**INEQUALITY UNDER THE SKIN**

How biomarkers show the effect of social and economic environment on health.

**BLOOD SAMPLES WERE GIVEN BY AROUND 10,000 PEOPLE.**

**BIOMARKERS IN THE BLOOD CAN SHOW INFLAMMATION CAUSED BY STRESS AND INFECTION.**

**HIGH LEVELS OF THESE BIOMARKERS MAY LEAD TO POOR HEALTH, SUCH AS HEART DISEASE AND DIABETES.**

**WE WERE LOOKING FOR BIOMARKERS, AN OBJECTIVE MEASURE OF HEALTH.**

**CRP [OR C-REACTIVE PROTEIN]**

**CRP AND FIBRINOGEN LEVELS TYPICALLY INCREASE AS WE GET OLDER.**

**WE ALSO LOOKED AT PEOPLE’S EDUCATION LEVEL AND THEIR HOUSEHOLD INCOME.**

**DEIRDRE, LEFT SCHOOL WITH NO GCSEs.**

**BEATRICE, GRADUATED WITH A DEGREE IN ARCHITECTURE.**

**WE FOUND THAT PEOPLE IN A LOWER SOCIAL AND ECONOMIC POSITION HAVE HIGHER LEVELS OF THESE BIOMARKERS MUCH EARLIER IN THEIR LIFE.**

**LIFESTYLE FACTORS LIKE SMOKING, EXERCISE, DIET, AND BODY MASS INDEX (BMI) DO NOT EXPLAIN ALL OF THESE DIFFERENCES.**

**THE EVERYDAY STRESS DEIRDRE EXPERIENCES IS REFLECTED IN HER BIOMARKER LEVELS. HER ENVIRONMENT CAN GET “UNDER THE SKIN.”**

**LOW PAY JOB INSECURITY WORK LONG HOURS HOUSING INSECURITY SOCIAL ISOLATION CHILD CARE CRIME.**

**ALTHOUGH EVERYONE FACES STRESS IN LIFE, BEATRICE’S ENVIRONMENT MEANS SHE MAY HAVE LESS STRESS TO DEAL WITH LONG-TERM.**

**WELL-PAID JOB SAVINGS STABLE CAREER FAMILY SUPPORT.**

**GOOD NEIGHBOURHOOD STABLE HOUSING HELP WITH CHILD CARE.**

**DEIRDRE IS MORE LIKELY TO SUFFER FROM POOR HEALTH EARLIER IN LIFE, NEEDING HEALTH CARE EARLIER WITH HIGHER LONG-TERM COSTS.**

**TACKLING THE LONG-TERM STRESS PEOPLE LIKE DEIRDRE HAVE VIA COMMUNITY SUPPORT AND MORE SECURE JOBS, FOR EXAMPLE, WOULD IMPROVE THE NATION’S HEALTH.**

**BUT CAN ANYTHING MAKE A DIFFERENCE?**

**FURTHER RESEARCH WILL HELP TO INFORM HEALTH POLICY SO WE CAN ALL BE HEALTHIER THROUGHOUT OUR LIVES.**

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*Davila E A, Renzval M, Kumari M. (2017) Socio-economic inequalities in C-reactive protein and fibrinogen across the adult age span: findings from Understanding Society, Scientific Reports, 7, 2641, available from: http://dx.doi.org/10.1038/s41598-017-02688-6*

*Comic adaptation and illustration: Karen Burns*