Nature Reviews Rheumatology | Published online 22 Jan 2016

IN BRIEF

RHEUMATOID ARTHRITIS

Having any parent with RA increases disease risk

The results of a Danish nationwide cohort study involving almost two million children followed up from birth to age 16 years reveal excess morbidity in children whose parents have rheumatoid arthritis (RA). Detrimental effects occur in children exposed to paternal as well as maternal RA, suggesting a genetic (rather than epigenetic) aetiology. Most of the 11 disease categories assessed show similar risk increases, but the largest risk increases are observed for autoimmune diseases: a threefold increase in risk of juvenile idiopathic arthritis (HR 3.30, 95% CI 2.71–4.03 for maternal RA and HR 2.97, 95% CI 2.20–4.01 for paternal RA); a ≤40% increase in the risk of type 1 diabetes mellitus (HR 1.37, 95% CI 1.12–1.66 and HR 1.44, 95% CI 1.09–1.90) and a ≤30% increase in the risk of asthma (HR 1.28, 95% CI 1.20–1.36 and HR 1.15, 95% CI 1.04–1.26), respectively.

ORIGINAL ARTICLE Rom, A. L. *et al.* Parental rheumatoid arthritis and long-term child morbidity: a nationwide cohort study. *Ann. Rheum. Dis.* http://dx.doi.org/10.1136/annrheumdis-2015-208072

CONNECTIVE TISSUE DISEASES

Multiple pathways to sex biases in autoimmunity

An X-chromosome gene-dosage effect might help to explain the female sex bias observed in some (but not all) autoimmune diseases. Trisomy X (47,XXX) is usually asymptomatic, but population screening studies show that it occurs in one in 1,000 live female births. Genotyping of 2,826 patients with systemic lupus erythematosus (SLE), 1,033 patients with primary Sjögren syndrome (pSS), 1,118 patients with primary biliary cirrhosis, 1,710 patients with rheumatoid arthritis (RA), 7,074 healthy control individuals and 939 patients with the nonautoimmune disease sarcoidosis revealed a ~2.5–3.0-fold higher than expected prevalence of 47,XXX in patients with SLE (1 in 404 patients, 95% CI 196–1,004) and those with pSS (1 in 344 patients, 95% CI 115–1,620). By contrast, the female sex bias observed in primary biliary cirrhosis and RA probably involves different mechanisms, as these groups showed no excess incidence of 47,XXX.

ORIGINAL ARTICLE Liu, K. B. S. *et al.* X chromosome dose and sex bias in autoimmune diseases: increased 47,XXX in systemic lupus erythematosus and Sjögren's syndrome. *Arthritis Rheumatol.* http://dx.doi.org/10.1002/art.39560

PAIN

Exercise aids low back pain, but the choice is yours

The results of a Cochrane systematic review confirm those of previous smaller meta-analyses suggesting that motor control exercise (which focuses on activating and thereby restoring the coordination and control of deep trunk muscles) is safe, but no more effective than other forms of exercise, in the treatment of low back pain. Motor control exercise is more effective than minimal intervention (placebo physiotherapy, education, advice, or no treatment) for improving pain, function, and global impression of recovery, Motor control exercise and manual therapies result in similar short, medium and long-term outcomes. Finally, motor control exercise is more effective than exercise plus electrophysical agents in terms of improving pain, disability, global impression of recovery and quality of life. Most of the available evidence is considered of no better than moderate quality, however. Thus, the choice of exercise therapy for chronic low back pain should probably depend on local availability, patient or therapist preferences, safety, and costs.

ORIGINAL ARTICLE Saragiotto, B. T. *et al.* Motor control exercise for chronic non-specific low-back pain. *Cochrane Database Syst. Rev.* http://dx.doi.org/10.1002/14651858.CD012004