# ADHD and physical health – what can be achieved and how...

REAL WORLD EVIDENCE FROM EUROPE'S LARGEST ADHD CLINIC

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### Disclosures

- ADHD 360, especially Natalie Jennings (Clinical Director) and Phil Anderton (CEO) work extensively with industry but do not take any remuneration for their work.
- ▶ In 2020 2023 ADHD 360 have worked as follows:
- Takeda research and CPD regarding Elvanse and aggression
- Takeda round table discussions on a variety of ADHD related topics
- Flynn Pharma research and CPD regarding Melatonin use alongside ADHD treatment







## ADHD 360

- Europe's largest specialist ADHD clinic
- Assessing, diagnosing and treating ADHD
- ▶ 1,200+ new patients a month
- ▶ 226 staff
- Clinical nurses, pharmacists, GPs, Paediatricians, Psychiatrists and supervising doctors
- ► Trust Pilot of 4.5/5





- ▶ Why is the relationship between physical health and ADHD so important?
- What are the key physical health issues that can be addressed alongside treatment for ADHD
- Examining those key physical health issues:
  - ▶ Women and the menstrual cycle
  - Hypertension and ADHD why we should treat with medication
  - Eating disorders and ADHD
  - Diabetes and ADHD
  - EDS and ADHD the rise in dual diagnosis
  - Alcohol abuse
  - Substance abuse
  - Smoking cessation



What the research tells us

- Natural hormone changes, those hormones being mainly oestradiol, progesterone, and testosterone
- When oestradiol levels <u>decrease</u> alongside an <u>increase</u> of progesterone and testosterone, women with ADHD, especially those with impulsivity, demonstrated higher ADHD impairment the next day
- We know that the cycle of those changing hormones is a major component of the menstrual cycle.



### What the research tells us

- Society has a certain set of expectations we place on women and ADHD often makes them harder to accomplish
- They are supposed to be the organizer, planner, and primary parent at home. Women are expected to remember birthdays and anniversaries and do laundry and keep track of events. That is all hard for someone with ADHD

Kathleen Nadeau, PhD, a clinical psychologist and director of the Chesapeake ADHD Centre of Maryland in Silver Spring USA



What <u>our</u> research tells us

Medication and treatment may be further complicated by hormone fluctuations across the menstrual cycle and across the lifespan (e.g. puberty, perimenopause and menopause) with an increase in ADHD symptoms whenever oestrogen levels fall



What <u>our</u> research tells us

We see female patients 'lose' one week in four

A quarter of their life

To higher levels of ADHD impairment, in effect they lose this time to their period



Let's discuss what we can and do about it:

"Stable and optimised"

► What is "optimisation?"

► How do we optimise treatment for the menstruating woman



Medication changes for the menstruating women

What to do

► How we do it

▶ What the woman can do for herself



# Treating below the neck – all gender perspective



### **Public Health in the UK & ADHD**

The National Perspective on Public Health (May 2023) has the following priorities:

### Reduce heart disease / stroke

ADHD 360 take 3 weekly BP / BMI readings from over 8,000 members of the public. Treatment for ADHD is proven to reduce BP & BMI.

### Reduce anxiety & depression

Especially in adults with untreated ADHD, present to GPs with unresponsive anxiety and depression.Treatment for ADHD alleviates / removes these presentations as they are clinically mis-classed and ADHD is missed.

### Major drivers of morbidity and mortality are listed as:

### Poor diet obesity

Treatment for ADHD is proven to overcome excessive weight, control binge eating and reduce  $\ensuremath{\mathsf{BMI}}$ 

### Smoking tobacco

Replacing the craving for nicotine as a stimulant for self medicators with ADHD, by medical treatment is proven to assist smoking cessation.

### Alcohol moderation / drug recovery

The intense addictive feedback and reward that drugs satisfy is reduced if not recovered when the untreated ADHD brain receives its dopamine "fix" from lawfully prescribed medications.

### Sexual health & HIV

47% of young women who have untreated ADHD have unwanted pregnancies. Treatment reduces impulsive behaviours and increases self esteem, which directly lead to healthier sexual activity. We refer to this agenda as: ADHD treatment below the neck".



### Mental Health = Public Health

This 'new' agenda opens up a new seam of 'payers' for ADHD services, including Public Health, Regional Boards, Public Health knowledge & intelligence hubs.



## ADHD below the neck campaign



ADHD 360 Marke THAN VOLK DIAGNOSIS

## Michigan Model 2024/5





### Hypertension and ADHD

► What is hypertension?

► Why is it important regarding ADHD?

What can be done about managing hypertension in ADHD patients?



### Hypertension and ADHD

- Hypertension occurs when the body's smaller blood vessels (the arterioles) narrow, causing the blood to exert excessive pressure against the vessel walls and forcing the heart to work harder to maintain the pressure
- Systolic BP (adult) over 130mm/Hg considered hypertensive
- Diastolic BP (adult) over 80 mm/Hg considered hypertensive



### Hypertension and ADHD

- In 2020, more than 670,000 deaths in the United States had hypertension as a primary or contributing cause<sup>1</sup>.
- ▶ Nearly half of adults in the United States (47%, or 116 million) have hypertension<sup>2</sup>
- ▶ High blood pressure costs the United States about \$131 billion each year<sup>3</sup>

- . Centers for Disease Control and Prevention, National Center for Health Statistics. About Multiple Cause of Death, 1999–2020. CDC WONDER Online Database website. Atlanta, GA: Centers for Disease Control and Prevention; 2022. Accessed February 21, 2022
- 2. Centers for Disease Control and Prevention. Hypertension Cascade: Hypertension Prevalence, Treatment and Control Estimates Among U.S. Adults Aged 18 Years and Older Applying the Criteria from the American College of Cardiology and American Heart Association's 2017 Hypertension Guideline— NHANES 2015–2018. Atlanta, GA: U.S. Department of Health and Human Services; 2021. Accessed March 12, 2021.
- 3. Kirkland EB, Heincelman M, Bishu KG, et. al. Trends in healthcare expenditures among US adults with hypertension: national estimates, 2003-2014. J Am Heart Assoc. 2018;7:e008731.



# Hypertension and connections to ADHD

- ► ADHD leads to anxiety
- Anxiety leads to high BP
- ► FACT
- So let's examine and deal with the cause of the anxiety
- ► We call it SPO



## Hypertension SPO

### ► Age of 6

- Always more difficult to achieve
- ► No correlation to intelligence
- "Why is it always me?"
- Challenges for someone with ADHD lead to SPO



# Medication for ADHD and hypertension

- Challenges for treatment
- ► How to overcome the challenges and why we should
- What to watch for
- ► How to be safe



### ADHD and SPO

### **BP v treatment**



## What it means for the patient - you!

Check your BP

Work with your clinician

► Recognise SPO

▶ Be safe and treat the cause...



► The correlation

► What we see clinically

What can be done and why we should





# Understanding ADHD & Disordered Eating



× Hi. Neec

The correlation

Poor planning

Eating at abnormal times

No healthy food available





What we see clinically

Most patients over weight

Most patients have a poor relationship with food

► This is reversable



What can be done and <u>why</u> we should

- If obesity rates stay consistent, by 2030, 51% of the population will be obese
- Twenty years ago, no state had an obesity rate above 15%. Today there are 41 states with obesity rates over 25%, according to the Trust for American's Health
- Since 1980, the rate of obesity in children and adolescents has almost tripled
- Obesity is the main cause for 60-70% of all known chronic illnesses



Fast Facts: How Obesity Affects America. Health Fitness Revolution - August 21, 20152

What can be done and why we should

Impact of medication

Preparing diet and food

Accept the facts and work with them

Have the difficult conversation



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Questions



Why is this an issue?

Where does clinical good practice have a role?

How do we do this?



Diabetes kills.

A poor relationship with food, and typical ADHD relationship with diet, therefore is a medical risk

This relationship is rarely spoken about.

8% (27 million) US citizens have diabetes and additional 7.3 million are undiagnosed

Andes LJ, Cheng YJ, Rolka DB, Gregg EW, Imperatore G. Prevalence of prediabetes among adolescents and young adults in the United States, 2005–2016. JAMA Pediatrics. 2020;174(2):e194498. doi:10.1001/jamapediatrics.2019.4498



- Diabetes is a major cause of blindness, kidney failure, heart attacks, stroke and lower limb amputation.
- Between 2000 and 2019, there was a 3% increase in diabetes mortality rates by age.
- In 2019, diabetes and kidney disease due to diabetes caused an estimated 2 million deaths.
- ▶ Of the 7.3 million undiagnosed, how many have ADHD?



Treating ADHD or dysfunctions related to ADHD may improve the outcome of obesity

Levy reported that, in a group of 242 adult patients with a lengthy history of weight loss failure, those treated with stimulants following the detection of previously undiagnosed ADHD lost 12.36% of their initial weight

These results lasted far longer than the initial influence of the anorexigenic effects of medication, and are due to improved executive functioning and weight loss programme adherence

Levy L.D., Fleming J.P., Klar D. Treatment of refractory obesity in severely obese adults following management of newly diagnosed attention deficit hyperactivity disorder. Int. J. Obes. 2009;33:326–334. doi: 10.1038/ijo.2009.5.



The initial target should be the 7.3million undiagnosed diabetics that are in the ADHD category

This should be a naturally screened process for obese people especially adults

We should note the anorexigenic effects of ADHD medications and harness this positively.



### To recap

Neurodiversity, especially ADHD does not exist in a vacuum

 Correlating physical health conditions need to be acknowledged, looked for and treated alongside ADHD

Success leads to a whole life set of outcomes that reach far beyond normalised ADHD treatment.



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