

New WCM-Q research offers hope for women with polycystic ovary syndrome

Doha – July 31, 2017: New research conducted at Weill Cornell Medicine-Qatar (WCM-Q) has highlighted how simple lifestyle changes can help prevent or alleviate polycystic ovary syndrome, (PCOS), a major cause of female fertility problems.

PCOS, which is thought to affect around 22 percent of pre-menopausal women in Qatar, is a condition that increases the levels of the male hormone testosterone in a woman's body, which interferes with ovulation and can therefore prevent a woman from falling pregnant. The condition is also characterized by cysts in the ovaries and increased hair growth, particularly on the face or chest.

The new research by Dr. Stephen Atkin, Professor of Medicine at WCM-Q, found a strong correlation between PCOS and pre-diabetes, which is characterized by raised blood sugar levels and makes the onset of type-2 diabetes likely. This close association strengthens the belief that healthy lifestyle habits such as eating a balanced diet and taking regular exercise reduce an individual's risk of developing PCOS, as such behaviors also minimize the risk of developing pre-diabetes.

To conduct the research, Dr. Atkin was given access to Qatar Biobank and so was able to view the biometric data of 750 anonymous Qatari women between the ages of 18 and 40. He said: "More than 10 percent of the 750 women had pre-diabetes but 19 percent of the women with polycystic ovary syndrome had pre-diabetes.

"Essentially, if you have polycystic ovary syndrome you have more than double the chance of developing pre-diabetes. Polycystic ovary syndrome is also associated with diabetes in pregnancy. In fact, 66 percent of women with gestational diabetes have polycystic ovary syndrome and this is a problem for both mother and baby."

Even if women with PCOS don't develop diabetes, there are concerns the condition can make sufferers more susceptible to developing heart disease earlier and with more severe consequences. Added to this, PCOS is associated with an increased risk of endometrial cancer.

Dr. Atkin said: "PCOS is an extremely important condition that can have devastating consequences. It not only makes conception more difficult for couples wanting to start a family, but through its association with diabetes and heart disease, it can also shorten life expectancy. Added to this, PCOS can also severely affect a woman's self-esteem. The increase in the male hormone testosterone can lead to acne, facial hair and even, in severe cases, balding. This obviously is hugely detrimental to a person's confidence."

Although there is no cure for PCOS, the condition and its symptoms can be managed, and Dr. Atkin runs a clinic at Hamad Medical Corporation specifically for women with PCOS and will shortly open a second at Sidra Medical and Research Centre. However, prevention is far better than cure and lifestyle factors have a huge impact on PCOS – poor diet, a lack of exercise and being overweight make it much more likely that a woman will develop PCOS.



Dr. Atkin said: “There is a need to alert women about the problem and tell them what can be done in terms of prevention so they don’t develop the complications that occur when they go on to marry or get pregnant, or later on with respect to their overall health.

“Lifestyle advice is very important. It’s one thing telling young women to eat sensibly and exercise for cosmetic reasons, but another if you are telling them it could affect their fertility in later life. By educating women about the causes of PCOS and encouraging them to improve their lifestyles, we can have a hugely positive impact on families across Qatar.”

Dr. Atkin added that the research could not have been done without the collaboration of Qatar Biobank and BMRP1 funding from Qatar Foundation. He said collaborative efforts like this make a real difference to the people of Qatar.

Dr. Atkin has recently been awarded a grant by Qatar National Research Fund (QNRF), a member of Qatar Foundation, for a new study to identify the genetic aspects of PCOS in Qatari families that would allow a more focused approach to the diagnosis and treatment of PCOS for Qatari women. He is looking for Qatari women in large families with and without PCOS to take part in the research, which will require each participant to give only one blood sample. The forthcoming study is supported by the Path towards Personalized Medicine (PPM) program of QNRF (PPM2-0207-170010 - Identification of genetic variants associated with polycystic ovary syndrome).

“This research could help to make a major, positive difference to the health of women with PCOS in Qatar,” said Dr. Atkin. “I hope that many Qatari women will be able to participate.”

Dr. Khaled Machaca, Associate Dean for Research at WCM-Q, said: “We are excited about the collaborative efforts of Dr. Atkin with Qatar Biobank to make a difference for the local population in the diagnosis and treatment of PCOS in Qatar. The involvement of Qatar Biobank, Qatar Genome Project, WCM-Q and the recent funding by QNRF of this research highlights the collaborative national effort underway to address this important clinical problem.”

The study, entitled ‘The prevalence and metabolic characteristics of polycystic ovary syndrome in the Qatari population’ has been published by the peer-reviewed open access journal *PLOS ONE* and can be viewed at <http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0181467>

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Photos Captions:

Photo1: Dr. Stephen Atkin, Professor of Medicine at WCM-Q, has published groundbreaking research on polycystic ovary syndrome.

Photo2: Polycystic ovary syndrome, which affects around 22 percent of pre-menopausal women in Qatar, disrupts ovulation and can therefore prevent a woman from falling pregnant.



About Weill Cornell Medicine - Qatar

Weill Cornell Medicine - Qatar is a partnership between Cornell University and Qatar Foundation. It offers a comprehensive six-year medical program leading to the Cornell University M.D. degree with teaching by Cornell and Weill Cornell faculty and by physicians at Hamad Medical Corporation (HMC), Aspetar Orthopedic and Sports Medicine Hospital, the Primary Health Care Corporation, the Feto Maternal Center, and the Sidra Medical and Research Center who hold Weill Cornell appointments. Through its biomedical research program, WCM-Q is building a sustainable research community in Qatar while advancing basic science and clinical research. Through its medical college, WCM-Q seeks to provide the finest education possible for medical students, to improve health care both now and for future generations, and to provide high quality health care to the Qatari population.

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