

two cases of IAH, which were successfully treated with steroid regimens administered at different doses and routes. The aim of this study is to evaluate pituitary mass lesions in patients receiving Ipilimumab for the treatment of advanced metastatic melanoma. **Methods:** Two cases, one male and one female, presenting to TTH were reviewed and their clinical progression assessed via radiological and biochemical results. **Results:** IAH was a rare side effect observed in both cases, clinically manifesting as extreme lethargy, and central hypothyroidism. Magnetic resonant imaging of the brain demonstrated a pituitary mass with stalk thickening. Patients successfully responded to high-dose steroids, one on oral prednisolone alone and the other with an additional course of intravenous methylprednisolone. Complete radiological resolution of the pituitary mass occurred after six weeks, although both required ongoing hormone replacement thereafter. Unfortunately, one of the patients succumbed to her disease shortly after completing this treatment; the other remains stable on ongoing thyroxine replacement. **Conclusion:** IAH is a new and defined clinical entity occurring as a side effect of Ipilimumab therapy. However, it is successfully treatable with high-dose steroids, producing both resolution of pituitary masses and improvement in pituitary function.

## Behavioural effects of the pharmacological disruption of glucose metabolism in mice

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**Background/Aims:** Recent human genetic, proteomics and metabolomics studies suggest that abnormal glucose and energy metabolism may underlie the pathophysiology of a number of neuropsychiatric disorders, including schizophrenia and autism. However, the effects of specific disruption of glucose metabolism on behaviour have not been elucidated. This study aims to examine the effect of pharmacological disruption of glucose metabolism on behaviours relevant to schizophrenia and autism in mice. **Methods:** Three key enzymatic steps of glycolysis were pharmacologically targeted by acute systemic administration of specific inhibitors, including 2-deoxy-D-glucose (2DG, inhibitor of hexokinase), iodoacetate (inhibitor of glyceraldehyde-3-phosphate dehydrogenase, G3PDH) and oligomycin (inhibitor of ATP synthase). The resultant behavioural endophenotype (alterations in psychomotor activity, social behaviour, working and reference memory) was investigated by using a battery of tests, including open field, social interaction test, and the working and reference memory versions of the Y-maze. Psychomotor activity was investigated both in novel and familiar environment to assess the potential interaction between stress and glucose metabolism. **Results:** Inhibition of hexokinase dose-dependently alters psychomotor activity and social behaviour while working memory remains intact. Inhibition of G3PDH and ATP synthase may result in specific alterations in behavioural endophenotypes of schizophrenia and autism. **Conclusion:** Preliminary results show that pharmacological inhibition of glycolysis results in abnormal behaviour suggesting that the perturbation of this metabolic pathway may play a causal role in the pathophysiology of neuropsychiatric disorders.

## Cochrane review of upright versus recumbent positions for women during first stage of labour

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**Background/Aims:** Many women giving birth in health facilities now labour in bed. However, there is no evidence that this activity is associated with any advantage for women or their babies. The aim of this systematic review and meta-analysis was to assess the effects of encouraging women to assume different upright positions versus recumbent positions during first stage of labour, on the duration of labour, type of birth and other important outcomes for mothers and babies. **Methods:** This review included randomised and quasi-randomised trials. The methods used for data collection, assessment of study quality and analysis of the results are described in the Cochrane Handbook for Systematic Reviews of Interventions. **Results:** The methodological quality of the 25 included trials (5218 women) was variable. However, meta-analysis demonstrated clear evidence that upright positions in the first stage of labour reduced the duration of labour, the risk of caesarean birth and the need for epidural. **Conclusion:** Based on these findings, we recommend that women in low-risk labour should be informed of the benefits of using upright positions during the first stage of labour. There is little doubt that women should adopt positions which give them the greatest comfort, control and benefit during labour. More research of better quality is needed to validate these results for all women in labour.

## Diagnosis and management of pelvic inflammatory disease at an outpatient sexual health clinic: a chart audit

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**Background/Aims:** To compare the management of pelvic inflammatory disease (PID) at the Townsville Sexual Health Services (TNSHS) with the Queensland Sexual Health Clinical Management Guidelines (QSHCMG), and identify areas of discrepancy. **Methods:** A retrospective chart audit of patients diagnosed with PID between January 2012 and December 2013 was conducted. Information from patient charts on the diagnostic criteria, investigations performed and management was retrieved and compared with the QSHCMG. **Results:** A total of 47 charts was identified with patient age range of 16-48 years. There was insufficient documentation of many features that were deemed as risk factors for PID by the QSHCMG, such as having multiple partners, concurrent bacterial vaginosis, previous sexually transmitted disease, vaginal douching, post-partum endometriosis and recent uterine instrumentation. Minimal diagnostic criteria were met by 37 (79%) patients. Documentation of investigations and management plan was complete in all patients. The antibiotic regimen prescribed (ceftriaxone 500 mg IMI stat, metronidazole 400 mg BD for two weeks and azithromycin 1 g stat (plus repeat in one week) matched that in the QSHCMG in all patients. Symptom improvement was documented in 33 of 40 patients (83%). Seven

patients (15%) were lost to follow-up. **Conclusion:** Improvements could be made in the documentation of important parts of the history and clinical features that identify those patients diagnosed with PID.

## Di-peptidyl peptidase IV Inhibitors: a new horizon in management of atherosclerosis: a review

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**Background/Aims:** Dipeptidyl peptidase-IV (DPP-4) inhibitors are a relatively new class of anti-diabetic drugs that have therapeutic potential for management of atherosclerosis. Of the numerous DPP4-inhibitors in clinical practice, no studies have been conducted to compare their anti-atherosclerotic effects despite growing evidence of their usefulness in the high-risk population. The aim of the study is to evaluate and grade the anti-atherothrombotic effects of DPP-4 inhibitors in subjects with atherosclerosis. **Methods:** A literature search was conducted on MEDLINE and the Cochrane Library using the terms 'DPP-4 Inhibitors', 'atherosclerosis', 'GLP', 'inflammation', 'cytokines', 'stroke', 'ischaemic heart disease', 'hypertension' and 'peripheral vascular disease'. A mathematical model devised by us was used to derive and compare the anti-inflammatory effects of the DPP-4 inhibitors using protective score (PS). Data were analysed for alogliptin, linagliptin, saxagliptin, sitagliptin, and vildagliptin. **Results:** Sixty-two published studies collected in the search were assessed for relevance to this study. Sitagliptin had the highest PS (n=5) while Linagliptin and Saxagliptin yielded the lowest PS (n=1). This comparison and scoring system was limited to the data collected, which did not investigate all athero-thrombotic factors selected in this study. **Conclusion:** The findings reflected superiority of sitagliptin over the other DPP-4 inhibitors in the management of atherosclerosis. Further investigations are required to establish specific inflammatory cytokines influenced by the DPP-4 inhibitors and to elucidate their clinical application in atherothrombotic disease.

## Dipeptidyl-peptidase IV (DPP4) inhibitors' cholesterol lowering effect: a systematic review

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**Background/Aims:** Dipeptidyl peptidase-IV (DPP-4) inhibitors are a relatively new class of anti-diabetic drugs that have therapeutic potential for management of hypercholesterolemia. Of the numerous DPP4-inhibitors in clinical practice, no systematic review has been conducted to compare their anti-hypercholesterolemic effect, despite growing evidence of their usefulness in the high risk population. **Methods:** A systematic review of existing literature investigating cholesterol-lowering effects of DPP4 inhibitors was conducted. Published data on DPP-4 inhibitors use for more than six months in hypercholesterolemic subjects were sought from MEDLINE, PubMed and Google Scholar search of English language literature from 1994 to 2014 using the key words: 'DPP-4 inhibitors', 'hypercholesterolemia', 'dyslipidemia' and 'hyperlipidemia'. **Results:** A total of six full-text published studies conducted worldwide were included in this systematic review, comprising a total of 3968 subjects. Anti-hypercholesterolemic effects range between 13.3% reduction in total cholesterol by sitagliptin and vildagliptin, to no effect by linagliptin. Conversely, saxagliptin demonstrated modest anti-hypercholesterolemic effect. **Conclusions:** These findings reflected potential benefit of using DPP-4 inhibitors in the management of hypercholesterolemia particularly in subjects with diabetes. Further investigations are required to

establish specific anti-hypercholesterolemic effects of DPP-4 inhibitors and to elucidate their clinical application in addition to its established anti-diabetic effects.

## Effects of microalgae-containing diet on the behavioural consequences of chronic psychosocial stress in mice

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**Background/Aims:** Marine microalgae contain a large variety of bioactive substances that can be harnessed for their therapeutic potentials, including polyunsaturated fatty acids (PUFA), sterols, carotenoids, pigments, proteins and vitamins. A possible implication of these bioactive molecules is to control inflammatory processes. Stress-related mental illnesses, such as depression, have been associated with systemic inflammatory processes. However, the effects of microalgal diet on behaviour have not been investigated. The aim of this study is to examine the effect of microalgal diet on the depression-related behavioural consequences of chronic social defeat (CSD) in mice. **Methods:** From the age of 21 days for 11 weeks mice were fed with either (1) control normal mouse chow, or mouse chow containing (2) high concentration of saturated fats (high-fat 'Western diet'; HFD), or (3) microalgal biomass with high concentration of PUFAs (including docosahexanoic acid, DHA), or (4) de-fatted algal biomass (ALG). Mice were then either subjected to CSD or remained undisturbed. Psychomotor activity, anxiety-like behaviour and cognitive functions were measured using open-field, elevated plus maze, Y-maze and novel object recognition, respectively, taking advantage of a behavioural recognition software, TopScanLite (CleverSystem). **Results:** CSD induced social avoidance in HFD and DHA mice. ALG feeding prevented psychomotor retardation and cognitive impairments induced by CSD but HFD and DHA resulted in a worsening of the behavioural consequences of CSD. **Conclusion:** Our preliminary results show that certain bioactive compounds contained in the de-fatted microalgae may have beneficial effects in preventing adverse behavioural consequences of chronic psychosocial stress in mice and high DHA concentrations should be used with caution.

## Emergency packs (EP) in ED: improving safety, efficacy and continuity of care by including consumer medication information (CMI)

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**Background/Aims:** Many emergency departments (EDs) state-wide use emergency pack (EP) systems for discharging patients outside of pharmacy hours. Patients receive the EP without counselling from a pharmacist. Not all medications have consumer medication information (CMI) pre-supplied. The Pharmacy Board of Australia, Pharmaceutical Society of Australia and the Society of Hospital Pharmacists Australia all advocate for the provision of CMI. Their use is well documented to improve safety, compliance and continuity of care. Under these circumstances where a pharmacist is unavailable, a CMI is highly recommended. The aim of this study is to review and improve the current EP processes across the health district to meet standards held by our professional governing bodies. **Methods:** EP stock holding of four hospitals within our health service district was reviewed to determine the percentage of EPs that contained CMIs. The current procedure was changed so that