

# EXERCISE IS MEDICINE PRACTICE IN GHANA

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# Summary

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- Brief Discussion-Question?
- Exercise is medicine-definition/concept
- Science behind Physical activity and health
- Economic factors/Burden of chronic diseases
- What can be done in Ghana
- EIM Practice in Ghana and the Sports and Exercise medicine Doctor-Patient Model
- Conclusion

# Forewords

- Enormous changes in the world past decades
  - PA and movements engineered out of activity of daily living at home, work, leisure time etc
  - Energy expended activities like preparing a meal or dinner, scrubbing, cleaning, washing have been replaced by for eg self propelled vacuum cleaners, lawn mowers, microwave machines etc and a lot of sedentary leisure time activities to occupy us for hours
- (Blair, Steve N, EIM, 2011)

# Forewords2

- Prof Jerry Morris, invention of PA epidemiology stated ‘ We in the west are the first generation in human history in which the mass of the population has to deliberately exercise to be healthy’
- How can society’s collective adaptations match (Lee,I.M et al 2009)
- Ghana and developing nations ?second generation??? To follow suit-Very fast and catching up with the west-urban areas.

# Introduction

- Physical inactivity –arguably one of the leading public health problems in the world. Each year physical inactivity is responsible for 3.2 million deaths in the world
- In fact this places physical inactivity 4<sup>th</sup> on the list of causes of death exceeded only by High Blood Pressure, Tobacco use, High blood glucose or diabetes  
(WHO, 2009)



# Question

- What are the three major factors influencing our health and longevity?



# Answers

- Genetics
- The Environment-nutrition
- Behaviour

- Environmental factors-controlled by vaccinations, hygiene, nutrition, safety regulations etc
- Behavioural factors-little or nothing has been done on targeting behavioural factors like physical inactivity.

- ‘It is tragic that so little has been done to address the one major factor affecting our health and longevity that is almost entirely under our control.
- I believe physical inactivity has become the greatest public health problem of our time and finding a way to get patients more active is absolutely critical to improving health and longevity in the 21<sup>st</sup> century

(Sallis, RE.Br J Sports med Jan 2006,Vol3,p3)

- 5<sup>th</sup> century
- HIPPOCRATES
- “eating alone will not keep a man well; he must also take exercise.... Work together to produce health”

The association between physical activity health persists in virtually every sub group of the population, regardless of age, sex, race or environmental condition'



(Patte RR et al, JAMA 1995;273:403-7)

# Exercise is Medicine (EIM)



Definition-a concept which uses exercise or physical activity in the prevention, management and treatment of diseases

# Concept of EIM

- Non profit initiative
- Launched by ACSM/AMA Nov 5, 2007
- Urging healthcare providers to assess and review patients regarding PA at every office visit
- During visit consider exercise clearance and a prescription and referral to a qualified health/fitness professional
- Patients are also encouraged to begin a conversation with their dr about PA.

(Sallis, RE.Br J Sports med Jan 2006,Vol3,p3)

# The Science behind PA and Health

- Clear scientific evidence proving the benefit of regular physical activity (PA) on both the primary and secondary prevention of chronic diseases including diabetes, hypertension, cancers (Breast, Colon cancer) depression, osteoporosis and dementia
- Furthermore PA shown to be essential in achieving and maintaining, weight control (US Dept of Health and Human services, 1996)



- Finally there is a clear correlation between PA and all cause mortality  
(US Dept of Health and Human services, 1996)

- Without doubt exercise really is medicine and in fact, it can be seen as the much needed

## **VACCINE TO PREVENT CHRONIC DISEASE AND PREMATURE DEATH**

(Sallis, RE.Br J Sports med Jan 2006,Vol3,p3)

# Why???

- Organised medicine not declared an all out war against physical inactivity
- ‘Exercise Pill’-confers all the health benefits of exercise?
- ?Prescribed pill in the history of mankind?
- Pharmaceutical companies?? ?Profit

# Case for EIM

‘The doctor of the future will give no medication, but will interest his patients in the care of the human frame, in diet and in the cause and prevention of disease’

(Thomas A. Edison (1847-1931))

Batt, ME, Jeffrey LT, Clin J Sport Med; Vol  
21, No.1, Jan 2011

# THE EXERCISE PILL



# **Exercise Pill**

**=Exercise is Medicine**

**=Exercise vaccine**

**=Exercise Prescription**

# Economic factors

## Twelve Prevalent Chronic Diseases

1. CHD
2. Stroke
3. COPD
4. Depression
5. Lung Cancer
6. Diabetes
7. Arthritis
8. Colorectal Cancer
9. Asthma
10. Kidney Disease
11. Oral Diseases
12. Osteoporosis

**Carrier (2009)**

The Exercise Clinic, Spire  
Wellesley Hospital

# The Burden of chronic diseases





# The Burden of Chronic diseases

- Chronic diseases are long term conditions that cannot be cured but can be controlled with medication and/or other therapies (DOH 2010)
- Examples include; CHD, Stroke, Cancer, COPD, Diabetes
- The above constitutes the leading cause of mortality world wide (60%) of all deaths and are projected to increase by a further 17% over the next 10 years (WHO 2010)

# The Burden of Chronic diseases<sup>2</sup>

- The treatment of and care of individuals with chronic disease accounts for 70 percent of the total health and social care costs, and this is projected to rise dramatically over the next 12-15 years as the number of people aged over 65 years increases by an estimated 42 percent (DOH, 2010)

# The Burden of Chronic diseases<sup>3</sup>

Regular physical activity is widely accepted as being beneficial for health and a substantial body of epidemiological research has demonstrated inverse associations of varying strength between physical activity and the risk of several chronic diseases, including CHD, stroke, hypertension, type 2 diabetes, osteoporosis, obesity, anxiety and depression (Pate et al,1995; Haskell et al,2007;DOH 2004).

Currently there is an over emphasis on a pharmacological approach to the management of chronic diseases, although continuing exercise prescription has been shown to be of benefit in improving physical performance measures, psychosocial well being, and reduction in use of hospital services (Woo J et al, 2006).

# EIM and organised mainstream medicine

- Ignored research on the exercise pill
- Healthcare systems around the world are instead more concerned about procedures and pharmaceuticals
- Little resources on prevention

(Sallis, RE.Br J Sports med Jan 2006,Vol3,p3)

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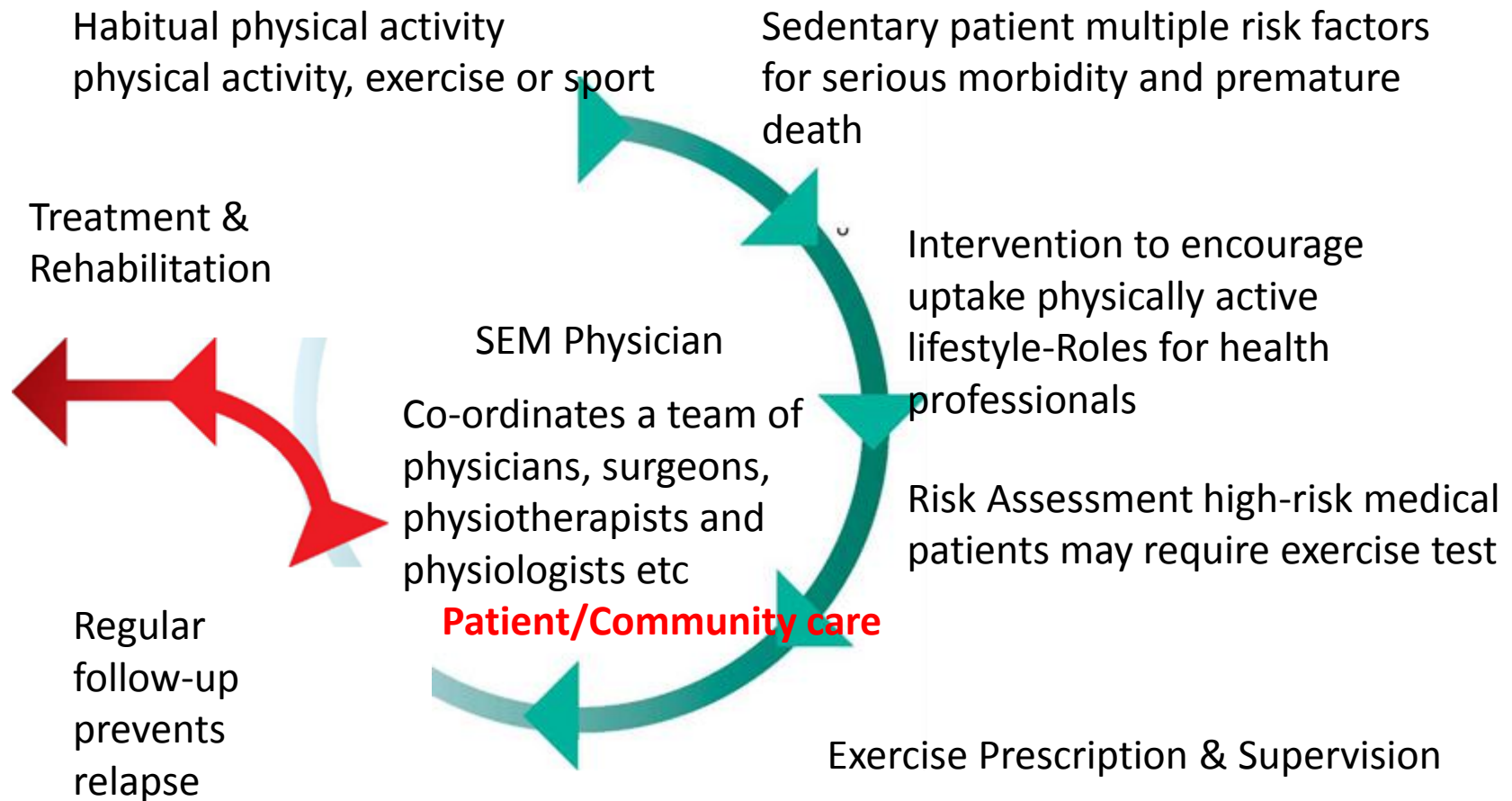
# What can be done?

- Promote EIM and healthy lifestyle concept in Ghana
- Merge fitness industry with healthcare systems
- Sports and exercise medicine (SEM) should be the best advocates for EIM amongst patients and then link these patients up with the fitness industry, sports science, physical education professionals etc. and then follow them up
- SEM training program for doctors being established at the GCPS and UCC to link up with exercise and fitness healthcare professionals



# EIM PRACTICE MODEL

## EIM+SEM+PATIENT





# Roles in intervention to encourage PA

- Physicians,
- Surgeons
- Anaesthetists
- Dentists
- Allied Health practitioners - physiotherapists, chiropractitioners, podiatrists, nutritionists, nurses biomechanisits etc,
- Accident and Emergency Medicine doctors,
- General Practitioners,
- Obstetricians & Gynaecologists,
- exercise physiologists,
- Occupational Medicine Specialists,
- Ophthalmologists,
- Pathologists,
- Paediatricians,
- Public Health Medicine Specialists,
- Psychiatrists and
- Radiologists
- Others etc

# SEM DR Role in Office or Clinic

- Record PA as a vital sign (PAV)
- ❖ At every visit the dr should ask two questions  
On average, how many days per week do you engage in at least moderate (brisk walk or greater) ?
- ❖ On average how many minutes per session?
- ❖ Multiply above no's at response=patients minutes per week of moderate or greater exercise
- ACSM/AHA-recommends at least 150 minutes per week for moderate exercise for our adult patients.

# What can be done? 2

- Create Physical Activity and Nutrition Group (PANG) committee or work group to look at creating programs and guidelines for comprehensive programs to promote physical activity and healthy eating and lifestyles

# **Future discussions-comprehensive programs to promote physical activity and healthy eating and lifestyles**

- Leadership, Planning/management, coordination
- Environmental systems and policy changes
- Mass communication
- Community programs and community development
- Programs for children and youth
- Health care delivery
- Surveillance, epidemiology and research

# Areas to consider

- Public Health
- Health care
- Education and training-SEM drs, Fitness professionals, nutritionists, sports scientists etc.
- Transportation
- Land use and community design
- Parks, recreation, fitness, sports
- Voluntary and NGO/non profit
- Mass media

# Conclusion

- Teamwork among all healthcare professionals with a new mind-set to promote PA and nutrition
- Education for all patients to understand the risks of being sedentary and the importance of exercise in treating and preventing chronic disease
- The biggest challenge will be to convince the healthcare system to make a big commitment to getting patients to become active

- There is a wealth of scientific evidence base for promoting PA
- Time for organised medicine to join with fitness professionals in Ghana and around the world to take their exercise pill and EIM practice

There is  
no better  
way to  
improve health  
and  
longevity







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# Further advice and help

**[www.exerciseismedicine.org](http://www.exerciseismedicine.org)**

# THANKS

# QUESTIONS