Arthritis and the Foot (or I just have a bit of Rheumatism...)

AN INTRODUCTION
The author:

- Podiatrist for 16 years
- Special interest in Diabetes and Rheumatology
- Completed post graduate training in Rheumatology at Keele University in 2012
- Completed the Independent prescriber course 2014-2015
When you say you have a rheumatism in your feet ...

- Do you mean?
- Gout?
- Rheumatoid Arthritis?
- Psoriatic Arthritis?
- Ankylosing Spondylitis?
- OR....
- Osteoarthritis?
- Because although they all may involve pain in your feet, their causes are different
SO what is the difference?

<table>
<thead>
<tr>
<th>Gout</th>
<th>Rheumatoid Arthritis</th>
<th>Psoriatic arthritis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Is an metabolic disorder commonly affecting the first toe</td>
<td><strong>Cause</strong> is not yet known</td>
<td>Can occur in people who suffer from Psoriasis but the two do not necessarily go together</td>
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<tr>
<td>Becomes more common with increasing age</td>
<td>It is three times more common in women than men</td>
<td>Has several disease patterns some of which are similar to Rheumatoid Arthritis</td>
</tr>
<tr>
<td>Is more common in men than women</td>
<td>Peak incidence in women between 45-75</td>
<td>Affects the nails of the hands and feet with pitting and thickening of the nails</td>
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<tr>
<td>Obesity increases the risk of gout</td>
<td>It often affects the metatarsal joints and the forefoot joints in the feet</td>
<td>Unlike Rheumatoid arthritis can be asymmetrical</td>
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<tr>
<td>Is more common in meat eaters and alcohol consumers</td>
<td>It can affect the skin, eyes, nerves, blood and lungs</td>
<td>Also can affect the rear foot..</td>
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<tr>
<td>Some drugs can increase the risk of Gout</td>
<td></td>
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</tr>
</tbody>
</table>
Osteoarthritis is:

- The most common condition affecting synovial joints
- The most important cause of locomotor disability
- A metabolically dynamic process characterized by an imbalance of joint breakdown and insufficient repair
Osteoarthritis can be....

- the result of abnormal stress on a normal joint
- the result of normal stress on a joint that is compromised
- the result of genetic factors
- the result of all or several of these factors working together
Factors which can lead to Osteoarthritis

- Genetics
- Gender
- Age
- Excess weight
- Injury
- Joint deformity
- Occupational exposure
- And in some cases bone density
Osteoarthritis can be separated into primary and secondary ...

Primary osteoarthritis:
- Mainly the result of genetic predisposition
- Occurs in joints typical /expected locations
- Like the hips, knees, and the big toe on the foot

Secondary osteoarthritis:
- Often found in atypical joints like the ankle
- Often caused by previous injuries/ fractures
- Inflammatory arthropathy like gout
- Neuropathic conditions like diabetes
- Can be caused by things like sickle cell disease
- Mechanical trauma and hypermobility
It has been shown that hypermobility predisposed people to a number of rheumatic complaints, one of which was a tendency to develop osteoarthritis at a younger age. Although the term hypermobility covers a 'mixed bag' of diagnoses, those people who inherit the tendency can get other problems such as varicose veins, piles and slipped discs.

There is evidence that it hypermobility is associated with joints that are abnormally shaped or when the cartilage has been damaged.

However the symptoms of arthritis are no worse in people tat are hypermobile than those who are not
Osteoarthritis and the foot
The Foot is Complex!

- The foot is made up of many bones and muscles.
- It carries the weight of your body.
- It is subject to extreme stresses.
- Osteoarthritis in the foot is second only to Osteoarthritis in the hand as the most common site of Osteoarthritis.
- Osteoarthritis in the foot is more common than hip or knee osteoarthritis.
Osteoarthritis and the foot:

- The main joint affected is the big toe complex.
- The rear foot can also be affected usually in conjunction with flat feet.
- The ankle can be affected but this is usually secondary to trauma.
Osteoarthritis and the big toe

Hallux Rigidus

Hallux valgus/Bunions
Hallux Rigidus
Hallux rigidus:

- Loss of movement at the big toe joint due to Osteoarthritis
- Most critical factor in development of this condition is joint hypermobility
- Other factors like constant stubbing of the toe can not be ruled out as casual factors in its development
- Trauma may also be a casual factor in the development of this disorder
Hallux Rigidus
Hallux Valgus/Bunions
Bunions:
- More common in women than men
- Factors predisposing to hallux valgus:
  - Genetics
  - Footwear
  - Gender
  - Pronation of the foot
  - Other types of arthritis like rheumatoid arthritis
  - Miscellaneous factors like overlong big toes, obesity, trauma, and amputation of the second toe
  - Pregnancy???
Rigid flat feet/rigid Pes Planus
Rigid flat feet:

- Can be the result of a change from a flexible structure to a rigid structure due to the aging process.
- Osteoarthritic changes or other inflammatory arthritic changes lead to the rigidity of this condition.
- May be related to a history of ankle sprains.
Rigid flat feet

- Normal arch
- Heel spur
- Fallen (flattened) arch
- Hammertoe
- Bunion

Comparison between normal and pes planus feet.
The effect of deformity on the foot

- Normal arch
- Fallen (flattened) arch
- Heel spur
- Hammertoe
- Bunion
Bonus : Tailors Bunion
So that is fine but what do you do about it?

- Footwear advice
- Reduction of callus over pressure areas
- Orthoses
- Padding and strapping
- Referrals
Case study time

The patient:
50 year old Caribbean Male
Diabetic
Hallux rigidus
Presented with Callus under his big toe which had ulcerated
The deformity had also lead to the callus under his second to fourth toes
Thanks for listening, and take care of those feet!
This is why I do it...