SUMMARY OF NEW CONCLUSIONS OF PHD THESIS

Title:	Prevalence, some factors of environment and polymorphisms associated with prediabetes among 40 - 64 year old people in Ha Nam province
Speciality:	Human and Animal Physiology
Classification:	62.42.01.04
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Institutional:	Hanoi National University of Education

New conclusions

The prevalence of prediabetes among 40 - 46 year old people in Ha Nam province was at high level (15.2%), of which the majority was impaired fasting glucose (9.2%). This result is suggesting that it is important to determine the prediabetes prevalence in the population for prevention of its related diseases.

The thesis results has shown environmental factors which increased the risk of prediabetes. This may help to make recommendations for lifestyle changes to reduce the risk of prediabetes and thus contribute to improve the quality of Vietnamese life.

In the four polymorphisms: *FTO*-rs9939609, *TCF7L2*-rs7903146, *CDKN2A*-rs10811661 and *KCNJ11*-rs5219, the study has exhibited an association of *CDKN2A*-rs10811661 with prediabetes in codominant model (OR = 1.40) and in summation model with allele T (OR = 1.18). This is the scientific basis for long-term investigations which study the role of genetics in pathogenesis of the disease. Therefore, it may help to establish a model for early diagnosis of prediabetes.

The research has developed a model for diagnosing prediabetes based on some environmental and genetic factors, including region, marriage, alchohol consumption, waist/hip ratio, maximum blood pressure, HDL-C, LDL-C, triglyceride and *CDKN2A*-rs10811661. This result can be applied in clinics, health centers and non-communicable chronic disease prevention programs to give effective advice for reducing the risk of prediabetes.

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