

AEPCOS QUARTERLY PUBLICATION LIST

OCTOBER—DECEMBER 2014

Highlighted articles

Calderon-Margalit R, Siscovick D, Merkin SS, Wang E, Daviglius ML, Schreiner PJ, Sternfeld B, Williams OD, Lewis CE, Azziz R, Schwartz SM, Wellons MF. Prospective association of polycystic ovary syndrome with coronary artery calcification and carotid-intima-media thickness: the Coronary Artery Risk Development in Young Adults Women's study. *Arterioscler Thromb Vasc Biol.* 2014 Dec; 34(12):2688-94 (KMH)

There remains debate about the cardiovascular impact of a diagnosis of PCOS. While there is evidence that different phenotypes of PCOS exhibit different metabolic risk, there are few well characterized longitudinal studies to assess cardiovascular risk in PCOS. The Coronary Artery Risk Development in Young Adults (CARDIA) study is a population based that was initiated in 1985-6 and included 5115 adults aged 18-30 years in the US. The population was 54% women. Serum was stored at year 2 of the study to measure androgens. At year 16 of the study 1163 women completed reproductive health questions. Women were defined as oligomenorrhic based on cycle irregularities age 20-30 and hyperandrogenism was defined by elevated testosterone at year 2 of the study in women not on oral contraceptives or pregnant, or by development of hirsutism. In year 20 of the study coronary artery calcium (CAC) and carotid intima media thickness (IMT) studies were performed on 982 women. The mean age was 45.3. This included 55 women with PCOS by oligomenorrhea and hyperandrogenism, 156 women with hyperandrogenism alone, 103 with oligomenorrhea alone and 668 with neither. CAC was present in 10.3% of controls, 11.7% of isolated oligomenorrhic patients, 6.4% with isolated hyperandrogenism and 23.6% of PCOS, resulting in a multivariable adjusted OR of 2.70 (1.31-5.60) for CAC in PCOS. HOMA-IR was increased in PCOS compared to the other groups. BMI was not different between the groups with a mean BMI of 29.3 in the PCOS women. Women with PCOS had increased bulb or internal carotid artery IMT. Therefore this study demonstrates that there appears to be an increased rate of subclinical cardiovascular disease in women at age 45 with a history of PCOS by characteristics present in their 20s. Neither oligomenorrhea alone nor hyperandrogenism alone was associated with a similar risk. Overall this study is limited by the generally small number of women diagnosed with PCOS (55) by these criteria and the menstrual data was by delayed self-report. There are no ultrasound data to assess the contributions of this component of the phenotype. The outcome measure is of subclinical disease and therefore it cannot answer a question regarding cardiovascular morbidity. However this is a population based cohort with a multicentre design

and 20 years of follow up. As this was a nonreferral population with diagnostic criteria applied similarly across the board, the population is not biased by the concern of more significant disease presenting for diagnosis. This study provides additional support for continuing study to assess the cardiovascular disease risk of PCOS.

Kurzthaler D, Hadziomerovic-Pekic D, Wildt L, Seeber BE. Metformin induces a prompt decrease in LH-stimulated testosterone response in women with PCOS independent of its insulin-sensitizing effects. *Reprod Biol Endocrinol.* 2014 Oct 11;12:98 (CM)

This study provides additional clinical evidence about the action of metformin on androgen production independent of its metabolic effect. The mechanisms by which metformin exerts its effects in PCOS are not totally understood. There is scarce evidence of a direct effect of metformin on ovarian steroidogenesis independent of its effects on insulin sensitivity. In vitro studies using cultured ovarian cells have demonstrated a direct metformin-effect on ovarian steroidogenesis. A decrease in serum free T has been shown following metformin in PCOS, thought to be secondary to a reduction in insulin secretion. Most previously published studies reporting improvement in hyperandrogenemia have evaluated androgen levels in PCOS women following 8 to 12 weeks of metformin, though some have observed a reduction in T within one week of treatment. The primary aim of this study was to test the hypothesis of a direct effect following 2 days of metformin on the ovary, independent of improving insulin sensitivity in women with PCOS, evaluating short-term changes in androgen levels and LH-stimulated androgen response. The secondary aim was to determine the longer-term effects during a 12 week follow-up with metformin on clinical, metabolic and endocrine parameters, including changes in anthropometric measures, insulin sensitivity, menstrual pattern, metabolic and endocrine parameters.

Patients (n = 19) were 18 - 40 years old with PCOS, as defined by the Rotterdam criteria. After the baseline assessment, an LH stimulation test was performed with a load of SC 75 I.U. recombinant human LH. Blood samples were collected at -15, 0, 15, 30, 45 and 60 minutes before and after LH administration. Androgens and estradiol were measured before LH and repeated at each time of assessment during the LH stimulation test. Patients were divided into those who received metformin 500 mg, three times daily (n = 10) and those who received placebo in similar form (n = 9) for the following 2 days. The authors evaluated the short-term effects of metformin compared to placebo on basal and LH-stimulated androgen secretion and on hormonal and metabolic parameters during a randomized, double-blinded placebo-controlled clinical trial. The serial values obtained during the 3-h OGTT were used to calculate the area under the curve for insulin and glucose. In addition, they investigated the effects of metformin on ovulation, metabolic and endocrine parameters in a 3 month follow-up evaluation.

They found that compared to placebo, 2 days of metformin was associated with a borderline significant reduction in the free androgen index ($p = 0.05$), with a reduction in the serum LH-stimulated T ($p = 0.03$). Following 3 months of use, a decline in T ($p = 0.04$) and an increase in DHEAS ($p = 0.03$) was observed, independent of changes in weight, metabolic parameters or insulin sensitivity. The findings therefore suggest that there is a direct effect of metformin on androgen production at the ovarian level, independent of its insulin sensitizing effects. However, the effect on menstrual pattern and the rate of ovulation after the 3 months of metformin use was not completely reported.

The conclusion of the study is that metformin induces a prompt decrease in LH-stimulated T secretion after only 2 days of use in women with PCOS. This action precedes the effects of metformin on insulin sensitivity or weight loss.

LIST OF PUBLICATIONS

Congenital Adrenal Hyperplasia and Disorders of Steroidogenesis

Ahmad IC, Yilmaz TF, Kocakoç E. Doppler ultrasonography and magnetic resonance imaging findings of testicular adrenal rest tissue in a patient with 11 β hydroxylase deficiency. Case report. *Med Ultrason*. 2014 Dec;16(4):383-5. PMID: 25463895.

Ajish TP, Praveen VP, Nisha B, Kumar H. Comparison of different glucocorticoid regimens in the management of classical congenital adrenal hyperplasia due to 21-hydroxylase deficiency. *Indian J Endocrinol Metab*. 2014 Nov;18(6):815-20. doi: 10.4103/2230-8210.141358. PMID: 25364676; PubMedCentral PMCID: PMC4192987.

Alcantara-Aragon V, Martinez-Couselo S, Tundidor-Rengel D, Webb SM, Carreras G, Espinos JM, Chico A, Blanco-Vaca F, Corcoy R. Genetic analysis does not confirm non-classical congenital adrenal hyperplasia in more than a third of the women followed with this diagnosis. *Hormones (Athens)*. 2014 Oct;13(4):585-7. doi:10.14310/horm.2002.1509. Epub 2014 Nov 5. PMID: 25402394.

Ali JM, Jalaludin MY, Harun F. Late onset X-linked adrenal hypoplasia congenita with hypogonadotropic hypogonadism due to a novel 4-bp deletion in exon 2 of NR0B1. *J Pediatr Endocrinol Metab*. 2014 Nov;27(11-12):1189-92. doi:10.1515/jpem-2014-0161. PMID: 25003377.

Ambroziak U, Kępczyńska-Nyk A, Kuryłowicz A, Wyślouch-Cieszyńska A, Małunowicz EM, Bartoszewicz Z, Kondracka A, Jaźwiec R, Pawłowska E, Szcześniak M, Dadlez M, Bednarczuk T. LC-MS/MS improves screening towards 21-hydroxylase deficiency. *Gynecol Endocrinol*. 2014 Dec 24:1-5. PMID: 25539143.

Amr NH, Ahmed AY, Ibrahim YA. Carotid intima media thickness and other cardiovascular risk factors in children with congenital adrenal hyperplasia. *J Endocrinol Invest*. 2014 Oct;37(10):1001-8. doi: 10.1007/s40618-014-0148-8. Epub 2014 Aug 12. PMID: 25112902.

Auchus RJ. The Classic and Nonclassic Congenital Adrenal Hyperplasias. *Endocr Pract*. 2014 Dec 22:1-25. PMID: 25536973.

Aulinas A, Webb SM. Health-related quality of life in primary and secondary adrenal insufficiency. *Expert Rev Pharmacoecon Outcomes Res*. 2014

Dec;14(6):873-88. doi: 10.1586/14737167.2014.963559. Epub 2014 Sep 25. PMID: 25252879.

Bernard V, Chougnnet CN, Tenenbaum F, Young J. 131I-noriodocholesterol uptake by testicular adrenal rest tumors in a patient with classical 21-hydroxylase deficiency. *J Clin Endocrinol Metab.* 2014 Nov;99(11):3956-7. doi: 10.1210/jc.2014-2195. Epub 2014 Aug 14. PMID: 25121463.

Bin-Abbas B, Al-Humaida D, Al-Sagheir A, Qasem E, Almohanna M, Alzahrani AS. Divergent Gender Identity in Three Siblings with 46XX Karyotype and Severely Virilizing Congenital Adrenal Hyperplasia Caused by a Novel CYP11B1 Mutation. *Endocr Pract.* 2014 Oct 1;20(10):e191-7. doi: 10.4158/EP14179.CR. PMID:25100385.

Bomberg EM, Addo OY, Kylo J, Gonzalez-Bolanos MT, Ltief AM, Pittock S, Himes JH, Miller BS, Sarafoglou K. The Relation of Peripubertal and Pubertal Growth to Final Adult Height in Children with Classic Congenital Adrenal Hyperplasia. *JPediatr.* 2014 Dec 31. pii: S0022-3476(14)01079-8. doi: 10.1016/j.jpeds.2014.11.027. PMID: 25557963.

Bonfig W, Schwarz HP. Blood pressure, fludrocortisone dose and plasma renin activity in children with classic congenital adrenal hyperplasia due to 21-hydroxylase deficiency followed from birth to 4 years of age. *Clin Endocrinol (Oxf).* 2014 Dec;81(6):871-5. doi: 10.1111/cen.12498. Epub 2014 Jun 17. PMID: 24818525.

Browne WV, Hindmarsh PC, Pasterski V, Hughes IA, Acerini CL, Spencer D, Neufeld S, Hines M. Working memory performance is reduced in children with congenital adrenal hyperplasia. *Horm Behav.* 2015 Jan;67:83-8. doi: 10.1016/j.yhbeh.2014.11.014. Epub 2014 Dec 9. PMID: 25496755.

Bry-Gauillard H, Cartes A, Young J. Mitotane for 21-hydroxylase deficiency in an infertile man. *N Engl J Med.* 2014 Nov 20;371(21):2042-4. doi:10.1056/NEJMc1410041. PMID: 25409392.

Chowdhury TK, Kabir M, Chowdhury MZ, Hutson JM, Banu T. The challenges in diagnosis and gender assignment in disorders of sex development presenting to a pediatric surgical unit in a developing country: the role of laparoscopy and simple tests for gender identity. *J Pediatr Urol.* 2014 Dec;10(6):1255-60. doi: 10.1016/j.jpuro.2014.06.021. Epub 2014 Jul 30. PMID: 25130901.

de Groot MJ, Pijnenburg-Kleizen KJ, Thomas CM, Sweep FC, Stikkelbroeck NM, Otten BJ, Claahsen-van der Grinten HL. Salivary morning androstenedione and 17 α -OH progesterone levels in childhood and puberty in patients with classic congenital adrenal hyperplasia. *Clin Chem Lab Med.* 2014 Oct 6. pii: /j/cclm.ahead-of-print/cclm-2014-0375/cclm-2014-0375.xml. doi: 10.1515/cclm-2014-0375. PMID: 25283138.

Falhammar H, Frisén L, Norrby C, Hirschberg AL, Almqvist C, Nordenskjöld A, Nordenström A. Increased mortality in patients with congenital adrenal

hyperplasia due to 21-hydroxylase deficiency. *J Clin Endocrinol Metab.* 2014 Dec;99(12):E2715-21. doi: 10.1210/jc.2014-2957. PMID: 25279502.

Faurschou S, Mouritsen A, Johannsen TH, Hougaard DM, Cohen A, Duno M, Juul A, Main KM. Hormonal disturbances due to severe and mild forms of congenital adrenal hyperplasia are already detectable in neonatal life. *Acta Paediatr.* 2015 Feb;104(2):e57-62. doi: 10.1111/apa.12835. Epub 2014 Nov 17. PMID: 25346389.

Fukami M, Ogata T. Cytochrome P450 oxidoreductase deficiency: rare congenital disorder leading to skeletal malformations and steroidogenic defects. *Pediatr Int.* 2014 Dec;56(6):805-8. doi: 10.1111/ped.12518. PMID: 25294558.

Gioiello A, Cerra B, Zhang W, Vallerini GP, Costantino G, De Franco F, Passeri D, Pellicciari R, Setchell KD. Synthesis of atypical bile acids for use as investigative tools for the genetic defect of 3 β -hydroxy- Δ (5)-C27-steroid oxidoreductase deficiency. *J Steroid Biochem Mol Biol.* 2014 Oct;144 Pt B:348-60. doi: 10.1016/j.jsbmb.2014.06.008. Epub 2014 Jun 19. PMID: 24954360.

Gorduza D, Tardy-Guidollet V, Robert E, Gay CL, Chatelain P, David M, Bretones P, Lienhardt-Roussie A, Brac de la Perriere A, Morel Y, Mouriquand P. Late prenatal dexamethasone and phenotype variations in 46,XX CAH: concerns about current protocols and benefits for surgical procedures. *J Pediatr Urol.* 2014 Oct;10(5):941-7. doi: 10.1016/j.jpuro.2014.02.003. Epub 2014 Mar 15. PMID: 24679821.

Grosse SD, Sarafoglou K. Does newborn screening have 100% sensitivity to detect salt-wasting congenital adrenal hyperplasia?: A word of caution. *JAMA Pediatr.* 2014 Oct;168(10):970-1. doi: 10.1001/jamapediatrics.2014.1505. PMID: 25285869.

Güven A, Nurcan Cebeci A, Hancili S. Gonadotropin releasing hormone analog treatment in children with congenital adrenal hyperplasia complicated by central precocious puberty. *Hormones (Athens).* 2014 Dec 29. doi: 10.14310/horm.2002.1555. PMID: 25553759.

Heather NL, Seneviratne SN, Webster D, Derraik JG, Jefferies C, Carll J, Jiang Y, Cutfield WS, Hofman PL. Newborn screening for congenital adrenal hyperplasia in New Zealand 1994-2013. *J Clin Endocrinol Metab.* 2014 Dec 12;jc20143168. PMID: 25494862.

Hindmarsh PC, Charmandari E. Variation in absorption and half-life of hydrocortisone influence plasma cortisol concentrations. *Clin Endocrinol (Oxf).* 2014 Nov 5. doi: 10.1111/cen.12653. PMID: 25369980.

Houben CH, Tsui SY, Mou JW, Chan KW, Tam YH, Lee KH. Reconstructive surgery for females with congenital adrenal hyperplasia due to 21-hydroxylase deficiency: a review from the Prince of Wales Hospital. *Hong Kong Med J.* 2014 Dec;20(6):481-5. doi: 10.12809/hkmj144227. Epub 2014 Jul 18. PMID: 25045882.

Hui E, Lee AC, Lang BH, Chan AO, Lam KS, Tan KC. Congenital adrenal hyperplasia presenting as a large adrenal incidentaloma in an elderly man. *ANZ J Surg.* 2014 Nov 12. doi: 10.1111/ans.12909. PMID:25388095.

Januś D, Wójcik M, Tyrawa K, Popławska K, Starzyk JB. Testicular adrenal rest tumors in congenital adrenal hyperplasia: a case report and literature overview. *Endocr Pract.* 2014 Nov 1;20(11):e219-24. doi: 10.4158/EP14188.CR. PMID:25100387.

Kawashima Y, Usui T, Fujimoto M, Miyahara N, Nishimura R, Hanaki K, Kanzaki S. A rare CYP 21 mutation (p.E431K) induced deactivation of CYP 21A2 and resulted in congenital adrenal hyperplasia. *Endocr J.* 2014 Oct 15. PMID: 25319875.

Kim CJ. Congenital lipoid adrenal hyperplasia. *Ann Pediatr Endocrinol Metab.* 2014 Dec;19(4):179-83. doi: 10.6065/apem.2014.19.4.179. Epub 2014 Dec 31. Review. PMID: 25654062; PubMed Central PMCID: PMC4316413.

Krone N, Webb EA, Hindmarsh PC. Keeping the pressure on mineralocorticoid replacement in congenital adrenal hyperplasia. *Clin Endocrinol (Oxf).* 2014 Dec 16. doi: 10.1111/cen.12700. PubMed PMID: 25510524.

Krysiak R, Okopien B. The effect of metformin on androgen production in diabetic women with non-classic congenital adrenal hyperplasia. *Exp Clin Endocrinol Diabetes.* 2014 Nov;122(10):568-71. doi: 10.1055/s-0034-1382048. Epub 2014 Jul 23. PMID: 25054311.

Leccese A, Longo V, Dimatteo C, De Girolamo G, Trunzo R, D'Andrea G, Bafunno V, Margaglione M, Santacroce R. Lack of genotype-phenotype correlation in congenital adrenal hyperplasia due to a CYP21A2-like gene. *Clin Chim Acta.* 2014 Nov 1;437:48-51. doi: 10.1016/j.cca.2014.07.009. Epub 2014 Jul 12. PMID:25025300.

Mallappa A, Sinaii N, Kumar P, Whitaker MJ, Daley LA, Digweed D, Eckland DJ, VanRyzin C, Nieman LK, Arlt W, Ross RJ, Merke DP. A Phase 2 Study of Chronocort®, a Modified-release Formulation of Hydrocortisone, in the Treatment of Adults with Classic Congenital Adrenal Hyperplasia. *J Clin Endocrinol Metab.* 2014 Dec 11;jc20143809. PMID: 25494662.

Marino R, Perez Garrido N, Costanzo M, Guercio G, Juanes M, Rocco C, Ramirez P, Warman DM, Ciaccio M, Pena G, Feyling JG, Miras M, Rivarola MA, Belgorosky A, Saraco N. Five New Cases of 46,XX Aromatase Deficiency: Clinical Follow-Up From Birth to Puberty, a Novel Mutation, and a Founder Effect. *J Clin Endocrinol Metab.* 2015 Feb;100(2):E301-7. doi: 10.1210/jc.2014-2967. Epub 2014 Nov 21. PMID: 25415177.

Marra AM, Improda N, Capalbo D, Salzano A, Arcopinto M, De Paulis A, Alessio M, Lenzi A, Isidori AM, Cittadini A, Salerno M. Cardiovascular abnormalities and impaired exercise performance in adolescents with

congenital adrenal hyperplasia. *J Clin Endocrinol Metab.* 2015 Feb;100(2):644-52. doi: 10.1210/jc.2014-1805. Epub 2014 Nov 18. PMID: 25405496.

Martín S, Muñoz L, Pérez A, Sobrero G, Picotto G, Ochetti M, Carpentieri A, Silvano L, de Barboza GD, Signorino M, Rupérez C, Bertolotto P, Ulla MR, Pellizas C, Montesinos M, Tolosa de Talamoni N, Miras M. Clinical and molecular studies related to bone metabolism in patients with congenital adrenal hyperplasia. *J Pediatr Endocrinol Metab.* 2014 Nov;27(11-12):1161-6. doi: 10.1515/jpem-2014-0104. PMID: 25026125.

McCann-Crosby B, Chen MJ, Lyons SK, Lin Y, Axelrad M, Dietrich JE, Sutton VR, Macias CG, Gunn S, Karaviti L. Nonclassical congenital adrenal hyperplasia: targets of treatment and transition. *Pediatr Endocrinol Rev.* 2014 Dec;12(2):224-38. PMID: 25581988.

Nascimento ML, Cristiano AN, Campos Td, Ohira M, Cechinel E, Simoni G, Lee Jv, Linhares RM, Silva PC. Ten-year evaluation of a Neonatal Screening Program for congenital adrenal hyperplasia. *Arq Bras Endocrinol Metabol.* 2014 Oct;58(7):765-71. PMID: 25372587.

Neocleous V, Shammam C, Phedonos AA, Phylactou LA, Skordis N. Phenotypic variability of hyperandrogenemia in females heterozygous for CYP21A2 mutations. *Indian J Endocrinol Metab.* 2014 Nov;18(Suppl 1):S72-9. doi: 10.4103/2230-8210.145077. PMID: 25538881.

Öcal G, Berberoğlu M, Sıklar Z, Aycan Z, Hacıhamdioğlu B, Erdeve ŞS, Çamtosun E, Kocaay P, Ruhi Hİ, Kılıç BG, Tukun A. Clinical Review of 95 Patients with 46,XX Disorders of Sex Development Based on the New Chicago Classification. *J Pediatr Adolesc Gynecol.* 2015 Feb;28(1):6-11. doi: 10.1016/j.jpag.2014.01.106. Epub 2014 Nov 12. PMID: 25444050.

Øksnes M, Ross R, Løvås K. Optimal glucocorticoid replacement in adrenal insufficiency. *Best Pract Res Clin Endocrinol Metab.* 2015 Jan;29(1):3-15. doi: 10.1016/j.beem.2014.09.009. Epub 2014 Oct 7. Review. PMID: 25617168.

Pina C, Khattab A, Katzman P, Bruckner L, Andolina J, New M, Yau M. Ovarian carcinoma in a 14-year-old with classical salt-wasting congenital adrenal hyperplasia and bilateral adrenalectomy. *J Pediatr Endocrinol Metab.* 2014 Nov 26. pii: /j/jpem.ahead-of-print/jpem-2014-0299/jpem-2014-0299.xml. doi: 10.1515/jpem-2014-0299. PMID: 25427061.

Reisch N. Substitution therapy in adult patients with congenital adrenal hyperplasia. *Best Pract Res Clin Endocrinol Metab.* 2015 Jan;29(1):33-45. doi: 10.1016/j.beem.2014.11.002. Epub 2014 Nov 14. Review. PMID: 25617171.

Sarafoglou K, Gonzalez-Bolanos MT, Zimmerman CL, Boonstra T, Yaw Addo O, Brundage R. Comparison of cortisol exposures and pharmacodynamic adrenal steroid responses to hydrocortisone suspension vs. commercial tablets. *J Clin Pharmacol.* 2014 Nov 10. doi: 10.1002/jcph.424. PMID: 25385533.

Sharaf S, Hafez M, ElAbd D, Ismail A, Thabet G, Elsharkawy M. High frequency of splice site mutation in 21-hydroxylase deficiency children. *J Endocrinol Invest.* 2014 Dec 13. PMID: 25501839.

Smeets EE, Span PN, van Herwaarden AE, Wevers RA, Hermus AR, Sweep FC, Claahsen-van der Grinten HL. Molecular Characterization of Testicular Adrenal Rest Tumors in Congenital Adrenal Hyperplasia; Lesions with both Adrenocortical and Leydig Cell Features. *J Clin Endocrinol Metab.* 2014 Dec 8;94(12):4203-11. PMID: 25485724.

Teixeira SR, Elias PC, Andrade MT, Melo AF, Elias Junior J. The role of imaging in congenital adrenal hyperplasia. *Arq Bras Endocrinol Metabol.* 2014 Oct;58(7):701-8. PMID: 25372578.

Tugtepe H, Thomas DT, Turan S, Cizmecioglu F, Hatun S, Bereket A, Dagli ET. Does common channel length affect surgical choice in female congenital adrenal hyperplasia patients? *J Pediatr Urol.* 2014 Oct;10(5):948-54. doi: 10.1016/j.jpuro.2014.02.012. Epub 2014 Mar 21. PMID: 24703836.

Tuhan HU, Catli G, Anik A, Onay H, Dundar B, Bober E, Abaci A. Cross-reactivity of adrenal steroids with aldosterone may prevent the accurate diagnosis of congenital adrenal hyperplasia. *J Pediatr Endocrinol Metab.* 2014 Dec 11. pii: /j/jpem.ahead-of-print/jpem-2014-0170/jpem-2014-0170.xml. doi: 10.1515/jpem-2014-0170. PMID: 25503463.

Vitkin E, Ben-Dor A, Shmoish M, Hartmann MF, Yakhini Z, Wudy SA, Hochberg Z. Peer group normalization and urine to blood context in steroid metabolomics: the case of CAH and obesity. *Steroids.* 2014 Oct;88:83-9. doi: 10.1016/j.steroids.2014.07.003. Epub 2014 Jul 17. PMID: 25042470.

PCOS-Adolescence

Bouzas IC, Cader SA, Leão L, Kuschnir MC, Braga C. Menstrual cycle alterations during adolescence: early expression of metabolic syndrome and polycystic ovary syndrome. *J Pediatr Adolesc Gynecol.* 2014 Dec;27(6):335-41. doi:10.1016/j.jpog.2014.01.002. Epub 2014 Sep 23. PMID: 25256874.

Chikvaidze N, Kristesashvili J, Gegechkori M. Peculiarities of sexual development and reproductive function in young women with childhood onset weight problems. *Georgian Med News.* 2014 Oct;(235):11-6. PMID: 25416210

Eleftheriadou M, Stefanidis K, Lykeridou K, Iliadis I, Michala L. Dietary habits in adolescent girls with polycystic ovarian syndrome. *Gynecol Endocrinol.* 2014 Nov 28;1-3. PMID: 25430596.

El-Sharkawy AA, Abdelmotaleb GS, Aly MK, Kabel AM. Effect of metformin on sleep disorders in adolescent girls with polycystic ovarian syndrome. *J Pediatr Adolesc Gynecol.* 2014 Dec;27(6):347-52. doi: 10.1016/j.jpog.2014.01.004. Epub 2014 Sep 23. PMID: 25256878.

Ganie MA, Hassan S, Nisar S, Shamas N, Rashid A, Ahmed I, Douhat S, Mudassar S, Jan VM, Rashid F. High-sensitivity C-reactive protein (hs-CRP) levels and its relationship with components of polycystic ovary syndrome in Indian adolescent women with polycystic ovary syndrome (PCOS). *Gynecol Endocrinol*. 2014 Nov;30(11):781-4. doi: 10.3109/09513590.2014.924099. Epub 2014 Aug 19. PMID: 25137507.

Mani H, Potdar N, Gleeson H. How to manage an adolescent girl presenting with features of polycystic ovary syndrome (PCOS); an exemplar for adolescent healthcare in endocrinology. *Clin Endocrinol (Oxf)*. 2014 Nov;81(5):652-6. doi: 10.1111/cen.12501. Epub 2014 Jul 7. PMID: 24826983.

Pawelczak M, Rosenthal J, Milla S, Liu YH, Shah B. Evaluation of the pro-inflammatory cytokine tumor necrosis factor- α in adolescents with polycystic ovary syndrome. *J Pediatr Adolesc Gynecol*. 2014 Dec;27(6):356-9. doi: 10.1016/j.jpag.2014.01.104. Epub 2014 Sep 23. PMID: 25256873.

Pinola P, Morin-Papunen LC, Bloigu A, Puukka K, Ruokonen A, Järvelin MR, Franks S, Tapanainen JS, Lashen H. Anti-Müllerian hormone: correlation with testosterone and oligo- or amenorrhoea in female adolescence in a population-based cohort study. *Hum Reprod*. 2014 Oct 10;29(10):2317-25. doi: 10.1093/humrep/deu182. Epub 2014 Jul 23. PMID: 25056088.

Senaldi L, Gopi RP, Milla S, Shah B. Is ultrasound useful in the diagnosis of adolescents with polycystic ovary syndrome? *J Pediatr Endocrinol Metab*. 2014 Nov 6. pii: /j/jpem.ahead-of-print/jpem-2014-0307/jpem-2014-0307.xml. doi: 10.1515/jpem-2014-0307. PMID: 25381947.

Sopher AB, Grigoriev G, Laura D, Cameo T, Lerner JP, Chang RJ, McMahon DJ, Oberfield SE. Anti-Müllerian hormone may be a useful adjunct in the diagnosis of polycystic ovary syndrome in nonobese adolescents. *J Pediatr Endocrinol Metab*. 2014 Nov;27(11-12):1175-9. doi: 10.1515/jpem-2014-0128. PMID: 25003376.

Torchen LC, Fogel NR, Brickman WJ, Papanodis R, Dunaif A. Persistent apparent pancreatic β -cell defects in premenarchal PCOS relatives. *J Clin Endocrinol Metab*. 2014 Oct;99(10):3855-62. doi: 10.1210/jc.2014-1474. Epub 2014 Jul 16. PMID: 25029420.

West S, Lashen H, Bloigu A, Franks S, Puukka K, Ruokonen A, Järvelin MR, Tapanainen JS, Morin-Papunen L. Irregular menstruation and hyperandrogenaemia in adolescence are associated with polycystic ovary syndrome and infertility in later life: Northern Finland Birth Cohort 1986 study. *Hum Reprod*. 2014 Oct;29(10):2339-51. doi: 10.1093/humrep/deu200. Epub 2014 Aug 1. PMID:25085801.

Youngster M, Ward VL, Blood EA, Barnewolt CE, Emans SJ, Divasta AD. Utility of ultrasound in the diagnosis of polycystic ovary syndrome in adolescents.

Fertil Steril. 2014 Nov;102(5):1432-8. doi: 10.1016/j.fertnstert.2014.07.1241. Epub 2014 Sep 16. PMID: 25226858.

PCOS-Dermatology

Buzney E, Sheu J, Buzney C, Reynolds RV. Polycystic ovary syndrome: a review for dermatologists: Part II. Treatment. *J Am Acad Dermatol*. 2014 Nov;71(5):859.e1-859.e15; quiz 873-4. doi: 10.1016/j.jaad.2014.05.009. Epub 2014 Oct 15. Review. PMID: 25437978.

Hagag P, Steinschneider M, Weiss M. Role of the combination spironolactone-norgestimate-estrogen in Hirsute women with polycystic ovary syndrome. *J Reprod Med*. 2014 Sep-Oct;59(9-10):455-63. PMID: 25330687.

Housman E, Reynolds RV. Polycystic ovary syndrome: a review for dermatologists: Part I. Diagnosis and manifestations. *J Am Acad Dermatol*. 2014 Nov;71(5):847.e1-847.e10; quiz 857-8. doi: 10.1016/j.jaad.2014.05.007. Epub 2014 Oct 15. Review. PMID: 25437977.

Leelaphiwat S, Jongwutiwes T, Lertvikool S, Tabcharoen C, Sukprasert M, Rattanasiri S, Weerakiet S. Comparison of desogestrel/ethinyl estradiol plus spironolactone versus cyproterone acetate/ethinyl estradiol in the treatment of polycystic ovary syndrome: A randomized controlled trial. *J Obstet Gynaecol Res*. 2014 Oct 15. doi: 10.1111/jog.12543. PMID: 25319761.

PCOS-Endocrine Disruptors

Akın L, Kendirci M, Narin F, Kurtoglu S, Saraymen R, Kondolot M, Koçak S, Elmalı F. The endocrine disruptor bisphenol A may play a role in the aetiopathogenesis of polycystic ovary syndrome in adolescent girls. *Acta Paediatr*. 2014 Dec 3. doi: 10.1111/apa.12885. PMID: 25469562.

Vagi SJ, Azziz-Baumgartner E, Sjödin A, Calafat AM, Dumesic D, Gonzalez L, Kato K, Silva MJ, Ye X, Azziz R. Exploring the potential association between brominated diphenyl ethers, polychlorinated biphenyls, organochlorine pesticides, perfluorinated compounds, phthalates, and bisphenol a in polycystic ovary syndrome: a case-control study. *BMC Endocr Disord*. 2014 Oct 28;14:86. doi:10.1186/1472-6823-14-86. PMID: 25348326.

PCOS-Animal models

Benrick A, Maliqueo M, Johansson J, Sun M, Wu X, Mannerås-Holm L, Stener-Victorin E. Enhanced insulin sensitivity and acute regulation of metabolic genes and signaling pathways after a single electrical or manual acupuncture session in female insulin-resistant rats. *Acta Diabetol.* 2014 Dec;51(6):963-72. doi: 10.1007/s00592-014-0645-4. Epub 2014 Sep 14. PMID:25218925.

Noroozadeh M, Ramezani Tehrani F, Sedaghat K, Godini A, Azizi F. The impact of prenatal exposure to a single dose of testosterone on insulin resistance, glucose tolerance and lipid profile of female rat's offspring in adulthood. *J Endocrinol Invest.* 2014 Dec 21. PMID: 25527160.

Rezvanfar MA, Saadat S, Shojaei Saadi HA, Mansoori P, Saeedi S, Gooshe M, Baeeri M, Abdollahi M. Cellular and molecular mechanisms of pentoxifylline's beneficial effects in experimental polycystic ovary. *Theriogenology.* 2014 Nov 29. pii: S0093-691X(14)00654-2. doi: 10.1016/j.theriogenology.2014.11.034. PMID: 25557188.

Roland AV, Moenter SM. Reproductive neuroendocrine dysfunction in polycystic ovary syndrome: insight from animal models. *Front Neuroendocrinol.* 2014 Oct;35(4):494-511. doi: 10.1016/j.yfrne.2014.04.002. Epub 2014 Apr 18. PMID: 24747343.

Walters K. The role of the androgens in normal and pathological ovarian function. *Reproduction.* 2014 Dec 16. pii: REP-14-0517. PMID: 25516989.

Wilson JL, Chen W, Dissen GA, Ojeda SR, Cowley MA, Garcia-Rudaz C, Enriori PJ. Excess of nerve growth factor in the ovary causes a polycystic ovary-like syndrome in mice, which closely resembles both reproductive and metabolic aspects of the human syndrome. *Endocrinology.* 2014 Nov;155(11):4494-506. doi:10.1210/en.2014-1368. Epub 2014 Sep 11. PMID: 25211588.

Zhang D, Cong J, Shen H, Wu Q, Wu X. Genome-wide identification of aberrantly methylated promoters in ovarian tissue of prenatally androgenized rats. *Fertil Steril.* 2014 Nov;102(5):1458-67. doi: 10.1016/j.fertnstert.2014.07.1203. Epub 2014 Aug 20. PMID: 25150387.

PCOS-General Health

Arentz S, Abbott JA, Smith CA, Bensoussan A. Herbal medicine for the management of polycystic ovary syndrome (PCOS) and associated oligo/amenorrhoea and hyperandrogenism; a review of the laboratory evidence for effects with corroborative clinical findings. *BMC Complement*

Altern Med. 2014 Dec 18;14(1):511. PMID: 25524718.

Barry JA, Azizia MM, Hardiman PJ Risk of endometrial, ovarian and breast cancer in women with polycystic ovary syndrome: a systematic review and meta-analysis. *Hum Reprod Update*. 2014 Sep-Oct;20(5):748-58. doi: 10.1093/humupd/dmu012. Epub 2014 Mar 30. PMID: 24688118.

Bouchard P, Fauser BC. PCOS: an heterogeneous condition with multiple faces for multiple doctors. *Eur J Endocrinol*. 2014 Oct;171(4):E1-2. doi: 10.1530/EJE-14-0429. PMID: 25209877.

Carlioglu A, Kaygusuz I, Karakurt F, Gumus II, Uysal A, Kasapoglu B, Armutcu F, Uysal S, Keskin EA, Koca C. The platelet activating factor acetyl hydrolase, oxidized low-density lipoprotein, paraoxonase 1 and arylesterase levels in treated and untreated patients with polycystic ovary syndrome. *Arch Gynecol Obstet*. 2014 Nov;290(5):929-35. doi: 10.1007/s00404-014-3275-8. Epub 2014 May 20. PMID: 24840107.

Christiansen SC, Vanky E, Klungland H, Stafne SN, Mørkved S, Salvesen KÅ, Sæther M, Carlsen SM. The effect of exercise and metformin treatment on circulating free DNA in pregnancy. *Placenta*. 2014 Dec;35(12):989-93. doi: 10.1016/j.placenta.2014.09.010. Epub 2014 Sep 23. PMID: 25282112.

Conway G, Dewailly D, Diamanti-Kandarakis E, Escobar-Morreale HF, Franks S, Gambineri A, Kelestimur F, Macut D, Micic D, Pasquali R, Pfeifer M, Pignatelli D, Pugeat M, Yildiz B; ESE PCOS Special Interest Group. European survey of diagnosis and management of the polycystic ovary syndrome: results of the ESE PCOS Special Interest Group's Questionnaire. *Eur J Endocrinol*. 2014 Oct;171(4):489-98. doi: 10.1530/EJE-14-0252. Epub 2014 Jul 21. PMID: 25049203.

Conway G, Dewailly D, Diamanti-Kandarakis E, Escobar-Morreale HF, Franks S, Gambineri A, Kelestimur F, Macut D, Micic D, Pasquali R, Pfeifer M, Pignatelli D, Pugeat M, Yildiz BO; ESE PCOS Special Interest Group. The polycystic ovary syndrome: a position statement from the European Society of Endocrinology. *Eur J Endocrinol*. 2014 Oct;171(4):P1-29. doi: 10.1530/EJE-14-0253. Epub 2014 May 21. Review. PMID: 24849517.

Jayasena CN, Franks S. The management of patients with polycystic ovary syndrome. *Nat Rev Endocrinol*. 2014 Oct;10(10):624-36. doi: 10.1038/nrendo.2014.102. Epub 2014 Jul 15. Review. PMID: 25022814
Joham AE, Boyle JA, Zoungas S, Teede HJ. Hypertension in Reproductive-Aged Women With Polycystic Ovary Syndrome and Association With Obesity. *Am J Hypertens*. 2014 Dec 26. pii: hpu251. PMID: 25542625.

Kort DH, Lobo RA. Preliminary evidence that cinnamon improves menstrual cyclicity in women with polycystic ovarysyndrome: a randomized controlled trial. *Am J Obstet Gynecol*. 2014 Nov;211(5):487.e1-6. doi: 10.1016/j.ajog.2014.05.009. Epub 2014 May 9. PMID: 24813595.

Luque-Ramírez M, Escobar-Morreale HF. Polycystic ovary syndrome as a paradigm for prehypertension, prediabetes, and preobesity. *Curr Hypertens Rep.* 2014 Dec;16(12):500. doi: 10.1007/s11906-014-0500-6. PMID: 25304109.

Ma J, Lin TC, Liu W. Gastrointestinal hormones and polycystic ovary syndrome. *Endocrine.* 2014 Dec;47(3):668-78. doi: 10.1007/s12020-014-0275-1. Epub 2014 May 4. PMID: 24791734.

Setji TL, Brown AJ. Polycystic ovary syndrome: update on diagnosis and treatment. *Am J Med.* 2014 Oct;127(10):912-9. doi: 10.1016/j.amjmed.2014.04.017. Epub 2014 May 21. Review. PMID: 24859638.

Shen CC, Yang AC, Hung JH, Hu LY, Tsai SJ. A nationwide population-based retrospective cohort study of the risk of uterine, ovarian and breast cancer in women with polycystic ovary syndrome. *Oncologist.* 2015 Jan;20(1):45-9. doi:10.1634/theoncologist.2014-0311. Epub 2014 Nov 19. PMID: 25410097.

Soydan SS, Deniz K, Uckan S, Unal AD, Tutuncu NB. Is the incidence of temporomandibular disorder increased in polycystic ovary syndrome? *Br J Oral Maxillofac Surg.* 2014 Nov;52(9):822-6. doi: 10.1016/j.bjoms.2014.07.100. Epub 2014 Aug 12. PMID: 25124832.

Stanosz S, von Mach-Szczypiński J, Sieja K, Kościuszkiewicz J. Micronized estradiol and progesterone therapy in primary, preinvasive endometrial cancer (1A/G1) in young women with polycystic ovarian syndrome. *J Clin Endocrinol Metab.* 2014 Dec;99(12):E2472-6. doi: 10.1210/jc.2014-1693. PMID: 25157541.

Willis GR, Connolly K, Ladell K, Davies TS, Guschina IA, Ramji D, Miners K, Price DA, Clayton A, James PE, Rees DA. Young women with polycystic ovary syndrome have raised levels of circulating annexin V-positive platelet microparticles. *Hum Reprod.* 2014 Dec;29(12):2756-63. doi: 10.1093/humrep/deu281. Epub 2014 Oct 21. PMID: 25336711.

Yilmaz O, Calan M, Kume T, Temur M, Yesil P, Senses MY. The effect of prolactin levels on MPV in women with PCOS. *Clin Endocrinol (Oxf).* 2014 Oct 31. doi: 10.1111/cen.12647. PMID: 25359296.

Yilmaz Ö, Mehmet C, Kelekci S, Temur M. Association between red blood cell distribution width and polycystic ovary syndrome. *Endocr Res.* 2014 Dec 22:1-7. PMID: 25531764.

PCOS – Genetics

Baldani DP, Skrgatic L, Cerne JZ, Oguic SK, Gersak BM, Gersak K. Association between serum levels and pentanucleotide polymorphism in the sex hormone binding globulin gene and cardiovascular risk factors in females with polycystic ovary syndrome. *Mol Med Rep.* 2014 Dec 19. doi: 10.3892/mmr.2014.3117. PMID: 25530260.

Batista MC, Duarte Ede F, Borba MD, Zingler E, Mangussi-Gomes J, dos Santos BT, de Moraes OL, Hayashida SA, Baracat EC, da Rocha Neves Fde A, Maciel GA, Bachega TA, Barra GB, Lofrano-Porto A. Trp28Arg/Ile35Thr LHB gene variants are associated with elevated testosterone levels in women with polycystic ovary syndrome. *Gene.* 2014 Oct 15;550(1):68-73. doi: 10.1016/j.gene.2014.08.017. Epub 2014 Aug 8. PMID: 25111116.

Ben Salem A, Attaoua R, Mtiraoui N, Belkahla S, Ezzidi I, Ajina M, Souissi M, Poucheret P, Vintila M, Grigorescu F, Mahjoub T. Common polymorphisms of calpain-10 and the risk of polycystic ovary syndrome in Tunisian population: a case-control study. *Mol Biol Rep.* 2014 Oct;41(10):6569-74. doi: 10.1007/s11033-014-3540-8. Epub 2014 Jul 4. PMID: 24993116.

Casarini L, Brigante G. The polycystic ovary syndrome evolutionary paradox: a genome-wide association studies-based, in silico, evolutionary explanation. *J Clin Endocrinol Metab.* 2014 Nov;99(11):E2412-20. doi: 10.1210/jc.2014-2703. Epub 2014 Aug 5. PMID: 25093623.

Cui Y, Zhao S, Zhao H, Lv Y, Yu M, Wang Y, Chen ZJ. Mutational analysis of TOX3 in Chinese Han women with polycystic ovary syndrome. *Reprod Biomed Online.* 2014 Dec;29(6):752-5. doi: 10.1016/j.rbmo.2014.08.004. Epub 2014 Sep 27. PMID: 25311971.

Du J, Wang Z, Zhang J, Jia L, Zhang F, Shi Y, Chen Z. [Association between single nucleotide polymorphism of rs2252673 of INSR gene and polycystic ovarian syndrome]. *Zhonghua Fu Chan Ke Za Zhi.* 2014 Dec;49(12):919-24. Chinese. PMID: 25608993.

Kim JJ, Choi YM, Hong MA, Kim JM, Hwang SS, Lee GH, Chae SJ, Hwang KR, Yoon SH, Kim SH. Gene dose effect between a fat mass and obesity-associated polymorphism and body mass index was observed in Korean women with polycystic ovary syndrome but not in control women. *Fertil Steril.* 2014 Oct;102(4):1143-1148.e2. doi: 10.1016/j.fertnstert.2014.07.004. Epub 2014 Jul 30. PMID: 25086788.

Roemer KL, Young SL, Savaris RF. Characterization of GAB1 expression over the menstrual cycle in women with and without polycystic ovarian syndrome provides a new insight into its pathophysiology. *J Clin Endocrinol Metab.* 2014 Nov;99(11):E2162-8. doi: 10.1210/jc.2014-2128. Epub 2014 Aug 21. PMID: 25144631.

Salem AB, Attaoua R, Mtiraoui N, Meddeb S, Kacem O, Ajina M, Souissi M, Poucheret P, Normand C, Mahjoub T, Grigorescu F. Haplotyping strategy highlights the specificity of FTO gene association with polycystic ovary syndrome in Tunisian women population. *Gene*. 2014 Dec 12. pii: S0378-1119(14)01376-6. doi: 10.1016/j.gene.2014.12.004. PMID: 25498334.

Schweighofer N, Lerchbaum E, Trummer O, Schwetz V, Pieber T, Obermayer-Pietsch B. Metformin resistance alleles in polycystic ovary syndrome: pattern and association with glucose metabolism. *Pharmacogenomics*. 2014 Feb;15(3):305-17. doi: 10.2217/pgs.13.223. PMID: 24533710.

Shafiee MN, Malik DA, Yunus RI, Atiomo W, Omar MH, Ghani NA, Hatta AZ, Seedhouse C, Chapman C, Mokhtar NM. The effect of Metformin on endometrial tumor-regulatory genes and systemic metabolic parameters in polycystic ovarian syndrome - a proof-of-concept study. *Gynecol Endocrinol*. 2014 Dec 11:1-5. PMID: 25495168.

Vals MA, Öiglanc-Shlik E, Nõukas M, Shor R, Peet A, Kals M, Kivistik PA, Metspalu A, Õunap K. Coffin-Siris Syndrome with obesity, macrocephaly, hepatomegaly and hyperinsulinism caused by a mutation in the ARID1B gene. *Eur J Hum Genet*. 2014 Nov;22(11):1327-9. doi: 10.1038/ejhg.2014.25. Epub 2014 Feb 26. PMID: 24569609.

Wang X, Yang Y, Huang Y, Wang Q. Association study of polymorphism of FXIIIVal34Leu gene and polycystic ovary syndrome. *Int J Clin Exp Med*. 2014 Nov 15;7(11):4466-70. eCollection 2014. PMID: 25550970.

Wu HL, Heneidi S, Chuang TY, Diamond MP, Layman LC, Azziz R, Chen YH. The expression of the miR-25/93/106b family of micro-RNAs in the adipose tissue of women with polycystic ovary syndrome. *J Clin Endocrinol Metab*. 2014 Dec;99(12):E2754-61. doi: 10.1210/jc.2013-4435. PMID: 25243570.

PCOS - Immunological Considerations

Covington JD, Tam CS, Pasarica M, Redman LM. Higher circulating leukocytes in women with PCOS is reversed by aerobic exercise. *Biochimie*. 2014 Nov 12. pii: S0300-9084(14)00330-7. doi: 10.1016/j.biochi.2014.10.028. PMID: 25446648.

González F, Kirwan JP, Rote NS, Minium J. Evidence of mononuclear cell preactivation in the fasting state in polycystic ovary syndrome. *Am J Obstet Gynecol*. 2014 Dec;211(6):635.e1-7. doi: 10.1016/j.ajog.2014.06.044. Epub 2014 Jun 20. PMID: 24956549.

González F, Sia CL, Shepard MK, Rote NS, Minium J. The altered mononuclear cell-derived cytokine response to glucose ingestion is not regulated by excess adiposity in polycystic ovary syndrome. *J Clin Endocrinol Metab* 2014 Nov;99(11):E2244-51. doi: 10.1210/jc.2014-2046. Epub 2014 Jul 31. PMID: 25078146.

Papalou O, Livadas S, Karachalios A, Tolia N, Kokkoris P, Tripolitakis K, Diamanti-Kandarakis E. White blood cells levels and PCOS: direct and indirect relationship with obesity and insulin resistance, but not with hyperandrogenemia. *Hormones (Athens)*. 2014 Dec 29. doi: 10.14310/horm.2002.1563. PMID: 25553762.

PCOS - After the Menopause

Seifer DB, Merhi Z. Is AMH a regulator of follicular atresia? *J Assist Reprod Genet*. 2014 Nov;31(11):1403-7. doi: 10.1007/s10815-014-0328-7. Epub 2014 Sep 6. PMID: 25193290.

PCOS - Metabolic Dysfunction/Cardiovascular Disease/Inflammation

Abali R, Tasdemir N, Alpsoy S, Tasdemir UG, Guzel S, Yuksel MA, Temel Yuksel I, Yilmaz M. No relationship between osteoprotegerin concentrations and endothelial dysfunction in non-obese women with and without polycystic ovary syndrome. *Arch Gynecol Obstet*. 2014 Oct 4. PMID: 25280574.

Ademoglu E, Berberoglu Z, Carlioglu A, Dellal F, Gorar S, Alphan Z, Uysal S, Karakurt F. Higher levels of circulating chemerin in both lean and obese patients with polycystic ovarysyndrome. *Minerva Ginecol*. 2014 Dec;66(6):535-42. PMID: 25373013.

Aldrighi JM, Tsutsui JM, Kowastch I, Ribeiro AL, Scapinelli A, Tamanaha S, Oliveira RM, Mathias W Jr. Effects of Insulin Resistance on Myocardial Blood Flow and Arterial Peripheral Circulation in Patients with Polycystic Ovary Syndrome. *Echocardiography*. 2014 Nov 21. doi: 10.1111/echo.12849. PMID: 25412756.

Asemi Z, Foroozanfard F, Hashemi T, Bahmani F, Jamilian M, Esmailzadeh A. Calcium plus vitamin D supplementation affects glucose metabolism and lipid concentrations in overweight and obese vitamin D deficient women with polycystic ovary syndrome. *Clin Nutr*. 2014 Oct 3. pii: S0261-5614(14)00243-X. doi: 10.1016/j.clnu.2014.09.015 PMID: 25300649.

Asemi Z, Samimi M, Tabassi Z, Shakeri H, Sabihi SS, Esmailzadeh A. Effects of DASH diet on lipid profiles and biomarkers of oxidative stress in overweight

and obese women with polycystic ovary syndrome: a randomized clinical trial. *Nutrition*. 2014 Nov-Dec;30(11-12):1287-93. doi: 10.1016/j.nut.2014.03.008. Epub 2014 Mar 15. PMID: 25194966.

Bahmani F, Karamali M, Shakeri H, Asemi Z. The effects of folate supplementation on inflammatory factors and biomarkers of oxidative stress in overweight and obese women with polycystic ovary syndrome: a randomized, double-blind, placebo-controlled clinical trial. *Clin Endocrinol (Oxf)*. 2014 Oct;81(4):582-7. doi: 10.1111/cen.12451. Epub 2014 Apr 15. PMID: 24628390.

Calderon-Margalit R, Siscovick D, Merkin SS, Wang E, Daviglius ML, Schreiner PJ, Sternfeld B, Williams OD, Lewis CE, Azziz R, Schwartz SM, Wellons MF. Prospective association of polycystic ovary syndrome with coronary artery calcification and carotid-intima-media thickness: the Coronary Artery Risk Development in Young Adults Women's study. *Arterioscler Thromb Vasc Biol*. 2014 Dec;34(12):2688-94. doi: 10.1161/ATVBAHA.114.304136. Epub 2014 Oct 30. PMID: 25359859.

Chang CL, Huang SY, Soong YK, Cheng PJ, Wang CJ, Liang IT. Circulating irisin and glucose-dependent insulinotropic peptide are associated with the development of polycystic ovary syndrome. *J Clin Endocrinol Metab*. 2014 Dec;99(12):E2539-48. doi: 10.1210/jc.2014-1180. PMID: 25029417.

Chatterjee B, Suri J, Suri JC, Mittal P, Adhikari T. Impact of sleep-disordered breathing on metabolic dysfunctions in patients with polycystic ovarysyndrome. *Sleep Med*. 2014 Dec;15(12):1547-53. doi: 10.1016/j.sleep.2014.06.023. Epub 2014 Sep 16. PMID: 25311833.

Chen CI, Hsu MI, Lin SH, Chang YC, Hsu CS, Tzeng CR. Adiponectin and leptin in overweight/obese and lean women with polycystic ovary syndrome. *Gynecol Endocrinol*. 2014 Nov 25:1-5. PMID: 25423261.

Chen L, Xu WM, Zhang D. Association of abdominal obesity, insulin resistance, and oxidative stress in adipose tissue in women with polycystic ovary syndrome. *Fertil Steril*. 2014 Oct;102(4):1167-1174.e4. doi: 10.1016/j.fertnstert.2014.06.027. Epub 2014 Jul 23. Erratum in: *Fertil Steril*. 2014 Nov;102(5):1499. PMID: 25064406.

De Leo V, Tosti C, Cappelli V, Morgante G, Cianci EA. [Combination inositol and glucomannan in PCOS patients]. *Minerva Ginecol*. 2014 Dec;66(6):527-33. Italian. PMID: 25373012.

de Medeiros SF, Barbosa JS, de Medeiros MA, da Silva EB, de Souza AC, Yamamoto MM. Is glycated hemoglobin related to other dysmetabolic variables implicated in the increase of cardiovascular risk in polycystic ovary syndrome? A comparative study. *Exp Clin Endocrinol Diabetes*. 2014 Oct;122(9):553-7. doi: 10.1055/s-0034-1377043. Epub 2014 Jun 11. PMID: 24918529.

Gallea M, Granzotto M, Azzolini S, Faggian D, Mozzanega B, Vettor R, Mioni R. Insulin and body weight but not hyperandrogenism seem involved in seasonal serum 25-OH-vitamin D3 levels in subjects affected by PCOS. *Gynecol Endocrinol*. 2014 Oct;30(10):739-45. doi: 10.3109/09513590.2014.927857. Epub 2014 Jun 13. PMID: 24927080.

Gencer M, Gazi E, Hacivelioglu S, Binnetoğlu E, Barutçu A, Türkön H, Temiz A, Altun B, Vural A, Cevizci S, Kumcular T, Coşar E. The relationship between subclinical cardiovascular disease and lipocalin-2 levels in women with PCOS. *Eur J Obstet Gynecol Reprod Biol*. 2014 Oct;181:99-103. doi: 10.1016/j.ejogrb.2014.07.032. Epub 2014 Aug 1. PMID: 25145761.

Güdücü N, Görmüş U, Telatar B, Dünde I. Retinol-binding protein 4, as a negative acute-phase reactant in polycystic ovary syndrome. *Minerva Endocrinol*. 2014 Dec;39(4):299-304. PMID: 25371056.

Jamilian M, Razavi M, Fakhrie Kashan Z, Ghandi Y, Bagherian T, Asemi Z. Metabolic response to selenium supplementation in women with polycystic ovary syndrome: a randomized, double-blind, placebo-controlled trial. *Clin Endocrinol (Oxf)*. 2014 Dec 16. doi: 10.1111/cen.12699. PMID: 25510442.

Jensterle M, Kocjan T, Kravos NA, Pfeifer M, Janez A. Short-term intervention with liraglutide improved eating behavior in obese women with polycystic ovary syndrome. *Endocr Res*. 2014 Oct 20:1-6. PMID: 25330463.

Joham AE, Boyle JA, Zoungas S, Teede HJ. Hypertension in Reproductive-Aged Women With Polycystic Ovary Syndrome and Association With Obesity. *Am J Hypertens*. 2014 Dec 26. pii: hpu251. PMID: 25542625.

Kabil Kucur S, Gozukara I, Aksoy A, Uludag EU, Keskin H, Kamalak Z, Carlioglu A. How medical treatment affects mean platelet volume as a cardiovascular risk marker in polycystic ovary syndrome? *Blood Coagul Fibrinolysis*. 2014 Nov 14. PMID: 25402193.

Kahal H, Abouda G, Rigby AS, Coady AM, Kilpatrick ES, Atkin SL. Glucagon-like peptide-1 analogue, liraglutide, improves liver fibrosis markers in obese women with polycystic ovary syndrome and nonalcoholic fatty liver disease. *Clin Endocrinol (Oxf)*. 2014 Oct;81(4):523-8. doi: 10.1111/cen.12369. Epub 2013 Dec 12. PMID: 24256515.

Kelley CE, Brown AJ, Diehl AM, Setji TL. Review of nonalcoholic fatty liver disease in women with polycystic ovary syndrome. *World J Gastroenterol*. 2014 Oct 21;20(39):14172-84. doi: 10.3748/wjg.v20.i39.14172. PMID: 25339805.

Kiyak Caglayan E, Engin-Ustun Y, Gocmen AY, Polat MF, Aktulay A. Serum sirtuin 1 levels in patients with polycystic ovary syndrome. *J Obstet Gynaecol*. 2014 Dec 19:1-4. PMID: 25526506.

Kogure GS, Silva RC, Picchi Ramos FK, Miranda-Furtado CL, Lara LA, Ferriani RA, Dos Reis RM. Women with polycystic ovary syndrome have greater muscle strength irrespective of body composition. *Gynecol Endocrinol*. 2014 Nov 28;1-6. PMID: 25430509.

Kozakowski J, Kapuścińska R, Zgliczyński W. Associations of vitamin D concentration with metabolic and hormonal indices in women with polycystic ovary syndrome presenting abdominal and gynoidal type of obesity. *Ginekol Pol*. 2014 Oct;85(10):765-70. PMID: 25546928.

Kurzthaler D, Hadziomerovic-Pekic D, Wildt L, Seeber BE. Metformin induces a prompt decrease in LH-stimulated testosterone response in women with PCOS independent of its insulin-sensitizing effects. *Reprod Biol Endocrinol*. 2014 Oct 11;12:98. doi: 10.1186/1477-7827-12-98. PMID: 25304843.

Laganà AS, Barbaro L, Pizzo A. Evaluation of ovarian function and metabolic factors in women affected by polycystic ovary syndrome after treatment with D-Chiro-Inositol. *Arch Gynecol Obstet*. 2014 Nov 22. PMID: 25416201.

Lai H, Jia X, Yu Q, Zhang C, Qiao J, Guan Y, Kang J. High-fat diet induces significant metabolic disorders in a mouse model of polycystic ovarysyndrome. *Biol Reprod*. 2014 Nov;91(5):127. doi: 10.1095/biolreprod.114.120063. Epub 2014 Aug 6. PMID: 25100714.

Leão LM, Maranhão PA, Oliveira V, Villela NR, Bordallo MA, Borges MA, Bouskela E, Kraemer-Aguiar LG. Nonobese Young Females with Polycystic Ovary Syndrome have Nutritive Microvascular Dysfunction: A Pilot Study. *Endocr Pract*. 2014 Dec 1;20(12):1281-9. doi: 10.4158/EP14130.OR. PMID: 25100380.

Lee da E, Park SY, Park SY, Lee SR, Chung HW, Jeong K. Clinical and Biochemical Profiles according to Homeostasis Model Assessment-insulin Resistance (HOMA-IR) in Korean Women with Polycystic Ovary Syndrome. *J Menopausal Med*. 2014 Dec;20(3):104-10. doi: 10.6118/jmm.2014.20.3.104. Epub 2014 Dec 24. PMID: 25580421.

Livadas S, Pappas C, Karachalios A, Marinakis E, Tolia N, Drakou M, Kaldrymides P, Panidis D, Diamanti-Kandarakis E. Prevalence and impact of hyperandrogenemia in 1,218 women with polycystic ovary syndrome. *Endocrine*. 2014 Nov;47(2):631-8. doi: 10.1007/s12020-014-0200-7. Epub 2014 Apr 22. PMID: 24752393.

Macut D, Antić IB, Bjekić-Macut J. Cardiovascular risk factors and events in women with androgen excess. *J Endocrinol Invest*. 2014 Nov 29. PMID: 25432327.

Moran C, Arriaga M, Arechavaleta-Velasco F, Moran S. Adrenal androgen excess and body mass index in polycystic ovary syndrome. *J Clin Endocrinol Metab*. 2014 Dec 16;jc20142569. PMID: 25514100.

Naderpoor N, Shorakae S, Joham A, Boyle J, De Courten B, Teede HJ. Obesity and polycystic ovary syndrome. *Minerva Endocrinol.* 2015 Mar;40(1):37-51. Epub 2014 Nov 20. PMID: 25411807.

Orlik B, Madej P, Owczarek A, Skalba P, Chudek J, Olszanecka-Glinianowicz M. Plasma omentin and adiponectin levels as markers of adipose tissue dysfunction in normal weight and obese women with polycystic ovary syndrome. *Clin Endocrinol (Oxf).* 2014 Oct;81(4):529-35. doi: 10.1111/cen.12381. Epub 2014 Jan 7. PMID: 24392647.

Pai SA, Majumdar AS. Protective effects of melatonin against metabolic and reproductive disturbances in polycystic ovarysyndrome in rats. *J Pharm Pharmacol.* 2014 Dec;66(12):1710-21. doi: 10.1111/jphp.12297. Epub 2014 Sep 1. PMID: 25176048.

Palomba S, Falbo A, Chiossi G, Muscogiuri G, Fornaciari E, Orio F, Tolino A, Colao A, La Sala GB, Zullo F. Lipid profile in nonobese pregnant women with polycystic ovary syndrome: a prospective controlled clinical study. *Steroids.* 2014 Oct;88:36-43. doi: 10.1016/j.steroids.2014.06.005. Epub 2014 Jun 16. PMID: 24945113.

Porwal S, Tewari S, Sharma RK, Singhal SR, Narula SC. Periodontal status and high-sensitivity C-reactive protein levels in polycystic ovary syndrome with and without medical treatment. *J Periodontol.* 2014 Oct;85(10):1380-9. doi: 10.1902/jop.2014.130756. Epub 2014 Mar 4. PMID: 24592911.

Ramezani-Binabaj M, Motalebi M, Karimi-Sari H, Rezaee-Zavareh MS, Alavian SM. Are women with polycystic ovarian syndrome at a high risk of non-alcoholic Fatty liver disease; a meta-analysis. *Hepat Mon.* 2014 Nov 1;14(11):e23235. doi: 10.5812/hepatmon.23235. eCollection 2014 Nov. Review. PMID: 25598791.

Rondanelli M, Perna S, Faliva M, Monteferrario F, Repaci E, Allieri F. Focus on metabolic and nutritional correlates of polycystic ovary syndrome and update on nutritional management of these critical phenomena. *Arch Gynecol Obstet.* 2014 Dec;290(6):1079-92. doi: 10.1007/s00404-014-3433-z. Epub 2014 Sep 9. PMID: 25200687.

Sahin FK, Sahin SB, Balik G, Ural UM, Tekin YB, Cure MC, Senturk S, Yuce S, Cure E. Does low pentraxin-3 levels associate with polycystic ovary syndrome and obesity? *Int J Clin Exp Med.* 2014 Oct 15;7(10):3512-9. eCollection 2014. PMID: 25419391.

Sahin S, Eroglu M, Selcuk S, Turkgeldi L, Kozali S, Davutoglu S, Muhcu M. Intrinsic factors rather than vitamin D deficiency are related to insulin resistance in lean women with polycystic ovary syndrome. *Eur Rev Med Pharmacol Sci.* 2014 Oct;18(19):2851-6. PMID: 25339479.

Souza Dos Santos AC, Soares NP, Costa EC, de Sá JC, Azevedo GD, Lemos TM. The impact of body mass on inflammatory markers and insulin resistance in polycystic ovary syndrome. *Gynecol Endocrinol*. 2014 Nov 6:1-4. PMID: 25373529.

Wang L, Zhong Y, Ding Y, Shi X, Huang J, Zhu F. Elevated serum chemerin in Chinese women with hyperandrogenic PCOS. *Gynecol Endocrinol*. 2014 Oct;30(10):746-50. doi: 10.3109/09513590.2014.928687. Epub 2014 Jun 13. PMID: 24927079.

Zehir R, Karabay CY, Kocabay G, Kalayci A, Kaymaz O, Aykan AC, Karabay E, Kirma C. Assessment of atrial conduction time in patients with polycystic ovary syndrome. *J Interv Card Electrophysiol*. 2014 Nov;41(2):137-43. doi: 10.1007/s10840-014-9925-8. Epub 2014 Jul 9. PMID: 25005453.

PCOS - Neuroendocrine Dysfunction (CM)

Liu DM, Torchen LC, Sung Y, Papanodis R, Legro RS, Grebe SK, Singh RJ, Taylor RL, Dunaif A. Evidence for gonadotrophin secretory and steroidogenic abnormalities in brothers of women with polycystic ovary syndrome. *Hum Reprod*. 2014 Dec;29(12):2764-72. doi: 10.1093/humrep/deu282. Epub 2014 Oct 21.

Roland AV, Moenter SM. Reproductive neuroendocrine dysfunction in polycystic ovary syndrome: insight from animal models. *Front Neuroendocrinol*. 2014 Oct;35(4):494-511. doi: 10.1016/j.yfrne.2014.04.002. Epub 2014 Apr 18.

PCOS – Ovary

Dewailly D, Alebić MŠ, Duhamel A, Stojanović N. Using cluster analysis to identify a homogeneous subpopulation of women with polycystic ovarian morphology in a population of non-hyperandrogenic women with regular menstrual cycles. *Hum Reprod*. 2014 Nov;29(11):2536-43. doi: 10.1093/humrep/deu242. Epub 2014 Sep 29. PMID: 25267785.

Königer A, Koch L, Edimiris P, Enekwe A, Nagarajah J, Kasimir-Bauer S, Kimmig R, Strowitzki T, Schmidt B. Anti-Mullerian Hormone: an indicator for the severity of polycystic ovarian syndrome. *Arch Gynecol Obstet*. 2014 Nov;290(5):1023-30. doi: 10.1007/s00404-014-3317-2. Epub 2014 Jun 25. PMID: 24961320.

Königer A, Koch L, Edimiris P, Nießen S, Kasimir-Bauer S, Kimmig R, Strowitzki T, Schmidt B. Intraindividual right-left comparison of sonographic features in polycystic ovary syndrome (PCOS) diagnosis.

Eur J Obstet Gynecol Reprod Biol. 2014 Oct;181:124-9. doi: 10.1016/j.ejogrb.2014.07.029. Epub 2014 Aug 4. PMID: 25150949.

Maruthini D, Harris SE, Barth JH, Balen AH, Campbell BK, Picton HM. The effect of metformin treatment in vivo on acute and long-term energy metabolism and progesterone production in vitro by granulosa cells from women with polycystic ovary syndrome. Hum Reprod. 2014 Oct 10;29(10):2302-16. doi: 10.1093/humrep/deu187. Epub 2014 Aug 19. PMID: 25139174.

PCOS - Phenotypic Variation

Daan NM, Louwers YV, Koster MP, Eijkemans MJ, de Rijke YB, Lentjes EW, Fauser BC, Laven JS. Cardiovascular and metabolic profiles amongst different polycystic ovary syndrome phenotypes: who is really at risk? Fertil Steril. 2014 Nov;102(5):1444-1451.e3. doi: 10.1016/j.fertnstert.2014.08.001. Epub 2014 Sep 16. PMID: 25239303.

Livadas S, Pappas C, Karachalios A, Marinakis E, Tolia N, Drakou M, Kaldrymides P, Panidis D, Diamanti-Kandarakis E. Prevalence and impact of hyperandrogenemia in 1,218 women with polycystic ovary syndrome. Endocrine. 2014 Nov;47(2):631-8. doi: 10.1007/s12020-014-0200-7. Epub 2014 Apr 22. PMID: 24752393.

Louwers YV, Lao O, Fauser BC, Kayser M, Laven JS. The impact of self-reported ethnicity versus genetic ancestry on phenotypic characteristics of polycystic ovary syndrome (PCOS). J Clin Endocrinol Metab. 2014 Oct;99(10):E2107-16. doi: 10.1210/jc.2014-1084. Epub 2014 Jun 24. PMID:24960542.

PCOS-Pregnancy Complications

Banu J, Fatima P, Sultana P, Chowdhury MA, Begum N, Anwary SA, Ishrat S, Deeba F, Begum SA. Association of infertile patients having polycystic ovarian syndrome with recurrent miscarriage. Mymensingh Med J. 2014 Oct;23(4):770-3. PubMed PMID: 25481599.

Cassina M, Donà M, Di Gianantonio E, Litta P, Clementi M. First-trimester exposure to metformin and risk of birth defects: a systematic review and meta-analysis. Hum Reprod Update. 2014 Sep-Oct;20(5):656-69. doi: 10.1093/humupd/dmu022. Epub 2014 May 25. Review. PMID: 24861556.

Christiansen SC, Vanky E, Klungland H, Stafne SN, Mørkved S, Salvesen KÅ, Sæther M, Carlsen SM. The effect of exercise and metformin treatment on

circulating free DNA in pregnancy. *Placenta*. 2014 Dec;35(12):989-93. doi: 10.1016/j.placenta.2014.09.010. Epub 2014 Sep 23. PMID: 25282112.

De Frène V, Vansteelandt S, T'Sjoen G, Gerris J, Somers S, Vercruyssen L, De Sutter P. A retrospective study of the pregnancy, delivery and neonatal outcome in overweight versus normal weight women with polycystic ovary syndrome. *Hum Reprod*. 2014 Oct 10;29(10):2333-8. doi: 10.1093/humrep/deu154. Epub 2014 Jun 24. PMID: 24963163.

De Simone C, Caldarola G, Corbeddu M, Moro F, Tropea A, Moretta G, Apa R. A possible role of polycystic ovary syndrome for pregnancy complications in women with psoriasis. *Drug Dev Res*. 2014 Nov;75 Suppl 1:S64-6. doi: 10.1002/ddr.21199. PMID: 25381981.

Katulski K, Czyzyk A, Podfigurna-Stopa A, Genazzani AR, Meczekalski B. Pregnancy complications in polycystic ovary syndrome patients. *Gynecol Endocrinol*. 2015 Feb;31(2):87-91. doi: 10.3109/09513590.2014.974535. Epub 2014 Oct 30. PMID: 25356655.

Palomba S, Falbo A, Chiossi G, Muscogiuri G, Fornaciari E, Orio F, Tolino A, Colao A, La Sala GB, Zullo F. Lipid profile in nonobese pregnant women with polycystic ovary syndrome: a prospective controlled clinical study. *Steroids*. 2014 Oct;88:36-43. doi: 10.1016/j.steroids.2014.06.005. Epub 2014 Jun 16. PMID: 24945113.

PCOS Psychology

De Frène V, Verhofstadt L, Loeys T, Stuyver I, Buysse A, De Sutter P. Sexual and relational satisfaction in couples where the woman has polycystic ovary syndrome: a dyadic analysis. *Hum Reprod*. 2014 Dec 22. pii: deu342. PMID: 25534460.

Conte F, Banting L, Teede HJ, Stepto NK. Mental Health and Physical Activity in Women with Polycystic Ovary Syndrome: A Brief Review. *Sports Med*. 2014 Nov 28. PubMed PMID: 25430602.

Hart R, Doherty DA. The Potential Implications of a PCOS Diagnosis on a Woman's Long-term Health Using Data Linkage. *J Clin Endocrinol Metab*. 2014 Dec 22;jc20143886. PMID: 25532045.

Klimczak D, Szlendak-Sauer K, Radowicki S. Depression in relation to biochemical parameters and age in women with polycystic ovary syndrome. *Eur J Obstet Gynecol Reprod Biol*. 2015 Jan;184:43-7. doi: 10.1016/j.ejogrb.2014.10.028. Epub 2014 Nov 6. PMID: 25463634.

Moran LJ, March WA, Whitrow MJ, Giles LC, Davies MJ, Moore VM. Sleep

disturbances in a community-based sample of women with polycystic ovary syndrome. *Hum Reprod.* 2015 Feb;30(2):466-72. doi: 10.1093/humrep/deu318. Epub 2014 Nov 28. PubMed PMID: 25432918.

Moran LJ, Teede HJ, Vincent AJ. Vitamin D is independently associated with depression in overweight women with and without PCOS. *Gynecol Endocrinol.* 2014 Nov 4:1-4. PMID: 25366261.

Scaruffi E, Gambineri A, Cattaneo S, Turra J, Vettor R, Mioni R. Personality and psychiatric disorders in women affected by polycystic ovary syndrome. *Front Endocrinol (Lausanne).* 2014 Nov 12;5:185. doi: 10.3389/fendo.2014.00185. eCollection 2014. PMID: 25429283.

Stefanaki C, Bacopoulou F, Livadas S, Kandaraki A, Karachalios A, Chrousos GP, Diamanti-Kandarakis E. Impact of a mindfulness stress management program on stress, anxiety, depression and quality of life in women with polycystic ovary syndrome: a randomized controlled trial. *Stress.* 2014 Dec 29:1-10. PMID: 25287137.

PCOS Thyroid complications

Duran C, Basaran M, Kutlu O, Kucukaydin Z, Bakdik S, Burnik FS, Aslan U, Erdem SS, Ecirli S. Frequency of nodular goiter and autoimmune thyroid disease in patients with polycystic ovary syndrome. *Endocrine.* 2014 Dec 19. PMID: 25522724.

Petrikova J, Lazurova I, Dravecka I, Vrbikova J, Kozakova D, Figurova J, Vaczy Z, Rosocha J. The prevalence of non organ specific and thyroid autoimmunity in patients with polycystic ovary syndrome. *Biomed Pap Med Fac Univ Palacky Olomouc Czech Repub.* 2014 Dec 5. doi: 10.5507/bp.2014.062. PMID: 25485530.

Tuten A, Hatipoglu E, Oncul M, Imamoglu M, Acikgoz AS, Yilmaz N, Ozcil MD, Kaya B, Misirlioglu AM, Sahmay S. Evaluation of ovarian reserve in Hashimoto's thyroiditis. *Gynecol Endocrinol.* 2014 Oct;30(10):708-11. doi: 10.3109/09513590.2014.926324. Epub 2014 Jun 6. PMID: 24905723.

PCOS Infertility

Ambekar AS, Kelkar DS, Pinto SM, Sharma R, Hinduja I, Zaveri K, Pandey A, Prasad TS, Gowda H, Mukherjee S. Proteomics of follicular fluid from women with polycystic ovary syndrome suggests molecular defects in follicular development. *J Clin Endocrinol Metab.* 2015 Feb;100(2):744-53. doi: 10.1210/jc.2014-2086. Epub 2014 Nov 13. PMID: 25393639.

Bazarganipour F, Ziaei S, Montazeri A, Foroozanfard F, Kazemnejad A, Faghihzadeh S. Sexual Functioning among Married Iranian Women with Polycystic Ovary Syndrome. *Int J Fertil Steril*. 2014 Oct;8(3):273-80. Epub 2014 Nov 1. PMID: 25379156.

Choavaratana R, Thanaboonyawat I, Laokirkkiat P, Prechapanich J, Suksompong S, Mekemaharn O, Petyim S. Outcomes of Follicle-Stimulating Hormone Priming and Nonpriming in in vitro Maturation of Oocytes in Infertile Women with Polycystic Ovarian Syndrome: A Single-Blinded Randomized Study. *Gynecol Obstet Invest*. 2014 Dec 10. PMID: 25503808.

Das M, Son WY, Buckett W, Tulandi T, Holzer H. In-vitro maturation versus IVF with GnRH antagonist for women with polycystic ovary syndrome: treatment outcome and rates of ovarian hyperstimulation syndrome. *Reprod Biomed Online*. 2014 Nov;29(5):545-51. doi: 10.1016/j.rbmo.2014.07.019. Epub 2014 Aug 12. PMID:25262236.

Ding CF, Wang CY, Yang X, Zheng RH, Yan ZZ, Chen WQ. [Effect of modified cangfu daotan decoction in improving endometrial receptivity in infertility patients with polycystic ovarian syndrome]. *Zhongguo Zhong Xi Yi Jie He Za Zhi*. 2014 Nov;34(11):1297-301. Chinese. PMID: 25566617.

Dinicola S, Chiu TT, Unfer V, Carlomagno G, Bizzarri M. The rationale of the myo-inositol and D-chiro-inositol combined treatment for polycystic ovary syndrome. *J Clin Pharmacol*. 2014 Oct;54(10):1079-92. doi: 10.1002/jcph.362. Epub 2014 Jul 18. PMID: 25042908.

Foroozanfard F, Saberi H, Moraveji SA, Bazarganipour F. Pregnancy rate following luteal phase support in Iranian women with polycystic ovarian syndrome. *Int J Fertil Steril*. 2014 Oct;8(3):235-42. Epub 2014 Nov 1. PMID: 25379150.

Franik S, Kremer JA, Nelen WL, Farquhar C, Marjoribanks J. Aromatase inhibitors for subfertile women with polycystic ovary syndrome: summary of a Cochrane review. *Fertil Steril*. 2015 Feb;103(2):353-5. doi: 10.1016/j.fertnstert.2014.10.016. Epub 2014 Nov 5. PMID: 25455536.

Hashemi S, Ramezani Tehrani F, Farahmand M, Bahri Khomami M. Association of PCOS and its clinical signs with sexual function among Iranian women affected by PCOS. *J Sex Med*. 2014 Oct;11(10):2508-14. doi: 10.1111/jsm.12627. Epub 2014 Jul 4. PMID: 24995944.

Huang K, Liao X, Dong X, Zhang H. Effect of overweight/obesity on IVF-ET outcomes in chinese patients with polycystic ovary syndrome. *Int J Clin Exp Med*. 2014 Dec 15;7(12):5872-6. eCollection 2014. PMID: 25664123.

Isa AM, Abu-Rafea B, Alasiri SA, Al-Mutawa J, Binsaleh S, Al-Saif S, Al-Saqer A. Accurate diagnosis as a prognostic factor in intrauterine insemination treatment of infertile saudi patients. *J Reprod Infertil*. 2014 Oct;15(4):184-9.

PMID: 25473626.

Kort DH, Lobo RA. Preliminary evidence that cinnamon improves menstrual cyclicity in women with polycystic ovary syndrome: a randomized controlled trial. *Am J Obstet Gynecol*. 2014 Nov;211(5):487.e1-6. doi: 10.1016/j.ajog.2014.05.009. Epub 2014 May 9. PMID: 24813595.

Legro RS, Chen G, Kunselman AR, Schlaff WD, Diamond MP, Coutifaris C, Carson SA, Steinkampf MP, Carr BR, McGovern PG, Cataldo NA, Gosman GG, Nestler JE, Myers ER, Zhang H, Foulds J; Reproductive Medicine Network. Smoking in infertile women with polycystic ovary syndrome: baseline validation of self-report and effects on phenotype. *Hum Reprod*. 2014 Dec;29(12):2680-6. doi: 10.1093/humrep/deu239. Epub 2014 Oct 16. PMID: 25324541.

Nasiri N, Moini A, Eftekhari-Yazdi P, Karimian L, Salman-Yazdi R, Zolfaghari Z, Arabipour A. Abdominal obesity can induce both systemic and follicular fluid oxidative stress independent from polycystic ovary syndrome. *Eur J Obstet Gynecol Reprod Biol*. 2015 Jan;184:112-6. doi: 10.1016/j.ejogrb.2014.11.008. Epub 2014 Nov 20. PMID: 25498475.

Niu Z, Lin N, Gu R, Sun Y, Feng Y. Associations between insulin resistance, free fatty acids, and oocyte quality in polycystic ovary syndrome during in vitro fertilization. *J Clin Endocrinol Metab*. 2014 Nov;99(11):E2269-76. doi: 10.1210/jc.2013-3942. Epub 2014 Apr 2. PMID: 24694334; PubMed Central PMCID: PMC4223443.

O'Neill KE, Senapati S, Dokras A. Use of gonadotropin-releasing hormone agonist trigger during in vitro fertilization is associated with similar endocrine profiles and oocyte measures in women with and without polycystic ovary syndrome. *Fertil Steril*. 2015 Jan;103(1):264-9. doi: 10.1016/j.fertnstert.2014.09.042. Epub 2014 Nov 6. PMID: 25450300.

Ott J, Mayerhofer K, Nouri K, Walch K, Seemann R, Kurz C. Perioperative androstenedione kinetics in women undergoing laparoscopic ovarian drilling: a prospective study. *Endocrine*. 2014 Dec;47(3):936-42. doi: 10.1007/s12020-014-0267-1. Epub 2014 Apr 17. PMID: 24740546.

Ozmen B, Sükür YE, Seval MM, Ateş C, Atabekoğlu CS, Sönmezer M, Berker B. Dual suppression with oral contraceptive pills in GnRH antagonist cycles for patients with polycystic ovary syndrome undergoing intracytoplasmic sperm injection. *Eur J Obstet Gynecol Reprod Biol*. 2014 Dec;183:137-40. doi: 10.1016/j.ejogrb.2014.10.033. Epub 2014 Oct 31. PMID: 25461367.

Pekel A, Gönenç A, Turhan NO, Kafalı H. Changes of sFas and sFasL, oxidative stress markers in serum and follicular fluid of patients undergoing IVF. *J Assist Reprod Genet*. 2014 Dec 9. PMID: 25488202.

Sigala J, Sifer C, Dewailly D, Robin G, Bruyneel A, Ramdane N, Lefebvre-Khalil V, Mitchell V, Decanter C. Is polycystic ovarian morphology related to a poor oocyte quality after controlled ovarian hyperstimulation for

intracytoplasmic sperm injection? Results from a prospective, comparative study. *Fertil Steril*. 2015 Jan;103(1):112-8. doi: 10.1016/j.fertnstert.2014.09.040. Epub 2014 Oct 25. PMID: 25450303.

Sivalingam VN, Myers J, Nicholas S, Balen AH, Crosbie EJ. Metformin in reproductive health, pregnancy and gynaecological cancer: established and emerging indications. *Hum Reprod Update*. 2014 Nov-Dec;20(6):853-68. doi: 10.1093/humupd/dmu037. Epub 2014 Jul 10. PMID: 25013215.

Tal R, Tal O, Seifer BJ, Seifer DB. Antimüllerian hormone as predictor of implantation and clinical pregnancy after assisted conception: a systematic review and meta-analysis. *Fertil Steril*. 2015 Jan;103(1):119-130.e3. doi: 10.1016/j.fertnstert.2014.09.041. Epub 2014 Oct 24. PMID: 25450298.

Tso LO, Costello MF, Albuquerque LE, Andriolo RB, Macedo CR. Metformin treatment before and during IVF or ICSI in women with polycystic ovary syndrome. *Cochrane Database Syst Rev*. 2014 Nov 18;11:CD006105. doi: 10.1002/14651858.CD006105.pub3. Review. PMID: 25406011.

Tsouma I, Kouskouni E, Demeridou S, Boutsikou M, Hassiakos D, Chasiakou A, Hassiakou S, Gennimata V, Baka S. Lipid lipoprotein profile alterations in Greek infertile women with polycystic ovaries: influence of adipocytokines levels. *In Vivo*. 2014 Sep-Oct;28(5):935-9. PMID: 25189910.

Wissing M, Sonne S, Westergaard D, Nguyen K, Belling K, Høst T, Mikkelsen A. The transcriptome of corona radiata cells from individual M \ddot{u} oocytes that after ICSI developed to embryos selected for transfer: PCOS women compared to healthy women. *J Ovarian Res*. 2014 Nov 29;7(1):110. PMID: 25432544.

Younis A, Hawkins K, Mahini H, Butler W, Garelnabi M. Serum tumor necrosis factor- α , interleukin-6, monocyte chemotactic protein-1 and paraoxonase-1 profiles in women with endometriosis, PCOS, or unexplained infertility. *J Assist Reprod Genet*. 2014 Nov;31(11):1445-51. doi: 10.1007/s10815-014-0237-9. Epub 2014 Sep 4. PMID: 25186501.

PCOS Uterus/Endometrium

Baracat MC, Serafini PC, Simões RD, Maciel GA, Soares JM -Jr, Baracat EC. Systematic review of cell adhesion molecules and estrogen receptor expression in the endometrium of patients with polycystic ovary syndrome. *Int J Gynaecol Obstet*. 2014 Dec 18. pii: S0020-7292(14)00631-6. doi: 10.1016/j.ijgo.2014.10.022. Review. PMID: 25554522.

Giordano MV, Giordano LA, Gomes RC, Simões RS, Nader HB, Giordano MG, Baracat EC, Soares Júnior JM. The evaluation of endometrial sulfate

glycosaminoglycans in women with polycystic ovary syndrome. *Gynecol Endocrinol.* 2014 Dec 1:1-4. PMID: 25434369.

Gottschau M, Kjaer SK, Jensen A, Munk C, Mellemkjaer L. Risk of cancer among women with polycystic ovary syndrome: A Danish cohort study. *Gynecol Oncol.* 2015 Jan;136(1):99-103. doi: 10.1016/j.ygyno.2014.11.012. Epub 2014 Nov 20. PMID: 25451694.

Lin XH, Liu ME, Xu HY, Chen XJ, Wang H, Tian S, Sheng JZ, Huang HF. Leptin down-regulates γ -ENaC expression: a novel mechanism involved in low endometrial receptivity. *Fertil Steril.* 2015 Jan;103(1):228-235.e3. doi: 10.1016/j.fertnstert.2014.10.002. Epub 2014 Oct 24. PMID: 25450293.

Peyghambari F, Fayazi M, Amanpour S, Haddadi M, Muhammadnejad S, Muhammadnejad A, Abdolahpour S, Enkesari M, Mazaheri Z. Assessment of $\alpha 4$, αv , $\beta 1$ and $\beta 3$ integrins expression throughout the implantation window phase in endometrium of a mouse model of polycystic ovarian syndromes. *Iran J Reprod Med.* 2014 Oct;12(10):687-94. PMID: 25469127.

Plaza-Parrochia F, Bacallao K, Poblete C, Gabler F, Carvajal R, Romero C, Valladares L, Vega M. The role of androst-5-ene-3 β ,17 β -diol (androstenediol) in cell proliferation in endometrium of women with polycystic ovary syndrome. *Steroids.* 2014 Nov;89:11-9. doi: 10.1016/j.steroids.2014.07.008. Epub 2014 Jul 24. PMID: 25065586.

Schulte MM, Tsai JH, Moley KH. Obesity and PCOS: the effect of metabolic derangements on endometrial receptivity at the time of implantation. *Reprod Sci.* 2015 Jan;22(1):6-14. doi: 10.1177/1933719114561552. Epub 2014 Dec 7. PMID:25488942.

Stanosz S, von Mach-Szczypiński J, Sieja K, Koęciuszkiewicz J. Micronized estradiol and progesterone therapy in primary, preinvasive endometrial cancer (1A/G1) in young women with polycystic ovarian syndrome. *J Clin Endocrinol Metab.* 2014 Dec;99(12):E2472-6. doi: 10.1210/jc.2014-1693. PMID: 25157541.

Premature adrenarche

Chin VL, Cai Z, Lam L, Shah B, Zhou P. Evaluation of puberty by verifying spontaneous and stimulated gonadotropin values in girls. *J Pediatr Endocrinol Metab.* 2014 Dec 16. pii:/j/jpem.ahead-of-print/jpem-2014-0135/jpem-2014-0135.xml. doi: 10.1515/jpem-2014-0135. PMID: 25514323.

Mäntyselkä A, Jääskeläinen J, Lindi V, Viitasalo A, Tompuri T, Voutilainen R, Lakka TA. The presentation of adrenarche is sexually dimorphic and modified by body adiposity. *J Clin Endocrinol Metab.* 2014 Oct;99(10):3889-94. doi: 10.1210/jc.2014-2049. Epub 2014 Jul 16. PMID: 25029425.

Skordis N, Shammass C, Phedonos AA, Kyriakou A, Toumba M, Neocleous V, Phylactou LA. Genetic defects of the CYP21A2 gene in girls with premature adrenarche. *J Endocrinol Invest.* 2014 Dec 7. PMID:25481255.