AOPA Evidence Statement no. 3:
The role of the orthotist in the management of arthritis

Providing foot and knee orthoses to reduce pain and improve quality of life
About the Australian Orthotic Prosthetic Association

The Australian Orthotic Prosthetic Association (AOPA) is the peak professional body for orthotist/prosthetists in Australia. AOPA self-regulates the profession through the establishment of standards, codes and guidelines which are upheld by AOPA certified practitioners.

Our certified practitioners are qualified orthotist/prosthetists employed throughout the public and private sectors. They provide the full range of orthotic and prosthetic clinical care to support mobility, quality of life, rehabilitation, and participation goals of their clients.

AOPA’s mission is to self-regulate the profession to ensure the delivery of safe and effective orthotic and prosthetic care in Australia.

AOPA also has a role in member representation and the delivery of member benefits, which contributes to the growth of the profession, the shaping of clinical services and maintaining a profession of excellence.

For more information about the Australian Orthotic Prosthetic Association, visit www.aopa.org.au

© The Australian Orthotic Prosthetic Association 2016

Disclaimer: The Australian Orthotic Prosthetic Association has taken care to ensure that at the date of publication, information within this document is accurate, up-to-date and free from errors, however it may not cover all relevant aspects of the role of the orthotist in the management of arthritis, dependent upon how the information is being utilised. The AOPA therefore does not make any warranty about the accuracy, reliability, currency or completeness of the material contained within the document. The AOPA and any individual or organisation associated with the preparation of this document disclaim any and all liability associated with any loss the user of this document may suffer as a result of reliance on the document. Individuals should exercise their own independent skill and judgment before relying on this document.
Key message

- Osteoarthritis and rheumatoid arthritis are the most common cause of severe long term pain and negative physical impact in Australia
- Orthotic management of arthritis reduces pain, improves mobility and may delay the need for surgery
- Orthotists are the only allied health professional qualified to provide the full range of orthosis options to support people suffering from arthritis

Arthritis in Australia

One of the most common long-term diseases

Arthritis is one of the most common long-term diseases in Australia, affecting more than 3.1 million Australians or 15.2% of the total population\(^1\). Rheumatoid arthritis is an autoimmune disease that results in joint destruction and permanent deformity, most commonly in the hands and feet. Rheumatoid arthritis affects approximately 2% of the population and while the prevalence of rheumatoid arthritis peaks in older females, the disease may occur at any age\(^1\). Osteoarthritis is characterized by loss of joint cartilage primarily in the knees and hips and affects an estimated 8% of people, most commonly females in the later years of life\(^1\). Due to increasing obesity and an ageing population, the number of people living with the disabling effects of arthritis is increasing. It is estimated that by the year 2050, 7 million Australians will suffer from some form of arthritis\(^2\).

Pain and mobility loss in arthritis sufferers

The most common cause of severe long-term pain and negative physical impact

Rheumatoid arthritis and osteoarthritis are the most common cause of severe long-term pain and negative physical impact in Australia\(^1\). Almost one-third of people with arthritis, or 1 million Australians report some core activity restrictions\(^1\). Arthritic pain in the feet, knees and hips limits activity and participation and results in a decreased quality of life\(^3\). For advanced arthritis, joint damage becomes so severe that joint replacements and fusions become necessary. Accordingly, osteoarthritis is the major underlying factor in the need for joint replacements\(^1\).
The cost of arthritis

Disability and poor quality of life impose substantial costs on society

Rheumatoid arthritis and osteoarthritis are a major cause of health expenditure in Australia, responsible for expenses of approximately $1.4 billion in 2004-05\(^1\), with associated indirect costs estimated at triple this amount\(^2\). People with arthritis experience considerable disability, psychological distress and poor quality of life\(^{4,5}\), which also affects their families and carers\(^6\). The burden imposed on society is substantial – poor workforce participation is a common experience for people with chronic disease\(^7\).

Orthotic intervention in the management of arthritis

Orthoses help relieve pain in people suffering from arthritis

As most forms of arthritis have no known cure, the focus of health care is on effective strategies for relieving pain and maintaining mobility. Orthotic intervention is a common conservative treatment option for people with rheumatoid arthritis and osteoarthritis and has been the subject of several Cochrane\(^{8-11}\) and systematic reviews\(^{12-20}\).

Osteoarthritis

Osteoarthritis sufferers often experience pain from both cartilage degeneration and knee malalignment. Knee malalignment and associated pain may be reduced by the use of foot orthoses which alter knee alignment by changing the position of the tibia (lower leg bone). Foot orthoses may reduce pain\(^8\) and are more effective when orthotic treatment is started early: the less severe the osteoarthritis is at the time of initial presentation, the more effective the orthotic intervention\(^{21}\).

Knee orthoses

A knee orthosis encompasses the knee joint and may extend up the femur (thigh bone) and/or down the tibia/fibular (lower leg bones). Knee orthoses for people with osteoarthritis include ‘unloaders’ (pictured - image source: JointPainInfo) which provide a direct biomechanical effect to the knee joint, and ‘knee sleeves’ which provide circumferential support.
Rheumatoid arthritis

In people with rheumatoid arthritis, foot deformity results in areas of localised increased pressure, callousing and pain. Custom made foot orthoses (figure 2) aim to accommodate foot deformity, thereby relieving pressure and pain. Numerous systematic reviews have unanimously concluded that foot orthoses significantly reduce pain\(^{10, 11, 16-20}\), pressure\(^{17}\) and increase physical function\(^{19}\) in people with rheumatoid arthritis.

**Foot orthoses**

![Figure 2.](image)

A foot orthosis encompasses the whole or part of the foot\(^{31}\) and is worn in the shoe against the sole of the foot. Foot orthoses can be made from a variety of materials including hard plastic and varying densities of foam. Foot orthoses are used to re-distribute pressure, provide pain relief and realign joints of the foot, ankle and entire lower limb.

**The position of the Australian Orthotic Prosthetic Association**

- For clients with osteoarthritis or rheumatoid arthritis, the provision of custom made knee or foot orthoses help reduce pain and improve mobility.
- Numerous clinical guidelines\(^{23-25}\) recommend custom foot orthoses for people with rheumatoid arthritis and foot\(^{26-29}\) and knee\(^{27, 28, 30}\) orthoses for people with osteoarthritis.
- In Australia, orthotists are the only allied health professionals who are qualified to clinically assess, prescribe, design, fit and review orthoses for the whole body, to support clients with arthritis.
- Access to orthotists in both the primary and secondary health care settings is essential to improve client outcomes and minimize the burden of disease associated with arthritis in Australia.
References