cause of lupus is unknown.⁴

Arthritis: the warning signs

A person with the following symptoms in or around a joint for more than two weeks should see a doctor.

- Pain
- Stiffness
- Swelling (sometimes)
- Difficulty moving a joint

Source: Arthritis Foundation

Ankylosing spondylitis generally affects the joints of the spine but can affect other joints as well. It can cause the bones of the spine to fuse together as the condition progresses.⁵

Other types of arthritis include juvenile rheumatoid arthritis, gout, carpal tunnel syndrome, polymyalgia rheumatica, psoriatic arthritis, Marfan syndrome, and scleroderma to name a few. Additionally, other conditions or diseases can cause arthritis: examples of this are Lyme disease, inflammatory bowel disease, and hemochromatosis. Even some medications can cause arthritis. Arthritis affects each individual differently in the type and severity of symptoms.

What is Osteoporosis?

Osteoporosis is a condition characterized by decreased bone strength, which depends on two factors – bone density and bone quality. Bones in a person with osteoporosis are more susceptible to fractures (breaks). Osteoporosis is an underlying cause in most fractures among older people. The disease can progress undetected without pain or other symptoms for many years and is often undiagnosed until a bone breaks.

The most common places for osteoporotic fractures are the spine, wrists, hips and arms. Many of the spinal (vertebral) fractures that occur are painless and often not diagnosed, but a series of vertebral fractures may cause loss of height and a bent-over posture. Hip fractures are the most serious outcome of osteoporosis. In the United States about half the older people who are hospitalized with hip fracture never regain their former level of function, and in the year following the fracture, 20% will die.⁶ Falls are the leading cause of injury deaths in older adults (65 years of age or older) in the United States and the most common type of injury disability.⁷



The development of most osteoporosis is related to three factors: how much bone mass is produced in childhood and early adulthood, maintenance of bone mass between the ages of 30 and 50, and the rate of bone loss at older ages. However, osteoporosis can also be an outcome of other diseases or a result of using certain medications. An example of medications that can cause osteoporosis is in the class of drugs called glucocorticoids, which are often used to treat the inflammation associated with some types of arthritis.⁸

Arthritis in the United States and Alaska

In 1997, 16% of people in the United States, about 43 million people, had some form of arthritis. Arthritis limits the activities of more than eight million people in the U.S.⁹ Arthritis is also the leading cause of disability and has a substantial impact on the U.S. economy in terms of health care costs and missed work.¹⁰ In 1997, employers paid about \$9,693 per employee with rheumatoid arthritis for medical, pharmaceutical, and lost work costs in the U.S.¹¹

The prevalence of arthritis in Alaska's 1990 overall population was estimated to be 10% or 54,000 people. Of those, an estimated 8,000 had some sort of activity limitation because of arthritis.¹² This estimate was the lowest of any state in the United States, because Alaska's population makeup was, and continues to be, younger than other states. However, the results of a nationally standardized survey in the year 2000 showed similar percentages of people that report having chronic joint symptoms or doctor-diagnosed arthritis between Alaska and the other 35 states that asked the same arthritis questions. This survey, the Behavioral Risk Factor Surveillance System (BRFSS), is a nationwide random-digit-dialed telephone survey that asks civilian, non-institutionalized people 18 years of age and older to answer questions about their health and health behaviors. The survey is a good tool to compare what different groups of people say about their health.

Activity limitation and pain caused by arthritis have a tremendous negative impact on a person's quality of life and the lives of family and friends. The effect of arthritis on the lives and livelihoods of many Alaskans cannot be underestimated, and is best described by those who live with it.



"I haven't been hunting in about 10 years or so, or fishing..."

"I have arthritis in my hands to the extent that my handwriting is now quite shaky, and I have lost my dexterity - I can't pick up things and do fine work..."

"[My wife and I] were in a condo [where] we had to go down seven stairs, and just watching her go up and down the stairs was sheer agony, and it got worse everyday."

"I can't get around like I used to — I used to go berry picking, walk around in the woods — I can't do that anymore.

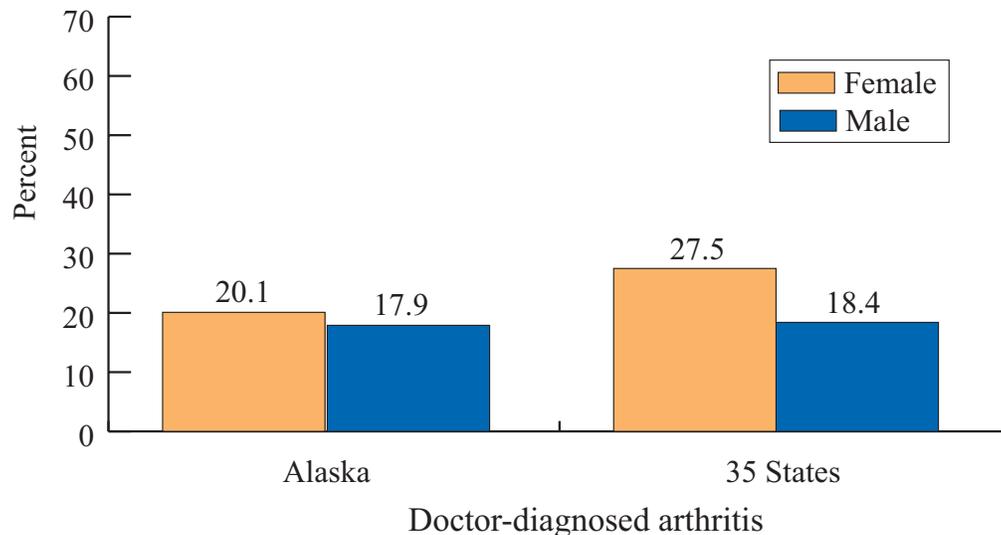
And I used to go down to the beach a lot, and I can't do that anymore either. I've got this arthritis on my spine too, and on my hand and on my ankle."

Some people are more likely to have arthritis than others. Generally, women have arthritis more often than men. Older people are more likely to have arthritis than younger people. Some differences in arthritis may be due to a person's genetic makeup. People who are overweight are more likely to develop osteoarthritis, and studies have shown that smoking may contribute to the development of, or increase disease severity in, rheumatoid arthritis in some people.^{13,14,15} These are all called "risk factors." Age, sex and genetics are characteristics that a person cannot change, so they are called "non-modifiable" risk factors. Physical activity, weight and smoking are factors that people can manage, so they are called "modifiable" risk factors.

Female/Male

Generally, women are more likely than men to have arthritis. A CDC estimate of arthritis prevalence in the U.S. showed that females in all age groups had higher rates of arthritis than males.⁹ Of the people in the 2000 Alaska Behavioral Risk Factor Surveillance System (BRFSS), 20.1% of women and 17.9% of men reported having been told by a doctor that they have arthritis. Figure 1 shows that in this regard, Alaska differs from other states. Of the 35 other states that asked arthritis questions in the 2000 BRFSS, 27.5% were women and 18.4% were men.

Figure 1. Percentage of Alaskan adults reporting doctor-diagnosed arthritis compared to 35 other states, by sex, 2000 Alaska BRFSS



* In the national 2000 BRFSS, Alaska and 35 other states included questions on arthritis. The 35 other states include Alabama, Arizona, California, Colorado, Connecticut, Florida, Georgia, Hawaii, Idaho, Illinois, Indiana, Iowa, Kansas, Kentucky, Maryland, Minnesota, Mississippi, Nebraska, New Hampshire, New Jersey, New Mexico, New York, North Carolina, North Dakota, Ohio, Oklahoma, Oregon, Rhode Island, South Carolina, Tennessee, Utah, Vermont, Virginia, Wisconsin, Wyoming.

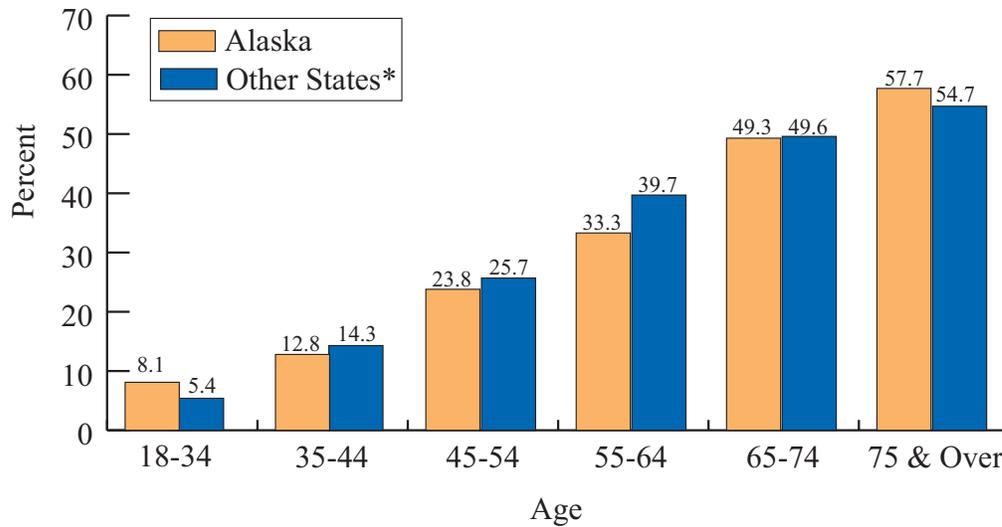
Age

Increasing age is associated with an increased risk of arthritis. The prevalence of arthritis in Alaska’s 1990 overall population was estimated to be 10%, the lowest of any state in the United States because Alaska’s population of people over the age of 65 is smaller than other states. However, the number of Alaskans who are 65 years of age and older has increased rapidly in recent years, and this segment of the population will have the most pronounced growth in the coming decades. The 2000 census data showed that 5.7% of the population was 65 years of age and older (35,699 people), a 209% increase since 1980. By 2010, persons 65 years of age and older will comprise 8.1% of Alaska’s total population, and by 2020 they will comprise 12.9%.¹⁶ This will result in an increase in the number of people affected by arthritis in the future, because nearly 50% of the people over the age of 65 years of age have arthritis.¹⁷

The 2000 Alaska BRFSS survey data showed that the percentage of respondents reporting a doctor’s diagnosis of arthritis increases with age in Alaska, similar to trends in the overall United States population (Figure 2).

Arthritis affects young people as well. Juvenile rheumatoid arthritis is a common chronic illness in children, affecting an estimated 285,000 children in the United States.¹⁷ As yet, there is no estimate for the number of children affected by arthritis in Alaska.

Figure 2. Percentage of Alaskan adults reporting doctor-diagnosed arthritis, by age group, 2000 Alaska BRFSS



* In the national 2000 BRFSS, Alaska and 35 other states included questions on arthritis. The 35 other states include Alabama, Arizona, California, Colorado, Connecticut, Florida, Georgia, Hawaii, Idaho, Illinois, Indiana, Iowa, Kansas, Kentucky, Maryland, Minnesota, Mississippi, Nebraska, New Hampshire, New Jersey, New Mexico, New York, North Carolina, North Dakota, Ohio, Oklahoma, Oregon, Rhode Island, South Carolina, Tennessee, Utah, Vermont, Virginia, Wisconsin, Wyoming.

Ancestry/Race

In the 2000 census Alaska ranked 48th in total population size with 626,932 people. Within the Alaska population 69.3% are white, 15.6% American Indian or Alaskan Native, 5.5% with two or more racial heritages, 4.0% Asian, 3.5% African American, 0.5% Native Hawaiian or other Pacific Islander, and 1.6% reported being some other race. A little over 4% of the population reported Hispanic or Latino ethnicity (independent of racial identity).¹⁸ The BRFSS telephone survey showed that the percentage of people who report doctor-diagnosed arthritis is similar between Alaska Natives and whites: the sample sizes of other racial categories were too small to provide reliable estimates (Table 1). U.S. prevalence estimates show similar rates between African American, American Indian Eskimo and Aleut, and white populations, with lower rates among Asian and Pacific Islander populations.¹⁹

Table 1. Percentage of Alaskan adults reporting doctor-diagnosed arthritis by race/ethnicity, 2000 Alaska BRFSS

<i>Race/Ethnicity</i>	<i>Percent of persons reporting doctor-diagnosed arthritis</i>
Alaska Native, American Indian	21.8%
White	19.4%

Note: the percentages for African American and Asian/Pacific Island populations and Hispanic ethnicity are not shown: because of the small number of respondents in these groups, the percentages are either not reliable or not statistically significant.

Although little is known about what types of arthritis occur in Alaskans generally, much more is known about arthritis in Alaska Native populations, because the Alaska Native Medical Center (ANMC) maintains a database for their clients with arthritis around the state. The ANMC serves people at its hub in Anchorage and conducts rheumatology clinics in 11 communities throughout the state twice a year. Currently there are close to 3,000 patients in the arthritis database; almost all are Alaska Natives.



Rheumatoid arthritis is more prevalent among the Inupiat of the North Slope area and the Tlingit of Southeast Alaska but not among other groups. The Yupik, who share common ancestry with the Inupiat, have prevalence rates within the same range as the general United States population (Table 2).²⁰

Table 2. Prevalence rate of rheumatoid arthritis among adults ≥20 in select Alaska Native populations

Population (year of study)	Prevalence Rate, age-adjusted to 1980 U.S. population (95% CI)		
	Male	Female	Total
North Slope Borough Inupiat 1990	0.68 (0.22-1.6)	2.78 (1.74-4.4)	1.78 (1.13-2.67)
Bristol Bay Yupik 1990	0.07 (0.002-0.39)	1.12 (0.56-2.0)	0.62 (0.32-1.09)
Kotzebue Inupiat 1982	0.39 (0.14-0.85)	2.33 (1.13-3.8)	1.41 (0.88-2.13)
Yukon-Kuskokwim Yupik 1982	0.41 (0.22-0.69)	1.27 (0.86-1.8)	0.86 (0.62-1.15)
Tlingit 1984	1.28 (0.84-1.87)	3.45 (2.7-4.38)	2.42 (1.98-2.95)

Source: Boyer GS, Benevolenskaya LI, Templin DW, Erdsz S, Bowler A, Alexeeva LI, Goring WP, Krylov MY, Mylov NM. Prevalence of rheumatoid arthritis in circumpolar native populations. *J Rheumatol* 1998; 25:23-9.

The prevalence of systemic lupus erythematosus is also elevated among the Tlingit.²¹ Other types of arthritis, known as spondyloarthropathies (which are diseases of the joints within the spine), are also highly prevalent in Inupiat communities in both adults and children.²²

Weight/Physical Activity

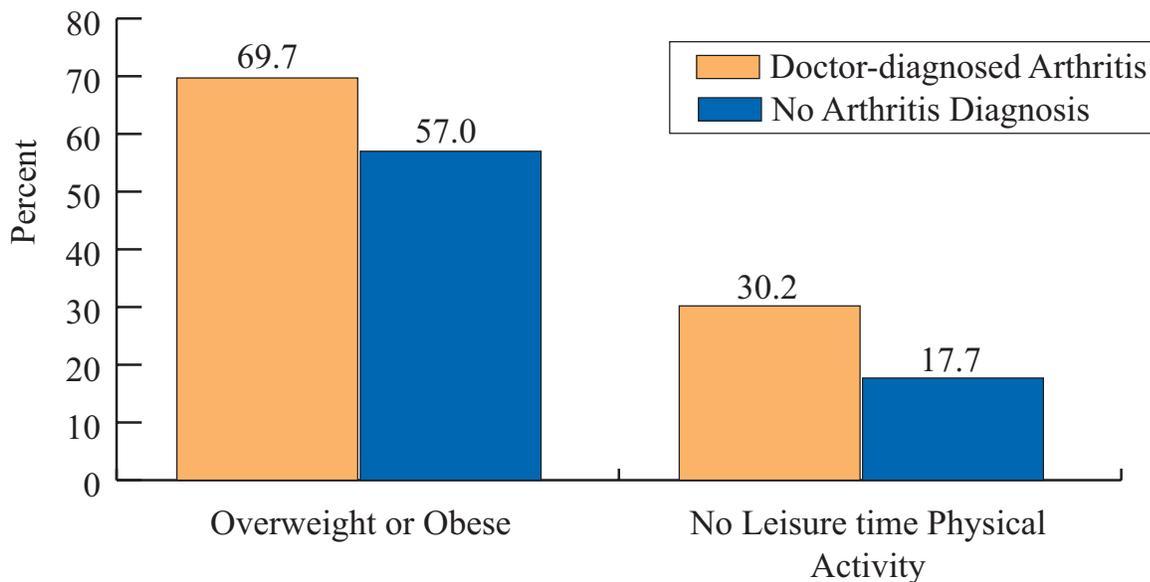
Being overweight or obese increases the likelihood that a person will develop osteoarthritis, especially in weight-bearing joints such as the hips and knees. People with arthritis often become less active because they experience joint pain when they move, which might lead to weight gain and even more stress on the weight-bearing joints. For people with osteoarthritis, being overweight makes it more likely that joint damage will occur.¹³

“I don’t move as fast and I have more of a tendency - it may be just me, but I fall - I don’t know if it’s arthritis or if it’s just my clumsiness”

According to 2000 Alaska BRFSS data, 59% of Alaskan adults reported being overweight or obese, up from 49% in 1991. Twenty percent of Alaskans reported engaging in no leisure time physical activity, and only 19% reported regular and vigorous physical activity.

People with arthritis are more likely to be overweight or obese, and they are less likely to engage in physical activity. Figure 3 below shows that more people reporting doctor-diagnosed arthritis in the 2000 Alaska BRFSS survey were overweight or obese (69.7 % compared to 57.0 %) and reported no leisure time physical activity (30.2% compared to 17.7%) than people who did not report having arthritis.

Figure 3. Overweight and inactivity status reported among Alaskan adults with and without doctor-diagnosed arthritis, 2000 Alaska BRFSS



The good news is that people can lower their risk for arthritis by maintaining a healthy weight and engaging in regular physical activity. Maintaining or working toward a healthy weight and participating in physical activity are also important for persons who have already developed arthritis. For people with arthritis who are overweight, losing weight can decrease arthritis pain. An appropriate exercise program for anyone with arthritis will strengthen muscles around the joint, increase joint mobility, lessen arthritis pain, and improve overall health. Before beginning a weight control or exercise program it is important for the person with arthritis to discuss options with a health care provider.



Joint Injury

Arthritis, particularly osteoarthritis, may develop in joints that have been injured. Joint injury can occur at work or at home, in physical labor, in sports, or in daily activities.

Three of Alaska's important industries, logging, commercial fishing (both harvesting fish and fish processing), and transportation are industries that have high incidences of occupational illness and injury. They all require heavy lifting and/or repetitive movements, which may cause joint injury.¹³

In 1998, manufacturing, composed mostly of the seafood processing and wood products industries, had a lost workday rate more than twice that of the overall private sector. The second most hazardous industry category was construction, and the third was the category of transportation, communications, and public utilities. Mining, which includes oil and gas extraction, posted the lowest lost workday rate.²³



Of occupational illnesses in Alaska, 65.4% were related to repeated trauma in 1998, and many of these types of illnesses occurred in the seafood processing industry. Alaska 1999 labor statistics show that in these occupations, sprains/strains are the most common type of non-fatal injury that caused days away from work. In the production of fresh or frozen prepared fish, worker motion or position caused nearly 23% of the injuries.²⁴

Worksite wellness programs and programs promoting safety in sports need to address the risks for joint injury and improve joint protection.

Osteoporosis in the United States and Alaska

Osteoporosis affects an estimated 10 million people in the United States, and another 18 million people have low bone mass, which puts them at an increased risk for the disease. Osteoporosis affects an estimated 5 to 8 million people in the United States, affecting 13% to 18% of women over the age of 50 and 3% to 6% of men in the same age group.²⁵ Applying these national estimates to Alaska’s 2000 population, between 11,000 and 12,000 Alaskans 50 years of age and older have osteoporosis.

The prevalence of osteoporosis increases with age among both men and women. However, 80% of those affected by osteoporosis are women.²⁶ Osteoporosis is more common among women than among men because: women do not build as much total bone mass as men; with age, women lose bone mass faster than men due to declining estrogen levels after menopause; and women have a longer life span than men.²⁷ Women make up 80% of the hospital admissions for hip fractures, one of the most serious outcomes of osteoporosis.⁷

The prevalence of osteoporosis increases with increasing age. Of those 85 years of age and older, 90% of women and 54% of men had reduced bone mineral density. While the prevalence of osteoporosis is estimated to be twice as high among non-Hispanic white people over the age of 65, significant risk has been reported in people of all ethnic backgrounds.²⁸

Other risk factors that lead to low bone mass include: low weight and low body mass index (BMI), smoking, and a history of prior fractures.²⁹ A more complete list of factors that increase the likelihood of having an osteoporotic fracture is in Table 3.

<ul style="list-style-type: none"> • History of fracture as an adult • Caucasian or Asian race • Female sex • Poor health/frailty • Low body weight (< 127 lbs.) • Estrogen deficiency • Use of certain medications • Alcoholism • Recurrent falls 	<ul style="list-style-type: none"> • History of fracture in a 1st degree relative • Advanced age • Dementia • Current cigarette smoking • Anorexia nervosa or bulimia • Low testosterone levels in men • Low calcium intake (lifelong) • Impaired eyesight despite adequate correction • Inadequate physical activity
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Source: National Osteoporosis Foundation

Falls are the leading cause of injury deaths for people 65 years of age and older. One in three older adults falls at least once a year, and 20%-30% sustain moderate to severe injuries.⁷ Osteoporosis plays a major role in injury from falls. The number of people in the U.S. at increased risk for fracture because of low bone mass is estimated to be 25 million.³⁰ One-half of all women and one in eight men over 50 will have an osteoporosis-related fracture in her or his lifetime.³¹ The medical care costs of fractures in older adults were estimated to be \$13.8 billion dollars in 1995.³²

As with arthritis, the rapidly aging Alaskan population will likely result in an increased prevalence of osteoporosis and osteoporotic fractures in the coming decades.

Why Address Both Arthritis and Osteoporosis in this Plan?

People with osteoarthritis (the most common type of arthritis) are *less likely* to develop osteoporosis.³³ Even though osteoporosis and osteoarthritis do not typically affect the same people, both rheumatoid arthritis and systemic lupus erythematosus (lupus) increase the likelihood of osteoporosis.³⁴

There are other important relationships between arthritis and osteoporosis. For example, some of the medications used to treat several types of arthritis can cause osteoporosis.⁸ People taking these medications and their health care providers need to be vigilant in monitoring and managing potential losses of bone mineral density.

People with arthritis are more likely to be less physically active. Physical inactivity can contribute to weakened muscle strength and inadequate balance, which increase the risk of falls and osteoporotic fracture.

While arthritis and osteoporosis are two very different medical conditions, they have similarities in the groups of people most affected and in the management strategies that people can use. Osteoporosis and many types of arthritis are more prevalent among women and older age groups. Both conditions can also be improved through healthy eating, physical activity, and pain management strategies.

Identified Needs and Existing Resources in Alaska

The Arthritis Advisory Group defined many areas in the prevention, diagnosis, medical management and self-management of arthritis that need to be addressed in order to reduce the burden of arthritis and osteoporosis in Alaska. The group also identified many resources that already exist but may not be well known or utilized throughout the state that can serve as a foundation to build a network of resources. Disseminating information about available resources is as important as developing new resources.

A statewide needs assessment survey conducted in 2001 confirmed many of the needs that the Arthritis Advisory Group identified. This survey of both people with arthritis and primary health care providers showed that there is a great deal of work ahead.

Programs

Need – Greater numbers of effective arthritis exercise and self-management programs need to be established throughout the state.

The arthritis needs assessment survey found that people with arthritis live with a great deal of pain: respondents reported an average of over 14 days in a month when pain made it hard for them to do their usual activities. They also used health care services frequently: over 50% of the respondents visited a clinic or doctor's office three or more times in the past year. Not many of the programs designed to improve the lives of people with arthritis have been well studied for effectiveness, but two Arthritis Foundation courses, the Arthritis

"My concern is that they tell us to exercise, but other than walking there isn't a place to exercise."

Self-Help Course and PACE (People with Arthritis Can Exercise), have been shown to be effective. The Arthritis Self-Help Course reduced arthritis pain by up to 20% and also reduced the number of physician visits by over 40% over a four-year period in one study.³⁵ Currently there are only a few of these evidence-based self-management arthritis programs in Alaska.



Resources – The Washington/Alaska Chapter of the Arthritis Foundation recently held instructor training programs in Alaska for the first time in several years, and the Foundation supports two PACE classes, two Aquatics Programs and one support group. The Arthritis Foundation is committed to continued growth of their programs throughout Alaska. The Lupus Foundation of America, Alaska Chapter has a strong program in the state, offering both lupus and fibromyalgia support groups for people around the state.

The Washington/Alaska Chapter of the Arthritis Foundation offers many services to Alaskans, including a toll free “Helpline”, Internet resources, free brochures, exercise and self-management classes, and training opportunities for people who would like to be instructors. The chapter is located in Seattle, Washington, 2,435 driving miles from Anchorage. The physical presence of the Arthritis Foundation in the state would vastly increase the programs and services they provide to Alaskans and increase the support that the organization could provide to their dedicated volunteers here in Alaska.

The Arthritis Program will work with the Arthritis Foundation, senior centers, health clubs and other partners to increase the number of programs available in the state. A major priority will be to establish programs in rural communities.

Tips for managing your pain

- Exercise regularly
- Use correct posture to help your joints stay aligned properly
- Listen to your body for signals that it needs to rest
- Use assistive devices such as splints and braces to help stabilize joints, provide strength and reduce pain and inflammation
- Ask your doctor about hot tub therapy
- Get enough sleep
- Consider massage
- Practice relaxation techniques
- Keep a positive attitude

“If you don’t move, you are done for.”

“That’s part of arthritis, it’s getting the rest of your body functioning so that it can get strong and support the joints that are not working very well.”

Data

Need – A surveillance system needs to be developed to provide reliable data on prevalence, morbidity, economic burden, and quality of life for Alaskans with arthritis and osteoporosis. Existing data systems have a limited ability to fully monitor the burden of arthritis and osteoporosis in Alaska.

The Alaska BRFSS, a yearly population-based random telephone survey, asked questions about arthritis for the first time in the year 2000. Both arthritis questions and questions asking about a person's quality of life are asked in the 2001 survey. The survey data provide the only population-based source of information about arthritis and arthritis risk factors in Alaska. However, at this point there is no long-term plan for including these questions in future surveys.

Another challenge is that the State of Alaska currently has no uniform hospital discharge data. The Arthritis Program is working to develop a composite picture of the burden of arthritis in Alaska from as many available data sources as possible. However, with no continuing access to uniform hospital discharge data, it is difficult to obtain a complete picture of the burden of arthritis and osteoporosis.

Resources – The BRFSS Planning Committee is a group that makes recommendations to the Commissioner of Health and Social Services about which questions should be included yearly in the survey. This group is working to develop a long-range strategic plan.

The Arthritis Program will work to develop a surveillance system that will monitor arthritis and osteoporosis at the state level. Collecting arthritis and osteoporosis data is an important way to evaluate the progress on this plan.

Partners

Need – Current partnerships need to be strengthened and non-traditional partnerships need to be formed.

Although many organizations working with people with arthritis or osteoporosis are interested in providing information or services, currently no support network exists so many activities are done in isolation.

Resources – The number of agencies and individuals who are interested and enthusiastic about addressing the arthritis and osteoporosis burden in Alaska is Alaska's most valuable resource. A full list of individuals and organizations that contributed to developing this plan are included in the acknowledgements. These partners are committed to continue working on arthritis and osteoporosis issues, and the number of partners in this process continues to grow every month as networks develop.

New creative partnerships will need to be formed to address the full scope of arthritis and osteoporosis issues in Alaska. This can include activities that range from working with groups that promote local environmental changes that encourage physical activity, to assuring that primary health care providers have the tools they need to diagnose and help the person self-manage arthritis and osteoporosis.

No program or organization can complete the task ahead alone: no one organization has the resources to address every aspect of the problem. Coordinated efforts will make the best use of limited resources and decrease duplication of efforts. Partnerships between public and private agencies will help translate scientific findings to successful activities at the community level.



Access for Rural Alaskans

Need – Quality arthritis and osteoporosis care needs to be accessible to all Alaskans.

Area of residence affects arthritis care in Alaska. There are only three practicing rheumatologists in the state, one of which contracts with the Alaska Native Medical Center to serve Alaska Natives and American Indians. The other two rheumatologists have private practices in Anchorage.

Rural Alaskans face a number of challenges getting arthritis care. Since rheumatologists and orthopedic surgeons are a long and expensive flight away from a rural resident’s nearest airport hub, specialty care may be difficult to obtain. Once a diagnosis is made, there are no self-management programs in rural areas. Physical therapy services are not available in many rural areas: after joint replacement surgery, persons face the choice of either a lengthy and expensive stay away from their home or returning home where physical therapy support may not be available.

“When you’re sitting in the boondocks about 50 miles from anywhere, you can’t run to see the doctor”

For people with severe arthritis disability in rural areas, living at home is often impossible because of the shortage of home and community-based care in many rural areas. Physical therapy and occupational therapy services are also often not available in rural areas. The person with an arthritis-related disability often has the heartbreaking decision of leaving their home, their family, their community, and often their whole culture in order to get the care they need.

Resources – The Section of Public Health Nursing in the Department of Health and Social Services and the Alaska Native Tribal Health Consortium are very effective in reaching rural communities. Working with these organizations to decrease disability in those living with arthritis will result in a decreased need for specialty care.

Provider Awareness/Education

Need – Primary health care providers need additional education on the latest treatment, care and self-management of arthritis and osteoporosis.

For many Alaskans, the only person treating their arthritis is the primary health care provider. Given the isolation of many communities in Alaska, it is critical that family practitioners, nurses, physician assistants, and community health aides receive support so they can appropriately diagnose/refer and help the person manage arthritis or osteoporosis. Opportunities and resources for continuing education, consultation with specialists, and referral information for their clients need to be strengthened. Health care providers that participated in the arthritis needs assessment identified both provider and consumer education as two of the greatest unmet needs for people with arthritis in Alaska.

Resources – New technologies such as telemedicine and the Internet should be explored to provide continuing education, consultation services, and referral resources to Alaska’s health care providers.

Public Awareness/Education

Needs – Alaskans need an increased awareness and understanding of the importance of early diagnosis, appropriate treatment and self-management of arthritis and osteoporosis.

For types of arthritis, medications are available that can slow down joint damage. Alaskans with arthritis and their friends and family need to know where to get information and help. This will take a coordinated communications effort by public health agencies, arthritis partners and individual health care providers.

Over 50% of the people in the arthritis needs assessment waited longer than a year before talking to a health care provider about their symptoms. Alaskans need to know that they should go to a doctor for a diagnosis soon after the symptoms begin. Studies of rheumatoid arthritis have found that much of the joint damage occurs within the first two years, and that early aggressive treatment may alter the course of the disease.³⁶

"I usually don't go to the doctors, because, like my wife says, I come from Mars."

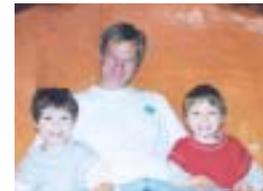
"... because, you know, you keep thinking that it's going to go away."

People with arthritis also need to know that physical activity and maintaining a healthy weight are great ways to improve arthritis symptoms by: decreasing pain, decreasing stiffness, improving range of motion, and improving sleep. In the arthritis needs assessment, 55% of Alaskans reported being able to manage their arthritis only "fairly well" or "not at all well." Considering the potential improvements in people's quality of life, promoting physical activity for people with arthritis should be a priority.

Alaskans also need to understand their risk for osteoporosis and discuss their risk for osteoporosis with a health care provider. Bone mineral density testing can identify low bone mass before a fracture occurs, so that fractures can be prevented.

Resources – In the arthritis needs assessment, the four most commonly cited sources of arthritis information that people currently use were:

- their doctor,
- magazines,
- the Internet, and
- television.



These ways of getting information out to people should be explored and developed. Other ways less often mentioned should not be dismissed, however: for example, because there are currently no arthritis messages on the radio does not mean that it would not be an effective way to inform people.

Health Systems

Needs –Health care systems need to improve management of chronic conditions such as arthritis and osteoporosis.

The current health care model does not manage chronic conditions as well as acute conditions. People with chronic illnesses need more time with health care providers at each visit, more referrals, and more prevention and self-management information.

The expenses for arthritis treatments requiring long rehabilitation or successive treatments can include airline tickets, and extended lodging and meal costs. Coverage is also often inadequate to pay for needed medications and orthotics.

Resources – PRO-West, a peer review organization in Alaska, has successfully initiated collaborative sessions for health care providers to improve the quality of care for diabetes. This model could be applied to arthritis and osteoporosis care.

Community/Environment

Needs – Communities need increased awareness and innovative ways to ensure accessibility to services for all community members.

Many small communities in Alaska have swimming pools, unfortunately not all communities have the resources to maintain them and fewer heat them so that people with arthritis will be able to exercise comfortably in the water.

Transportation is a problem in rural communities, as discussed earlier, but getting around in Fairbanks, Juneau, Ketchikan, and Anchorage is often a problem too, especially during the winter months. City officials need to consider covered or heated sidewalks and linking business buildings with indoor walkways in their city planning and improvement work. Transportation services for people with arthritis need to adopt a “door to door” approach instead of “curb to curb.”



Resources – Connecting communities in Alaska to each other will help overcome many of the barriers that isolation creates. Sharing model programs throughout the state will encourage communities to action. Developing a statewide resource guide will help communities locate resources for community members.

Alaska Arthritis Program and Arthritis Advisory Group

In 1999 the Arthritis Foundation, the Association of State and Territorial Health Officials, and the CDC collaborated to develop a public health approach to arthritis. The resulting document, the *National Arthritis Action Plan*, provides nationwide goals and strategies to lessen the burden of arthritis. One outcome of the national plan was that the federal government dedicated funds to create state arthritis programs. The Alaska Arthritis Program was established in September 1999 by a cooperative agreement between the CDC and the State of Alaska. The program is part of the Chronic Disease Program in the Section of Epidemiology, Division of Public Health, Department of Health and Social Services.

The Arthritis Program receives direction and support from the Alaska Arthritis Advisory Group. This group first met in September 2000, and continues to grow in membership with each meeting, as additional partners are identified. Currently, there are 23 members representing people with arthritis, nursing, tribal health organizations, academia, rheumatologists, orthopedic surgeons, government agencies, pharmacies, physical and occupational therapists, non-profit organizations, and the Commission on Aging.

After reviewing and providing input on the arthritis and osteoporosis chapter of *Healthy Alaskans 2010* (a document created to track the health of people in Alaska), the Advisory Group decided to include osteoporosis in this state plan. Doing this recognizes that these chronic conditions have a number of factors in common.



Mission

The mission of the Alaska Arthritis Advisory Group is to improve the lives of Alaskans through partnerships in public education, prevention, early diagnosis, and management of arthritis and related diseases.

Outcome Objectives

The goals and strategies described below will help meet the *Healthy Alaskans 2010* arthritis objectives. Progress for most of the outcome objectives will be monitored using the Alaska Behavioral Risk Factor Surveillance System.

The outcome objectives are:

1. Increase by 10% over baseline the number of days without severe pain among adults who have chronic joint symptoms by the year 2010.

Rationale: Pain is the most important symptom among persons with arthritis. A measure of pain-free days provides a pertinent and understandable performance-based approach for tracking this key health-related quality of life (HRQOL) determinant for persons with arthritis. Increasing days without severe pain is a feasible target, given more widespread use of available interventions (medical, educational, exercise, nutritional) that are likely to affect this measure.³⁷

2. Reduce by 10% of baseline the proportion of adults with chronic joint symptoms who currently experience a limitation in activity due to arthritis by the year 2010.

Rationale: Arthritis limits the major activities (e.g., housekeeping, grocery shopping, going to school or work) of nearly three percent (about seven million people) of the entire U.S. population, including nearly one out of every five persons with arthritis.^{12,19,38}

3. Increase by 10% over baseline the employment rate among adults with arthritis in the working-age population.

Rationale: Arthritis is second only to heart disease as a cause of work disability.³⁹ Demographic trends suggest that people will need to continue working at older ages, increasing the adverse social and economic consequences of high rates of activity limitation and disability of older persons with arthritis.

4. Collect baseline data to assess any racial/ethnic disparities in the rate of total knee replacements.

Rationale: Research studies have shown that African Americans have much lower rates of total knee replacement than whites, even when adjusted for age, gender, and insurance coverage. The effect of this is that many persons are not getting needed interventions to reduce pain and disability. This objective will help identify racial disparity in knee replacements if it exists in Alaska and will prompt action to correct the problem.³⁷

5. Increase by 10% over baseline the proportion of adults with chronic joint symptoms who have an arthritis diagnosis by a health care provider by the year 2010.

Rationale: In the United States it is estimated that 16% of adults (18 years of age or older) have not seen a doctor for their arthritis.⁴⁰ Medical management, including client education about self-management and physical activity, can reduce the pain and disability associated with arthritis.

6. Collect baseline data to describe the number of adults 65 years of age or older hospitalized for vertebral fractures associated with osteoporosis.

Rationale: Vertebral fractures are the most common fracture due to osteoporosis. About 30% to 50% of women and 20% to 30% of men will experience vertebral fractures in their lifetime.⁴¹ Interventions that reduce the number of persons with osteoporosis should reduce the rates of vertebral fractures.



Goals and Strategies

The goals and strategies that the Alaska Arthritis and Osteoporosis Plan will use to lessen the impact of arthritis and osteoporosis are described below. Generally strategies are listed chronologically, with the strategies to be completed sooner listed first. The strategies listed first are higher priorities because they are both important to success and are feasible to do right away, given anticipated resources.

GOAL 1 - Improve the quality of life for Alaskans living with arthritis and osteoporosis.

STRATEGIES

- By 2003, develop and maintain a registry of arthritis medication resources for health care providers and people with arthritis.
- By June 2003, increase the number of people participating in exercise or self-management programs to reduce arthritis symptoms.
- By 2003, develop an Alaska arthritis and osteoporosis resource guide.
- By 2003, establish a mentoring program for parents of children newly diagnosed with arthritis.
- By 2004, distribute information about osteoporosis and fracture prevention to agencies and organizations that serve older Alaskans.
- By 2004, organize a support and education group for people with arthritis who lead physically active lifestyles in the Anchorage area (modeled on the International Diabetic Athletes Association).
- By 2004, develop a strategic plan for creating an “Arthritis and Osteoporosis Resource Center.”
- By 2005, develop a strategic plan for establishing an Arthritis Medications Support Program.
- By 2005, increase the number of risk assessments for osteoporosis and falls in assisted living facilities.

GOAL 2 – Promote collaboration among health care providers, community organizations, government agencies, and professional organizations.

STRATEGIES

- By June 2002, link all organizations represented in the Alaska Advisory Group on web pages.
- By June 2003, share model programs throughout the state and ongoing thereafter.
- By 2003, explore legislative approaches to improve the environment for people with or at risk for arthritis and osteoporosis in Alaska and develop priorities for local and state policy/legislation development.
- By June 2004, establish an Arthritis Speakers Bureau.
- By 2004, distribute information about osteoporosis and fracture prevention to agencies and organizations that serve older Alaskans.
- By 2005, increase the number of risk assessments for osteoporosis and falls in assisted living facilities.

GOAL 3 – Increase the public’s awareness and knowledge of arthritis and osteoporosis and the importance of an early diagnosis.

STRATEGIES

- By June 2002, link all organizations represented in the Alaska Advisory Group on web pages.
- By June 2003, distribute arthritis and osteoporosis education materials as widely as possible and ongoing thereafter.

- Within six months after CDC campaign materials are available, conduct an arthritis health communications campaign.
- By 2003, promote use of newly developed arthritis and osteoporosis learning stations at health fairs.
- By June 2003, establish an Arthritis Speakers Bureau.

GOAL 4 – Improve health care providers’ communication with clients about self-management techniques and available resources.

STRATEGIES

- By June 2003, increase health care providers’ awareness of arthritis and osteoporosis resources and ongoing thereafter.
- By June 2003, establish an Arthritis Speakers Bureau.

GOAL 5 – Educate health care providers about proper diagnosis and treatment of arthritis and osteoporosis.

STRATEGIES

- By June 2003, establish a regular schedule of continuing education opportunities for health care providers in larger population centers.
- By June 2003, explore other ways to deliver continuing education to providers, especially to those in rural settings.
- By 2003, distribute information about osteoporosis and fracture prevention to health care providers.
- By 2005, increase the number of risk assessments for osteoporosis and falls in assisted living facilities.

GOAL 6 – Monitor the impact of arthritis and osteoporosis in Alaska over time.

STRATEGIES

- By May 2001, ensure standard and consistent use of data terms and ongoing thereafter.
- By September 2002, monitor the quality of life for Alaskans with arthritis and osteoporosis and periodically thereafter.
- By September 2002, monitor the prevalence of risk factors for arthritis and osteoporosis and periodically thereafter.
- By September 2002, develop current and future estimates of arthritis and osteoporosis prevalence in Alaska and periodically thereafter.
- By September 2002, estimate the costs associated with arthritis and osteoporosis and periodically thereafter.

Future Vision

The vision of arthritis and osteoporosis prevention care and management includes an integrated network of goals that address:

- a systematic approach to collecting, analyzing and communicating data - a surveillance system,
- a coordinated system to provide the public and providers with the information they need for appropriate diagnosis and management, and
- a collaborative approach between disease-specific organizations and other support organizations that serve people with arthritis or osteoporosis.

GOAL 1: Improve the quality of life for Alaskans living with arthritis and osteoporosis.					
Strategies	Target population	Activities	Partners	Completion Date	Evaluation
Develop and maintain a registry of arthritis medication resources for health care providers and people with arthritis.	<ul style="list-style-type: none"> Primary and specialty health care providers People with arthritis who need help paying for arthritis medications 	<ul style="list-style-type: none"> Enlist support from pharmaceutical companies. Partner with Arthritis Foundation to provide “Find a Way to Pay” information on-line. Provide “Find a Way to Pay” foldout to all PH clinics, AF list. Distribute information about the registry through all available venues. 	<ul style="list-style-type: none"> Pharmaceutical companies Arthritis Foundation Lupus Foundation AHELP 	January 2003	<ul style="list-style-type: none"> Number of “Find a Way to Pay” foldouts distributed in Alaska Number of public health clinics with foldouts available in waiting area. Number of “hits” on websites
Increase the number of Alaskans participating in exercise or self-management programs to reduce arthritis symptoms throughout the state, including rural areas of the state.	<ul style="list-style-type: none"> Alaskans with arthritis Rural Alaskans with arthritis 	<ul style="list-style-type: none"> Collaboration between Arthritis Foundation, Alaska Commission on Aging and Arthritis Program to piggyback instructor training with conferences that attract potential rural instructors. Promote airing of PACE video on Alaska TV in rural areas – work with public health clinics to promote participation in video classes. Explore the feasibility of providing courses through Internet, email and teleconferencing. 	<ul style="list-style-type: none"> Alaska Commission on Aging Arthritis Foundation Local TV stations 	June 2003 and ongoing	<ul style="list-style-type: none"> By October 2003, establishment of at least 10 new exercise or self-management classes: <ul style="list-style-type: none"> At least 5 in rural areas At least one alternative method of delivering exercise or self-management classes in place by January 2004

GOAL 1: Improve the quality of life for Alaskans living with arthritis and osteoporosis. (cont.)					
Strategies	Target population	Activities	Partners	Completion Date	Evaluation
Develop a Alaskan arthritis and osteoporosis guide.	<ul style="list-style-type: none"> Alaskans with arthritis or osteoporosis Service providers (health/social) 	<ul style="list-style-type: none"> Survey hospital discharge planners, aging agencies, pharmacies, etc. to obtain comprehensive list of resources. Distribute by email, Internet, mail. Update on yearly basis. 	<ul style="list-style-type: none"> Arthritis Advisory Group Arthritis Foundation Lupus Foundation 	January 2003	<ul style="list-style-type: none"> Resource guide ready for distribution by December 2002 Distribution of guide to public health clinics, agencies on aging, social service offices, primary care providers Resource guide available on Arthritis Program and Arthritis Foundation web pages
Establish a mentoring program for parents of children newly diagnosed with arthritis.	<ul style="list-style-type: none"> Children newly diagnosed with arthritis 	<ul style="list-style-type: none"> Measure interest in community. Establish a list of parents willing to offer support and guidance. 	<ul style="list-style-type: none"> Arthritis Foundation Children's Hospital at Providence 	January 2004	<ul style="list-style-type: none"> Existence of a list of "referral parents"
Distribute information about osteoporosis and fracture prevention to agencies and organizations that serve older Alaskans.	<ul style="list-style-type: none"> Health care providers Alaska Commission on Aging grantees Other agencies that serve older Alaskans 	<ul style="list-style-type: none"> Distribute available information to all target populations. 	<ul style="list-style-type: none"> Alaska Commission on Aging Other agencies that serve older Alaskans 	January 2004	<ul style="list-style-type: none"> Number of brochures distributed

GOAL 1: Improve the quality of life for Alaskans living with arthritis and osteoporosis.

(cont.)

Strategies	Target population	Activities	Partners	Completion Date	Evaluation
Organize a support and education group for people with arthritis who lead a physically active lifestyle in the Anchorage area (modeled on International Diabetic Athletes Association).	<ul style="list-style-type: none"> • Persons with arthritis who are very physically active 	<ul style="list-style-type: none"> • Seek out enthusiastic volunteers. • Measure interest in community. 	<ul style="list-style-type: none"> • Arthritis Foundation • AARP • Orthopedic surgeon's office staff 	January 2004	<ul style="list-style-type: none"> • Existence of group bylaws or written description of group structure
Develop a strategic plan for creating an "Arthritis and Osteoporosis Resource Center."	<ul style="list-style-type: none"> • Service providers (health/social) • Alaskans with arthritis or osteoporosis 	<ul style="list-style-type: none"> • Plan function/role of Resource Center. • Measure interest in Resource Center on part of providers and partners. • Seek available, ongoing funding. • Write strategic plan. 	<ul style="list-style-type: none"> • Advisory Group 	January 2004	<ul style="list-style-type: none"> • Strategic plan approved by Arthritis Advisory Group and other partners
Develop a strategic plan for establishing an Arthritis Medication Support Program.	<ul style="list-style-type: none"> • Persons who need financial assistance for arthritis • Health care providers 	<ul style="list-style-type: none"> • Enlist support from pharmaceutical companies/ Arthritis Foundation. • Find an agency with the capacity to manage this program. • Find an ongoing funding source for program. • Promote use of program. 	<ul style="list-style-type: none"> • Arthritis Foundation • Pharmaceutical companies • Program managing agency 	January 2005	<ul style="list-style-type: none"> • Strategic plan for Medication Support Program developed if project is feasible
Increase the number of risk assessments for osteoporosis and falls in assisted living facilities.	<ul style="list-style-type: none"> • Assisted living facilities • Alaska Commission on Aging • Pioneer's Home 	<ul style="list-style-type: none"> • Determine current number of risk assessments carried out in these facilities. • Distribute information, and if possible provide training for staff. 	<ul style="list-style-type: none"> • Alaska Commission on Aging • Other agencies that serve older Alaskans 	January 2005	<ul style="list-style-type: none"> • Number of risk assessments carried out

GOAL 2: Promote collaboration among health care providers, community organizations, government agencies, and professional organizations.					
Strategies	Target population	Activities	Partners	Completion Date	Evaluation
Note: See all other process objectives: they all involve partners working together and will advance progress towards goal 2.					
Link all organizations represented in the Advisory Group on web pages.	<ul style="list-style-type: none"> Advisory Group 	<ul style="list-style-type: none"> Request sites to provide links to related agencies and organizations. 	<ul style="list-style-type: none"> AHELP Organizations represented in the Advisory Group 	June 2002 and ongoing	<ul style="list-style-type: none"> Number partners web pages that link at least 2 other organizations represented in the Advisory Group
Share model programs throughout the state.	<ul style="list-style-type: none"> Health educators Allied health professionals Health care providers 	<ul style="list-style-type: none"> Periodic articles in Arthritis Foundation and Lupus Foundation newsletters. Electronic newsletters to partners and AHELP, AHEC. 	<ul style="list-style-type: none"> AHEC AHELP Lupus Foundation Arthritis Foundation 	June 2002 and ongoing	<ul style="list-style-type: none"> At least 4 articles per year included in newsletters At least 4 email updates per year to AHELP listserv group
Explore legislative approaches to improve the arthritis environment in Alaska and develop priorities for local and state policy/legislation development.	<ul style="list-style-type: none"> Legislators People living with arthritis 	<ul style="list-style-type: none"> Research current applicable Alaska laws. Research other states' legislation. Establish an advocacy network. Prioritize issues: Transportation Infrastructure Provide legislators/policy makers with information regarding arthritis disabilities as appropriate. 	<ul style="list-style-type: none"> AARP/ACoA Arthritis Program Advisory Group Arthritis Foundation Lupus Foundation 	Prioritization completed by January 2003	<ul style="list-style-type: none"> Completed prioritized list of legislative/policy needs for arthritis in Alaska Information provided to legislators and decision makers as appropriate

GOAL 2: Promote collaboration among health care providers, community organizations, government agencies, and professional organizations. (cont.)					
Strategies	Target population	Activities	Partners	Completion Date	Evaluation
Establish an Arthritis Speakers Bureau.	<ul style="list-style-type: none"> • People affected by arthritis, including children with arthritis and their parents • General public 	<ul style="list-style-type: none"> • Establish a pool of enthusiastic volunteers including: <ul style="list-style-type: none"> • specialist • primary care providers • people with arthritis • other health care professionals. • Develop talking points for presentations. • Promote Speakers Bureau to communities. 	<ul style="list-style-type: none"> • Arthritis Foundation • specialists • primary care providers • people with arthritis 	Established by June 2004	<ul style="list-style-type: none"> • By December 2004, at least 10 presentations will be given by Speakers Bureau
Increase the number of risk assessments for osteoporosis and falls in assisted living facilities.					-----See above-----
Distribute information about osteoporosis and fracture prevention to agencies and organizations that serve older Alaskans.					-----See above-----

GOAL 3: Increase the public's awareness and knowledge of arthritis and osteoporosis and the importance of an early diagnosis.

Strategies	Target population	Activities	Partners	Completion Date	Evaluation
<p>Link all organizations represented in the Advisory Group on web pages.</p>	<p>-----See previous page-----</p>				
<p>Distribute arthritis and osteoporosis education materials as widely as possible.</p>	<ul style="list-style-type: none"> • People living with arthritis but not yet diagnosed • People at risk for osteoporosis 	<ul style="list-style-type: none"> • Promote the Arthritis Foundation's toll free Helpline number by including # on all brochures distributed. • Seek funding for major brochure distribution. • Distribute available brochures/videos to all public health clinics. • Mail materials to health educators. 	<ul style="list-style-type: none"> • Public Health Nursing • Arthritis Foundation • Lupus Foundation • AHEC 	<p>June 2003 and ongoing</p>	<ul style="list-style-type: none"> • Number of brochures distributed • Request for at least a quarter of # of brochures originally distributed by June 2004
<p>Promote use of newly developed arthritis and osteoporosis learning stations at health fairs.</p>	<ul style="list-style-type: none"> • People affected by arthritis and osteoporosis • General public 	<ul style="list-style-type: none"> • Support volunteers in promoting arthritis exercise and support groups at health fairs. • Develop new learning centers for use at health fairs. 	<ul style="list-style-type: none"> • Alaska Health Fair, Inc. 	<p>January 2003</p>	<ul style="list-style-type: none"> • Number of times arthritis or osteoporosis learning centers are requested by health fair organizers (target - 10 requests per year)

GOAL 3: Increase the public's awareness and knowledge of arthritis and osteoporosis and the importance of an early diagnosis. (cont.)

Strategies	Target population	Activities	Partners	Completion Date	Evaluation
<p>Conduct an arthritis Health Communication Campaign.</p>	<ul style="list-style-type: none"> • People with arthritis 	<ul style="list-style-type: none"> • Seek funding source for public health campaign. • Evaluate effectiveness of existing public information campaign materials (CDC). • Develop specific trailer or other materials as needed. • Use TV, radio PSAs to the extent possible. • Distribute information through other sources: shopping centers, churches, retirement communities, health fairs. 	<ul style="list-style-type: none"> • CDC • AARP • Arthritis Foundation • Lupus Foundation • Public Health Nursing 	<p>Begin campaign 6 months after CDC campaign materials are available</p>	<ul style="list-style-type: none"> • At least a 50% increase in the number of calls to the Arthritis Foundation helpline from Alaskans • Request for brochures and other materials increased by 50% within 6 months of campaign launch
<p>Establish an Arthritis Speakers Bureau.</p>					

-----See above-----

GOAL 4: Improve health care providers' communication with clients about self-management techniques and available resources.

Strategies	Target population	Activities	Partners	Completion Date	Evaluation
<p>Increase health care providers' awareness of arthritis and osteoporosis resources.</p>	<ul style="list-style-type: none"> • Health care providers – specialists and primary care • Pediatricians caring for children with arthritis 	<ul style="list-style-type: none"> • Distribute available brochures/videos to all public health clinics. • Distribute resource guide and list of Internet resources to providers. • Distribute media campaign materials to provider prior to media launch . • Incorporate information about self-management techniques and available resources in CME, as appropriate. 	<ul style="list-style-type: none"> • CDC • Arthritis Foundation • Lupus Foundation • Advisory Group 	<p>June 2003 and ongoing</p>	<ul style="list-style-type: none"> • Request for at least a quarter of the number of brochures originally distributed to providers by June 2003 • Request for brochures and other materials increased by 50% within 6 months of campaign launch • Pre- and post-intervention survey of primary health care providers
<p>Establish an Arthritis Speakers Bureau.</p> <p style="text-align: center;">-----See above-----</p>					

GOAL 5: Educate health care providers about proper diagnosis and treatment of arthritis and osteoporosis.

Strategies	Target population	Activities	Partners	Completion Date	Evaluation
<p>Establish a regular schedule of continuing education opportunities for physicians in larger population centers.</p>	<ul style="list-style-type: none"> • Health care providers • Other allied health providers 	<ul style="list-style-type: none"> • Find funding for ongoing schedule of CME opportunities: • Journal clubs • Dinner lectures • Grand rounds 	<ul style="list-style-type: none"> • Hospitals • Pharmaceutical companies • Arthritis Foundation • State chapters of appropriate medical associations 	<p>June 2003</p>	<ul style="list-style-type: none"> • Completion of 2 year schedule of CME activities by June 2003
<p>Explore other ways to deliver continuing education to providers, especially those in rural settings.</p>	<ul style="list-style-type: none"> • Rural health care providers • Other providers including physical therapists, occupational therapists, health educators, pediatricians, etc. 	<ul style="list-style-type: none"> • Explore possibility of one-on-one CME for credit with traveling specialist. • Explore use of distance education techniques for CME credit. 	<ul style="list-style-type: none"> • Medical associations • Lupus Foundation • Arthritis Foundation • Advisory Group • Pharmaceutical companies 	<p>June 2003</p>	<ul style="list-style-type: none"> • Completion of 2 year schedule of CME activities by June 2003
<p>By 2003, distribute information about osteoporosis and fracture prevention to health care providers.</p>					
<p>Increase the number of risk assessments for osteoporosis and falls in assisted living facilities.</p>					

GOAL 6: Monitor the impact of arthritis and osteoporosis in Alaska over time.

Strategies	Target population	Activities	Partners	Completion Date	Evaluation
<p>Ensure standard and consistent use of data terms.</p>	<ul style="list-style-type: none"> Arthritis Program Advisory Group Research in Alaska 	<ul style="list-style-type: none"> Identify existing, reliable, and widely used definitions. Define terms in the plan. 	<ul style="list-style-type: none"> Advisory Group 	<p>May 2001 and ongoing</p>	<ul style="list-style-type: none"> Definitions provided in plan Research and studies conducted by Arthritis Program will use standard definitions
<p>Monitor the quality of life for Alaskans with arthritis and osteoporosis.</p>	<ul style="list-style-type: none"> Arthritis Program Advisory Group General population Legislators 	<ul style="list-style-type: none"> Analyze BRFSS survey data for quality of life, and mental health for people with arthritis. Develop a long-range plan for inclusion of arthritis, osteoporosis and quality of life questions in the BRFSS. 	<ul style="list-style-type: none"> Advisory Group BRFSS Program Chronic Disease Program 	<p>September 2002 and periodically</p>	<ul style="list-style-type: none"> State of Arthritis in Alaska report completed by September 2002
<p>Monitor the prevalence of risk factors for arthritis and osteoporosis.</p>	<ul style="list-style-type: none"> Arthritis Program Advisory Group General population 	<ul style="list-style-type: none"> Analyze BRFSS survey data for arthritis and osteoporosis risk factors, including BMI, physical activity, smoking. Explore potential use of Department of Labor and Workforce Development data for occupational risks. 	<ul style="list-style-type: none"> Advisory Group BRFSS Program Chronic Disease Program 	<p>September 2002 and ongoing</p>	<ul style="list-style-type: none"> State of Arthritis in Alaska report completed by September 2002

GOAL 6: Monitor the impact of arthritis and osteoporosis in Alaska over time. (cont.)					
Strategies	Target population	Activities	Partners	Completion Date	Evaluation
Develop current and future estimate of arthritis and osteoporosis prevalence in Alaska.	<ul style="list-style-type: none"> Arthritis Program Advisory Group General population Legislators 	<ul style="list-style-type: none"> Use current estimate methods to develop Alaska specific estimates. Analyze Medicaid and hospital admissions data. Evaluate prevalence in rural/urban Alaska Native populations. Advocate for a statewide uniform hospital discharge data reporting system that includes arthritis and osteoporosis diagnosis and procedure codes. 	<ul style="list-style-type: none"> Department of Labor PRO-West Advisory Group Alaska Native Health Board Hospitals 	September 2002 and periodically	<ul style="list-style-type: none"> State of Arthritis in Alaska report completed by September 2002
Estimate the costs associated with arthritis and osteoporosis.	<ul style="list-style-type: none"> Arthritis Program Advisory Group General population Legislators 	<ul style="list-style-type: none"> Determine a high, low and average cost of arthritis medications for patient scenarios. Estimate costs of arthritis/osteoporosis related hospitalizations. Estimate a cost per person for people with arthritis and osteoporosis. Estimate a total statewide cost of arthritis and osteoporosis. 	<ul style="list-style-type: none"> Medical associations Advisory Group Pharmacies Hospitals 	September 2002 and periodically	<ul style="list-style-type: none"> State of Arthritis in Alaska report completed by September 2002

arthritis – The term arthritis encompasses over 100 different diseases and conditions. Generally, arthritis refers to conditions that affect joints, the surrounding tissues and other connective tissues.

For the purposes of evaluating arthritis data in Alaska, two distinct definitions of arthritis will be used:

1. self-reported arthritis – Data gathered in any Arthritis Program supported surveys will use the definition of arthritis developed by the Centers for Disease Control and Prevention to analyze Behavioral Risk Factor Surveillance System data: a person who reports chronic joint symptoms *or* a doctor diagnosis (see below).

- **chronic joint symptoms** – Defined as those answering “yes” to two questions “During the past 12 months, have you had pain, aching, stiffness or swelling in or around a joint?” *and* “Were these symptoms present on most days for at least one month?”
- **doctor diagnosis** – Defined as those answering “yes” to the following question: “Have you ever been told by a doctor that you have arthritis?”

2. arthritis defined by diagnostic codes – Data gathered from records that code the patients’ diagnosis. The Arthritis Program will use the National Arthritis Data Workgroup (NADW) definition that lists a set of ICD diagnostic codes that represent all potential diagnoses for arthritis and other rheumatic conditions.

ankylosing spondylitis* – A rheumatic disease that causes arthritis of the spine and sacroiliac joints and, at times, inflammation of the eyes and heart valves.

arthritis prevalence – The number of people living with arthritis in a population at a specific time.

body mass index (BMI) – A measure of weight that is calculated by using the formula: weight in kilograms divided by height in meters squared ($BMI = kg/m^2$).

overweight - BMI 25.0-29.9

obese – BMI \geq 30.0

bursa* - A small sac of tissue located between bone and other moving structures such as muscles, skin, or tendons. The bursa contains a lubricating fluid that allows smooth gliding between these structures.

bursitis* - A condition involving inflammation of the bursae.

cartilage* - A resilient tissue that covers and cushions the ends of the bones and absorbs shock.

collagen* - The main structural protein of skin, bones, tendons, cartilage, and connective tissue.

fibromyalgia* - A chronic disorder characterized by widespread musculoskeletal pain, fatigue, and tenderness in localized areas of the neck, spine, shoulders, and hips called “tender points.”

*from National Institute of Arthritis and Musculoskeletal and Skin Diseases. *Questions and Answers about Arthritis and Rheumatic Disease.* <http://www.nih.gov/niams/healthinfo/art rheu.htm>

gout* - A type of arthritis resulting from deposits of needle-like crystals of uric acid in the connective tissue, joint spaces, or both.

infectious arthritis* - Forms of arthritis caused by infectious agents, such as bacteria or viruses.

inflammation* - A typical reaction of tissue to injury or disease. It is marked by four signs: swelling, redness, heat, and pain.

joint* - The place where two or more bones are joined. Most joints are composed of cartilage, joint space, fibrous capsule, synovium, and ligaments.

joint space* - The area enclosed within the fibrous capsule and synovium.

ligaments* - Stretchy bands of cord-like tissues that connect bone to bone.

lupus (systemic lupus erythematosus) – A type of immune disorder known as an autoimmune disease that can lead to inflammation of and damage to joints, skin, kidneys, heart, lungs, blood vessels, and brain.

lyme disease* - A disease caused by a bacterium in which arthritis is often a prominent symptom. Rash, heart disease, and nervous system involvement may also occur.

morbidity – Illness.

non-steroidal anti-inflammatory drugs (NSAIDs)* – A group of medications, including aspirin, ibuprofen, and related drugs, used to reduce inflammation that causes joint pain, stiffness, and swelling.

Obese – Body mass index (BMI) greater than or equal to 30 kg/m²

osteoarthritis* - A type of arthritis that causes the cartilage in the joints to fray and wear. In extreme cases, the cartilage may wear away completely.

overweight – Body mass index (BMI) within the range of 25.0 to 29.9 kg/m².

polymyalgia rheumatica* - A rheumatic disease that involves tendons, muscles, ligaments, and tissues around the joints. Pain, aching, and morning stiffness in the neck, shoulders, lower back, and hips characterize the disease. It is sometimes the first sign of giant cell arteritis (a disease of the arteries characterized by inflammation, weakness, weight loss, and fever).

psoriatic arthritis* - Joint inflammation that occurs in about 5 to 10 percent of people with psoriasis (a common skin disorder).

**from National Institute of Arthritis and Musculoskeletal and Skin Diseases. Questions and Answers about Arthritis and Rheumatic Disease. <http://www.nih.gov/niams/healthinfo/artrheu.htm>*

reactive arthritis* - A form of arthritis that develops after an infection involving the lower urinary tract, bowel, or other organs.

rheumatic* - A term referring to a disorder or condition that causes pain or stiffness in the joints, muscles, or bone.

rheumatoid arthritis* - An inflammatory disease of the synovium, or lining of the joint, that results in pain, stiffness, swelling, deformity, and loss of function in the joints.

rheumatologist* - A doctor who specialized in diagnosing and treating disorders that affect the joints, muscles, tendons, ligaments, and bones.

risk factor* - Something that increases a person's chance of developing a disease, such as age, gender, ethnicity, and genetics (family history).

scleroderma* - A disease of the connective tissues and blood vessels that leads to hardening of the skin. Scleroderma can also damage internal organs such as the kidneys, lungs, heart, or gastrointestinal tract.

self management – The set of beliefs and behaviors that people with arthritis use to manage their condition and to achieve or maintain their optimal health status or quality of life. Self management activities include but are not limited to:

- obtaining an accurate diagnosis
- participating in self management education
- engaging in appropriate physical activity and exercise
- achieving and maintaining an appropriate weight
- using appropriate medications and pain/stress management techniques as necessary.

synovial fluid* - Fluid released into movable joints by surrounding membranes. The fluid lubricates the joint and reduces friction.

synovium* - A thin membrane that lines a joint and releases a fluid that allows the joint to move easily.

tendinitis* - Inflammation of tendons caused by overuse, injury, or related rheumatic conditions.

tendon* - Tough, fibrous cords of tissue that connect muscle to bone.

**from National Institute of Arthritis and Musculoskeletal and Skin Diseases. Questions and Answers about Arthritis and Rheumatic Disease. <http://www.nih.gov/niams/healthinfo/artrheu.htm>*

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AARP	American Association of Retired Persons
ACoA	Alaska Commission on Aging
ADA	American Diabetes Association
AF	Arthritis Foundation
AHEC	Alaska Health Education Consortium
AHELP	Alaska Health Education Library Project
ANMC	Alaska Native Medical Center
BMI	Body Mass Index
BRFSS	Behavioral Risk Factor Surveillance System
CDC	Centers for Disease Control and Prevention
CEO	Chief Executive Officer
CME	Continuing Medical Education
CEU	Continuing Education Units
EMS	Emergency Medical Services
IHS	Indian Health Services
HRQOL	Health Related Quality of Life
KIC	Ketchikan Indian Corporation
NPs	Nurse Practitioners
OTs	Occupational Therapists
PACE	People with Arthritis Can Exercise
PH	Public Health
PTs	Physical Therapists
SLE	Systemic lupus erythematosus (lupus)
SSDI	Social Security Disability Insurance
UAA	University of Alaska, Anchorage
WA/AK	Washington/Alaska