



TheAlfred



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RHEUMATOLOGY

Head: Professor Flavia Cicuttini MBBS(Hons), MSc, PhD, DLSHTM, FRACP, FAFPHM

The main focus of research activity in the Department of Rheumatology is in understanding factors that influence joint structure in health and disease and the outcome of this. In a very successful year, the team has published extensively in international peer-reviewed journals, and holds six NHMRC Project Grants.

CURRENT PROJECTS

The effect of sociodemographic and lifestyle factors on the risk of primary and revision joint replacement

Wang Y, Simpson J, Wluka A, English D, Giles G, Graves S, Cicuttini F

Knee and hip osteoarthritis (OA) are a major cause of disability. End stage OA frequently needs treatment with joint replacement, which results in a significant economic burden on the community, and is likely to increase as the population ages. Understanding the impact of sociodemographic and lifestyle factors such as obesity and diet on the risk and outcome of joint replacement will help identify potential socioeconomic inequalities and potential strategies for improving outcomes of joint replacement.

The role of lifestyle factors on knee cartilage volume and rate of cartilage loss in a normal community-based population: a longitudinal study

Wang Y, Simpson J, Wluka A, English D, Giles G, Cicuttini F
This study aims to identify lifestyle factors that affect knee cartilage volume in healthy subjects, thereby identifying potential targets for prevention of OA. This is being done by utilising an existing cohort, the Melbourne Collaborative Cohort Study, and recently developed methodology for measuring articular cartilage volume pioneered by our group.

Role of musculoskeletal biomechanical factors in cartilage loss in those who undergo partial medial meniscectomy

Cicuttini F, Lloyd D, Bennell K, Stachowiak G, Forbes A
This project aims to determine whether musculoskeletal-biomechanical factors are associated with the rate of knee cartilage loss in people who have recently undergone an arthroscopic partial meniscectomy.

The predictors of knee cartilage loss: a five year natural history based on an existing cohort

Wang Y, Wluka A, Forbes A, Jones G, Cicuttini F
The natural history and factors influencing knee OA are poorly understood. The existing cohort is being followed at five years to determine the rate of change of joint cartilage in early knee OA and the factors that influence this.

The relationship between body composition and hip cartilage

Wluka A, Berry P, Hanna F, English D, Giles G, Cicuttini F
Factors increasing the risk of hip OA, including obesity, are poorly understood. The group has developed a method of measuring structural change in the hip using MRI. A cohort of healthy middle aged adults is being studied to determine how body composition relates to hip OA.

Low back pain (LBP) and urinary incontinence (UI): what are the risk factors and are these conditions associated?

Urquhart D, Cicuttini F, Bell R, Davis S
LBP and UI can have a profound effect on an individual's function and wellbeing, and result in substantial socioeconomic burden. This study aims to investigate risk factors for the development of LBP and UI, their association with physical, psychological and social factors, and the relationship between these conditions.

Identification of serum and urinary biomarkers associated with OA disease progression in a well established cohort of subjects with knee OA

Berry P, Maciewicz R, Cicuttini F, Downey-Jones M, Mills E, Oakley C, Wluka A
There has been increasing interest in different biomarkers that may be useful in identifying subjects most likely to lose joint cartilage. In 1997, the group began a longitudinal study of subjects with knee OA. A novel method was used that enabled measurement of knee cartilage volume and presence of cartilage defects using MRI. In collaboration with AstraZeneca, biomarkers of cartilage and bone metabolism and a panel of known mediators in the serum and urine of subjects were tested. The plan is to examine how this relates to the rate of cartilage loss, defect progression and risk of joint replacement.

Factors affecting knee structure in healthy women

Wluka A, Pasco J, Kotowicz M, Henry M
OA has the largest impact of any chronic disease on burden of disease borne in later life, affecting women more frequently than men. The aim of this study is to examine how modifiable factors such as obesity affect change in knee structure in an established healthy cohort of community based women.

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POSTGRADUATE STUDENTS

9 PhD Students

PUBLICATIONS

25 Journal Articles
1 Book Chapter