

# the med

## In this issue:

### SMOKING RISKS FOR ADOLESCENTS

Smoking, as a common practice among teens, poses what kinds of risk to the human body?

### SHIFTING SOCIAL DYNAMICS AND SOCIAL MEDIA

How does social media exacerbate or ameliorate a person's mental well being, especially those of teens?

### PREDIABETES

An investigation in prediabetes - a high risk state for the development of diabetes.

## All about teen health!



# EDITOR'S NOTE

Dear Medical Journal Readers,

Welcome to our second edition of the FIS Medical Journal with the theme of 'Teen Health', thanks for checking us out!

As a united team of Year 12 students, the FIS Medical Journal's main aims are to provide a light-hearted magazine-style medical journal for all FIS secondary students, to create opportunities for research and collaboration within the FIS community, to raise awareness of medical issues in the FIS community, to spark inspiration and interest in younger students and to provide Medical School guidance and advice.

I would like to first give a big thank you to our new contributors to the FIS, ranging from Year 11 to Year 13. They have worked hard to bring in a plethora of new articles which are well worth a read. As our journal continues to develop, we will be constantly bringing in new contributors and expanding our roster.

It is never easy being a teenager with stress, pressure and changes meddling with our mental health. In this edition, our 'What's the deal with being a teen' will cover all the ups and downs of this period as well as stress the importance of having a healthy lifestyle during teenage years. Our featured articles in this issue are centred on adopting good and healthy lifestyle habits as a teenager, hopefully many to be carried on into adulthood. In our 'Diagnosis of the month' section, we will be showcasing a common issue within teenagers, acne! We will be highlighting how it forms as well as ways to prevent it. Finally, our university guidance section will continue with part 2 of 'courses during summer' as well as what to consider when applying for medical school.

Finally, I would like to give my sincere thank you to FIS for its continued support as well as Mrs Leonard for contributing a fantastic article as our preface for this edition.

Be sure to check it out!

Now, please dig into all the articles that we have brought to you this month and enjoy!

**Hadrian Wong**  
Editor-in-Chief



# PREFACE

## Teen Health

*BY MRS LEONARD*

'Dear heart,  
Please stop getting involved in everything.  
Your job is to pump blood, that's it.'  
Anon. teenager

Teen health is a wide topic that covers so many aspects of the life of our students and children. It is a topic that is particularly close to my heart as a mum, as well as a teacher involved in our school's student welfare. But what is it? When we mention teen health, two aspects come to mind: the mental health, and the physical health of our teenagers.

The definition of mental health is 'a person's condition with regard to their psychological and emotional well-being'. (Oxford Dictionary)

Nina Jackson, a mental health consultant and educator who came to work with our senior students on that very subject last academic year, prefers to refer to it as 'mental wealth'. This is a more positive denomination for a topic too often seen as worryingly negative, or attached to sombre

connotations. The mind of a teenager does indeed contain a wealth of knowledge, imagination, creativity, perceptions, thoughts, feelings (these are sustainable) and emotions (these are temporary). It is precisely how the teen's brain processes those emotions that can sometimes lead to outbursts. The brain of a teenager is still maturing, and the emotions' control centre (the prefrontal cortex) is not fully ready to operate yet, unlike the brain of adults. Teenagers revert to the amygdala, a part of the brain that is deeply embedded within the limbic and the area that deals with emotions such as fear. So no wonder that when put in potentially frightening situations, our teenagers feel fear, and react in emotional (sometimes extreme) ways in order to protect themselves.

At FIS, we are developing approaches and systems that support the mental wealth of our teens in the best way possible: we surround ourselves with regular experts' interventions (Nina Jackson and Dr Claire Vanston in 2016-2017), we consult

professionals when we need to target specific issues (FIS has a partnership with St John's Counselling), and we set up and launched in November 2016 a Hong Kong-based Student Wellbeing Network with other Hong Kong international schools with the aim of sharing good practice and supporting our students as effectively as possible.

Positive psychology is a powerful approach used by many schools in Hong Kong as well as internationally, and is one of the tools we are trying to incorporate in order to help our students flourish and strengthen their 'mental wealth'. Research on positive psychology shows the tremendous impact it has on the well being and well learning of students.

Dr. Martin Seligman (<https://ppc.sas.upenn.edu/people/martin-ep-seligman>) is a well-established and recognised professor who created the flourishing model PERMA. In our Student Welfare programme delivered during our weekly PSHE sessions, we have used elements of his research to create our curriculum and integrated the PERMA

model as one of our foundations. The PERMA model focuses on Positive emotions, Engagement, Relationships, Meaning and Accomplishment.

We know and understand the importance for our teenagers to feel positive about these five areas, and each week we

promote one or more of these aspects in the activities we conduct. The focus behind these is of course the development and flourishing of the individual that lies in each of our student, the teenager, with his/her mental wealth, his/her emotions, positive, extremely positive, or negative, and at times extremely negative. Self-esteem and image do impact the overall state of our students' mental health.

The tremendous changes that have taken place over the last few years such as the massive increase in the use of social media by youngsters do play a part in sometimes destabilising the whole control system of their emotions. Whilst we do work on prevention and raise awareness on a sensible use of technology and the effect of social media on our children's state of happiness, it is not easy to strike the right balance, and more importantly find long-term workable solutions.

A positive approach based on understanding and trust will help, but a recent talk I attended on strengths got me thinking that this was potentially a powerful way to address many issues our teens encounter. Derived from positive psychology, the strengths-based approach, developed by Lea Waters, it focuses on the individual dominant strengths in each of us. It explains how, by focusing on them, we can help our students reframe their sometimes negative perspectives on the world or on themselves, and grow their self-esteem and resilience, equipping

them to deal with difficult situations more effectively.

Professor Waters is a psychologist, researcher, speaker and author who specialises in positive education, positive parenting, and positive organisations. She is the President of the International Positive Psychology Association, has affiliate positions with Cambridge University and University of Michigan and is the Ambassador for the Positive Education Schools Association. Her book, 'The Strength Switch', promotes the strengths-based approach and offers practical solutions (<http://www.leawaters.com>). Everyone can identify their top strengths by doing the VIA test online (<http://www.viacharacter.org/www/Character-Strengths-Survey>) and start using them as meaningful tools in their every day life. I strongly believe that this is a simple yet effective way of supporting teens at school, and helping them identify and build on their natural strengths that will be assets throughout their lives.

The role of schools is to foster the growth of its students, help them acquire knowledge as well as develop their skills and strengths, not one without the other. We need to support and encourage our students to find out who they are and understand how and why they react to certain situations the way they do, so that they are better prepared for the real world. With understanding your strengths, you feel stronger, and are more willing to take

on risks, try, fail and bounce back. Sir John Jones who visited our school earlier this week also referred to it as 'bouncebackability'.

Finally, the topic of teen health wouldn't be complete without mentioning physical health. Most teenagers are physically active, are members of the various clubs and teams at school, and outside school too. I am a strong advocate of the regular practice of sports – at FIS, we continue to promote Physical Education as a key part in the healthy life of our IBDP students and timetable weekly lessons. Throughout their learning journey at FIS, our students attend regular and varied PE lessons at a very minimum of two hours per week if they don't have other sports interests outside school.

As the Roman poet Juvenal wrote, two thousand years ago: 'Mens sana in corpore sano' – 'a healthy mind in a healthy body', a concept still perceived nowadays as essential for the mental wellbeing of people. From sports to charity and fund-raising events, there is an obvious connection, and one that our students make easily and regularly.

Recently, teams of secondary students participated in the 24-hour sailing race, raising funds for the support of various children's charities in Hong Kong (The Children's Cancer Foundation, Enlighten, Idea, Sailability Hong Kong and TREATS). The effects the involvement in these types

of events has on students are tremendously positive: raising money and engaging physically in challenges for a good cause does generate feelings of doing good, thus benefitting others and creating a virtuous circle. Much research has been done in this field, showing the positive effects kindness and gratitude have on the mind and one's outlook on life, but also how it positively impacts relationships ([https://www.health.harvard.edu/newsletter\\_article/in-praise-of-gratitude](https://www.health.harvard.edu/newsletter_article/in-praise-of-gratitude)). So one cannot dissociate the correlation between mental and physical health.

Teen health sits at the heart of everything we do at FIS, and all stakeholders take this topic very seriously. Maintaining the good health of our teens, both mental and physical, is everyone's priority. Our close-knit community does offer the uniqueness of knowing each other well enough to identify when someone needs that extra dose of TLC, support, or special professional help. It often just needs to start with a simple question: 'Are you ok?'. The rest will follow.

**Mrs Leonard**

Director of Learning and Welfare Years 7-9



# THE TEAM

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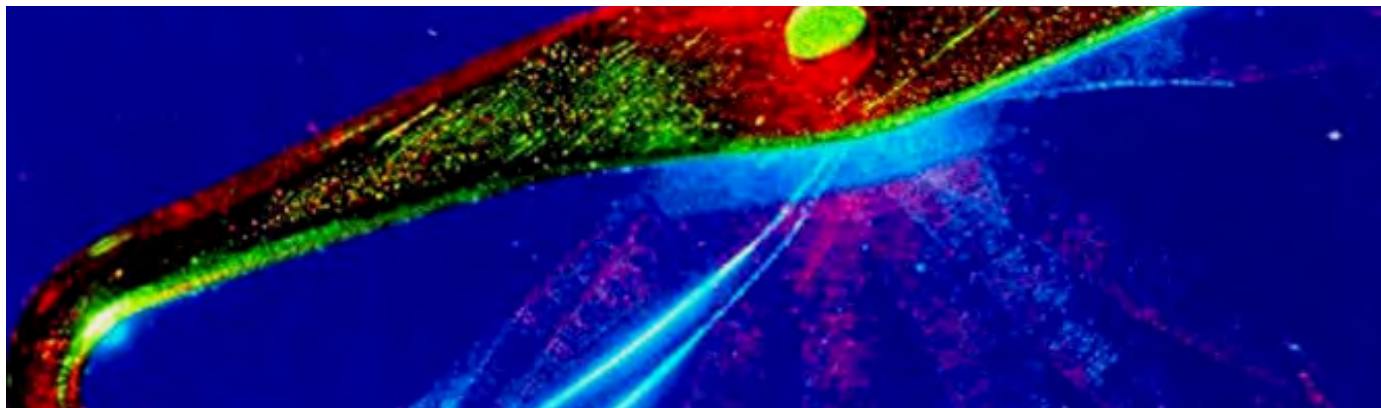
Sho Giersztien - Contributor

Audrey Corno - Contributor



NOVEMBER 2017

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Diffusion  
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## WHAT'S THE DEAL WITH

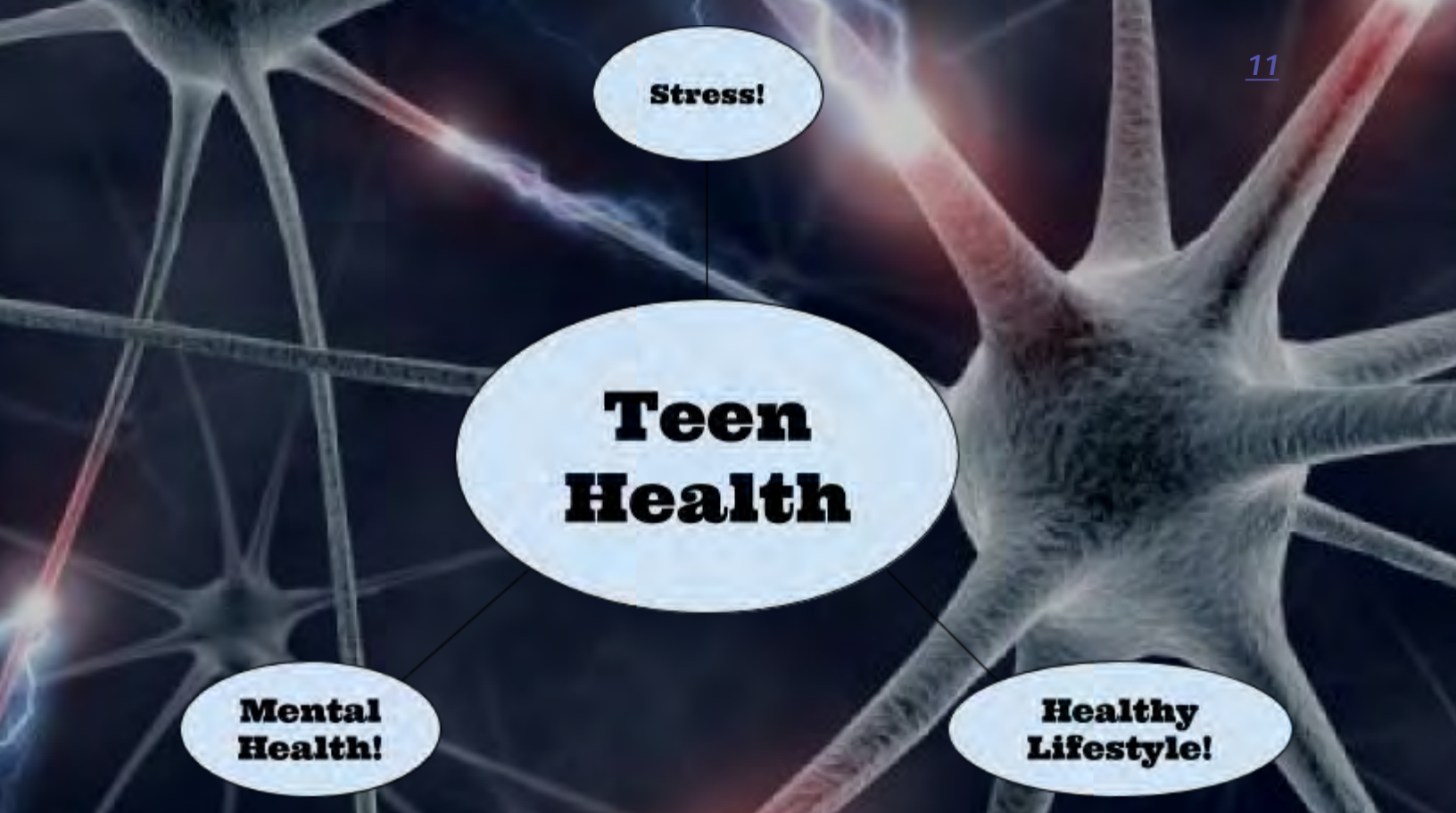
# TEEN HEALTH

**"As a teenager, it is important to have a good balance between workload and freetime."**

By Sho Gierzstein

For many, adolescent years can be tough. There is pressure and stress in trying to fit in as well as unexpected emotional or physical changes which work together to meddle with a teenager's mental health. These changes may provoke an unhealthy lifestyle for many teenagers. Lack of sleep, exercise and poor dieting just to name a few. If this is the case, then why is a healthy lifestyle so important for a teen? Well the truth is: Bad habits adopted from these teen years are likely to be carried into adulthood, therefore affecting good health in the long-term and increases chances in developing chronic illnesses.

This is why as a teenager, it is important to have a good balance between workload and freetime. Otherwise stress and poor mental health may affect your performance.



## Stress

Stress is defined as 'a state of mental or emotional strain or tension resulting from adverse or demanding circumstances'. Many different people have different ways to cope with stress; for example, some people exercise, whilst others can meditate. People tend to engage in activities which help them forget about stress and feel bliss and relaxation. It is vital to find a healthy way to deal with stress, especially for students and younger people, with stress from foreign things such as social life, grades, pressure from parents, pressure from teachers, school life, extra-curricular activities, and managing to balance all of these new and unfamiliar stresses in a healthy way.

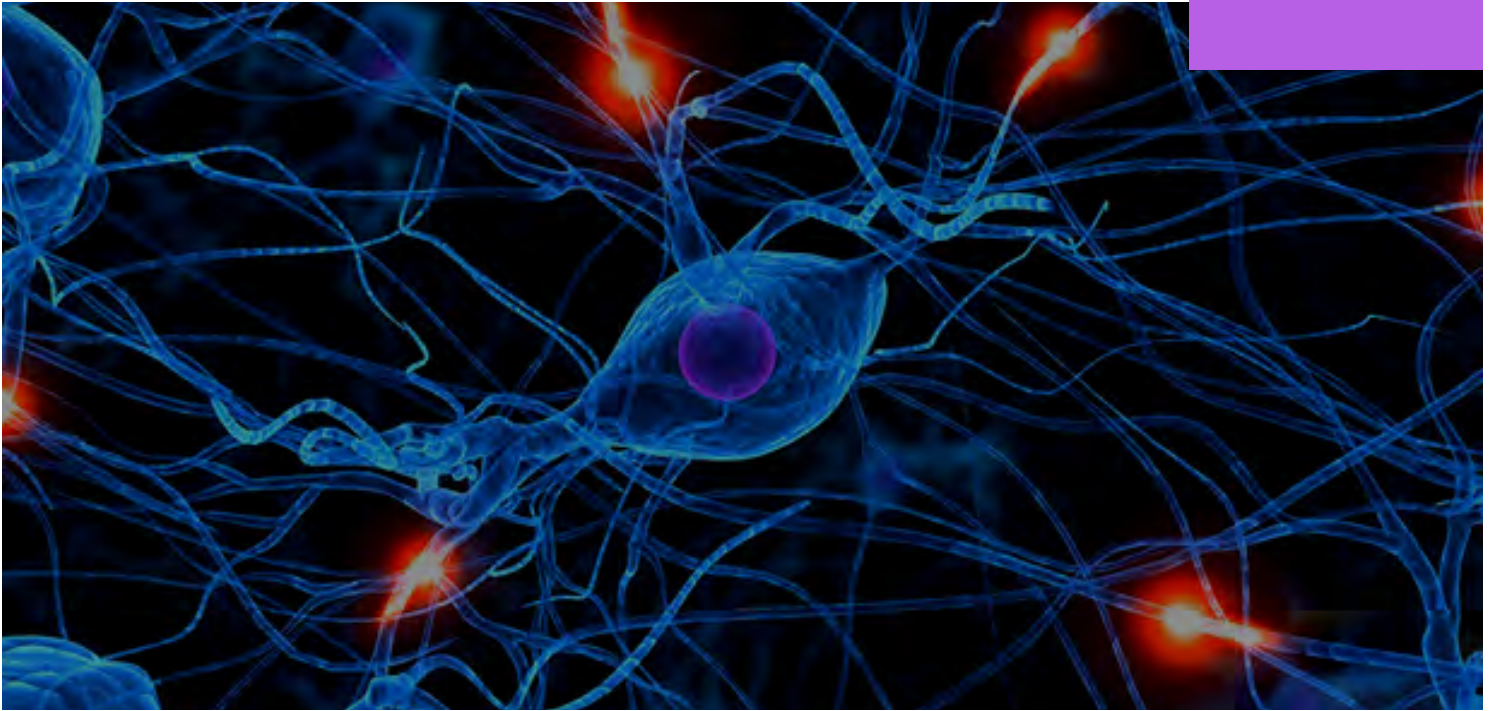
Being an adolescent is undoubtedly one of the most stressful peaks in life due to puberty and dealing with the changes happening in our bodies, and trying to achieve almost unattainable expectations from school, family and friends. It is unfortunately easy to fall into

bad habits and people do senseless things when pressured and put under heavy stress; examples being drinking alcohol, self-harm, smoking cigarettes, or doing illegal substances. Adolescents employ these lousy habits due to peer pressure or to try and 'escape' reality and the current stress.

## Mental health

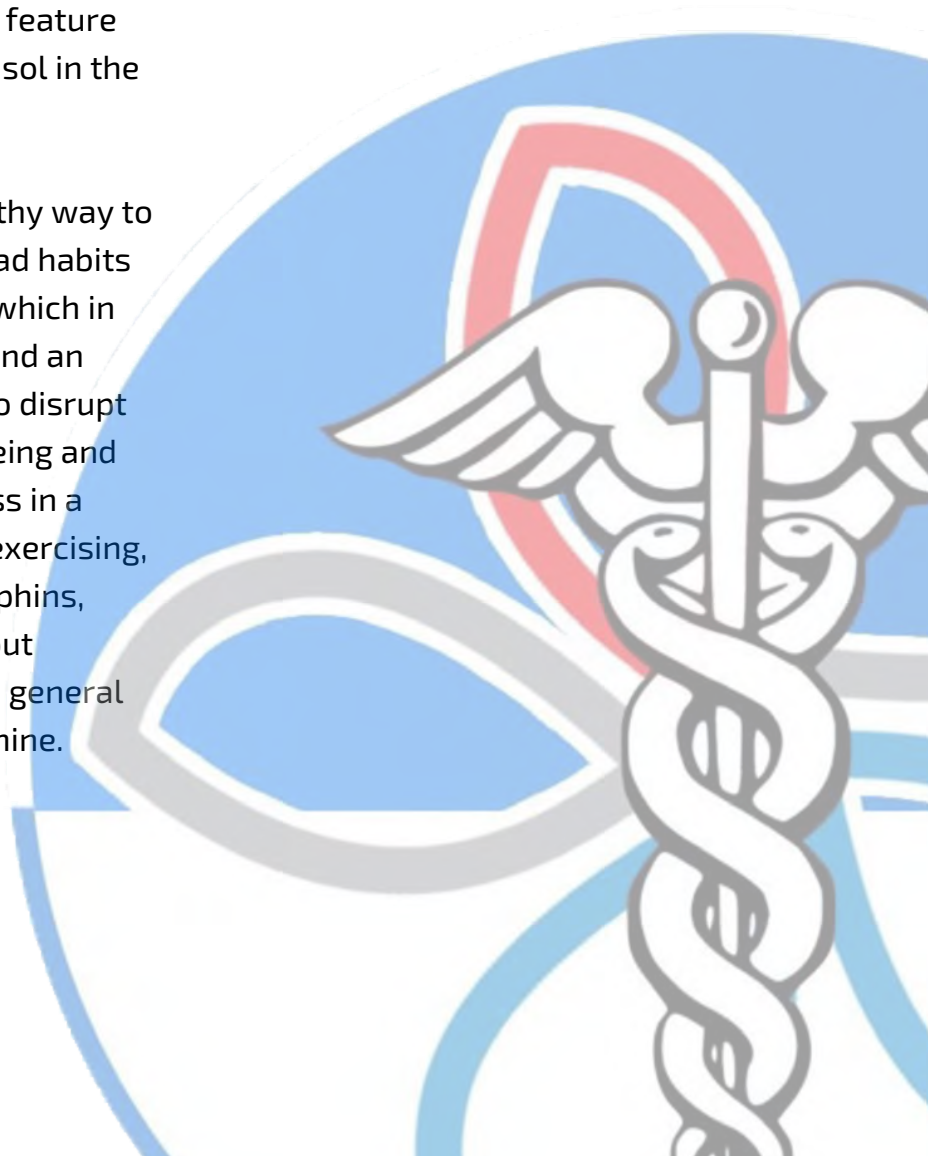
An accumulation of stress over an extended period of time can severely harm our bodies in the long run, as the 'stress hormone' cortisol keeps blood sugar and heart rate up in our bodies. Cortisol has been shown to damage and kill cells in the hippocampus (the part of the brain that is responsible for memory) and it can also cause premature brain ageing. Exposure to too much cortisol can make the brain vulnerable to damage such as strokes, ageing, and stressful events.

Approximately 20% of teens will experience depression before they reach adulthood, and 30% of teens with depression also develop a



substance abuse problem. Chronic stress is linked to depression and anxiety, which are disruptive and destructive mental conditions. A common feature of depression is an excess release of cortisol in the blood.

It is important to find and maintain a healthy way to cope with stress as it is easy to fall into bad habits or just to simply neglect responsibilities, which in the long run will only cause more stress and an accumulation of problems. Stress can also disrupt sleeping habits, overall emotional well-being and concentration. An example to let out stress in a healthy way would be to exercise. When exercising, the body releases chemicals called endorphins, which are hormones which help bring about feelings of euphoria, positive feelings and general well-being, similar to the effects of morphine.



# SMOKING RISKS FOR ADOLESCENTS

BY SACHA LEE

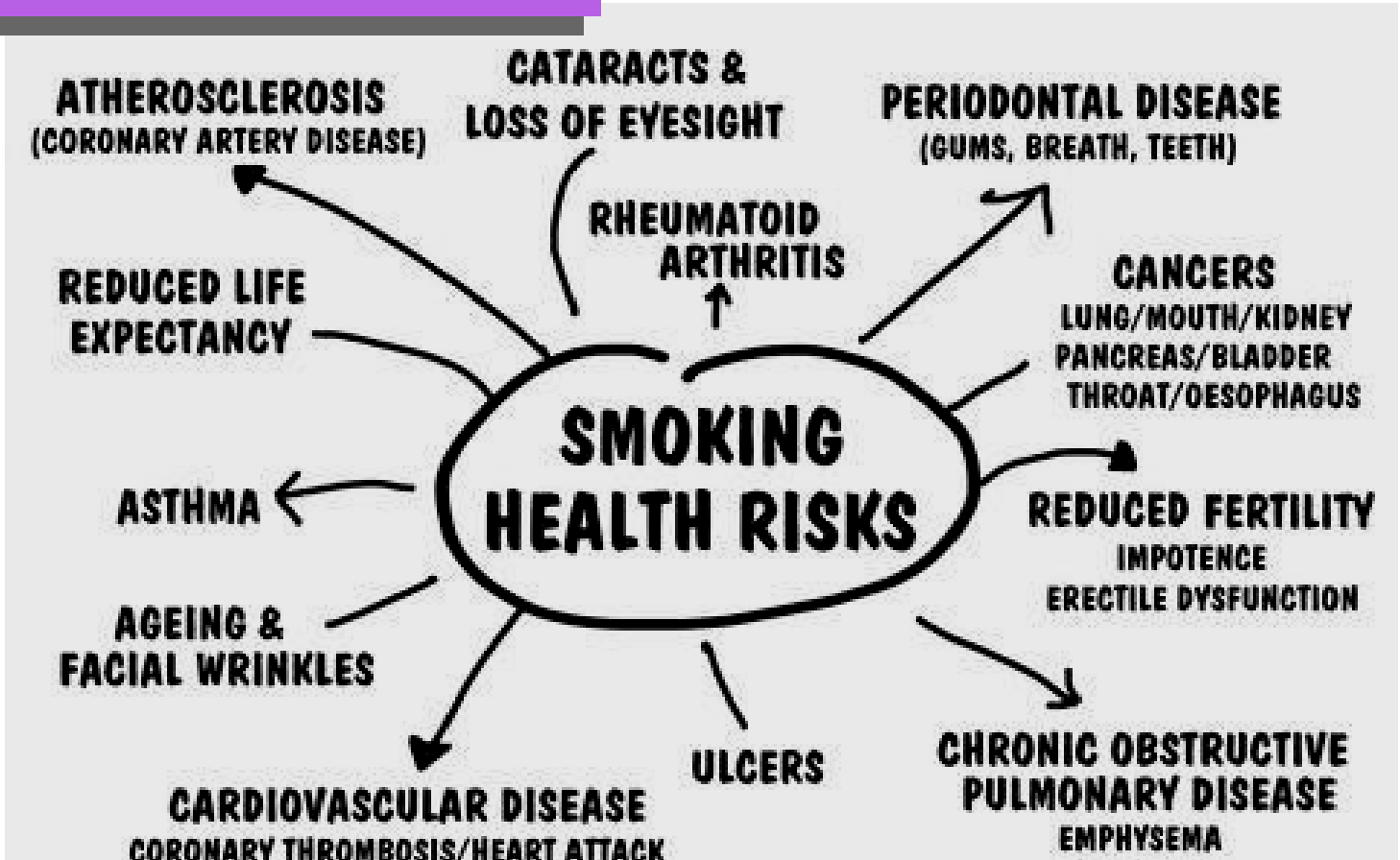
Smoking is a common practice among teens, and although most are aware of the risks, warnings seem to have little effect on the decision to take up smoking. The popularity of smoking is a result of many factors affecting adolescents but mainly comes down to peer pressure.

Teens are extremely susceptible to peer pressure and according to a study conducted by the South China Morning Post, "Having friends who smoke, according to the study, doubles the risk that youngsters between 10 and 19 will pick up the habit". Adolescents are massively influenced by the choices of those around them, and when others smoke, it forces them to make a decision as to whether they want to conform and follow the lead of others, or to make a conscious decision to differentiate themselves from those smoking.

Although many think of this as an easy decision that should be made without consequence, sometimes this fear of isolation drives adolescents to make rash choices they know deep down to be foolish.

Despite the pressure from students at school, parents can also have a large impact as to whether their child smokes, and if so, when their child starts to smoke. The University of Washington states that "Children whose parents smoked are twice as likely to begin smoking between ages 13 and 21 as offspring of nonsmokers".

Most students who smoke use their youth as a way to deny the serious risks that accompany smoking. Heart disease, strokes and lung cancer may be diseases that affect adult smokers, but despite their young age, according to studies, early signs of these diseases can still be found in adolescents who smoke. Although most teen smokers



don't view smoking necessarily as a life-long habit, due to the nicotine, smoking is severely addictive and "adolescents who have smoked at least 100 cigarettes report that they would like to quit, but can't."

"68.8% of smokers would like to stop smoking, 52.4% of smokers tried to quit in the past year but couldn't, and only 6.2% of smokers were able to quit smoking successfully within the past year."

Many students who don't smoke often have friends who do smoke, and though these people make a conscious decision to stay away from cigarettes, they can still be affected by second-hand smoke (also known as passive smoking).

Second-hand smoke can still result in medical risks, and there are many cases of second-hand smoke leading to lung cancer and heart disease.

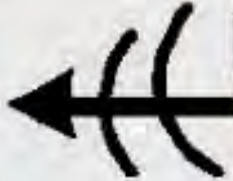
**Secondhand smoke causes** approximately 7,330 deaths from lung cancer and 33,950 deaths from heart disease each year."

Other students choose to smoke using electronic cigarettes as a 'healthy' substitute to normal cigarettes. Due to their lack of tobacco, electronic cigarettes are viewed as an equivalent for smoking that poses little to no health risks. However, new studies have shown that vaping can pose many new health risks such as affecting an adolescent's immunity, sometimes resulting in "Smoker's cough and bloody sores".

A study also showed a possibility of vaping impairing wound healing.

Fibroblasts cells contract in order to seal up wounds when we're injured. A study was conducted where lung fibroblasts were grown in Petri dishes, which were then exposed to e-cigarette vapors. Instead of closing the wound,

## FEATURED ARTICLE 1



Just taste it.  
You'll like it.

**"DESPITE PEER PRESSURE, YOU SHOULD CONSIDER THE RISKS YOU'RE SUBJECTING YOURSELF TO "**

some mitochondria were destroyed, and the cells simply didn't have enough energy to close the cut. Although this study can't fully confirm the dangers these cigarettes pose to the human body, it shows a possibility of the damage e-cigarettes may be imposing.

On top of these possible risks, there have been toxic metals found in the e-liquids of electronic cigarettes. "At the heart of every e-cigarette is a metal coil used to heat up the flavored e-liquid that will become a vapor." Some studies have shown that although some e-liquids were initially considered harmless, they could become toxic once heated. Now, a study has shown "traces of toxic metals in the e-liquids used in five different brands of e-cigarettes." The most concerning metals found were: nickel, chromium and manganese.

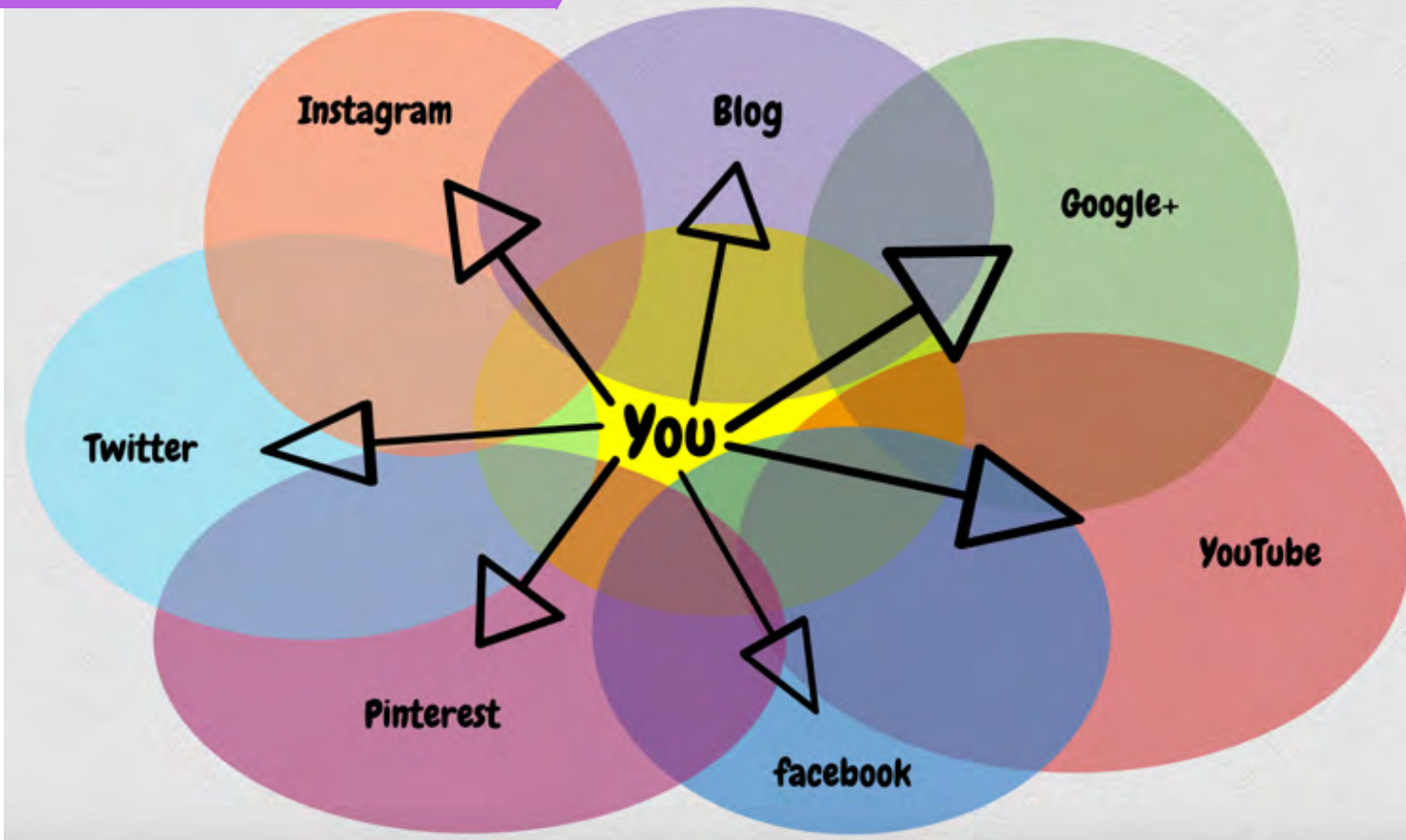
"Research suggests that nickel and certain forms of chromium may cause cancer. Manganese can harm the nervous system."

Ultimately, all students have a choice to make in regard to smoking, and despite the peer pressure and advantages it may bring to your social status, you should consider the disadvantages and risks you're subjecting yourself to in the long term, as this choice made in adolescence may be a huge factor in regard to your health later in life.





## FEATURED ARTICLE 2



# SHIFTING SOCIAL DYNAMICS AND SOCIAL MEDIA

By Elliot Topping

As time passes one thing is certain: much of what we know now will not be the same in years to come. This applies across all areas of life. In teaching and learning, physiology and psychology, as well as the pivotal character defining years of adolescence. During these years, being aware of this ever-present idea of impermanence and change,

highlighted in particular in growing up, is vital in maturing and being content with life and how things come to pass.

In particular, in a school environment like ours (whereby there are not many pupils per year) the potential for shifting dynamics in social circles amongst a clique or group of friends can impact



## FEATURED ARTICLE 2



how happy a person is. This can, at times, lead to feelings of alienation or exclusion.

However, for the most part, this state is just one in passing and in time new friends will be made and (for better or worse) maybe some will be lost. This could once again be seen as a prominent feature, in particular, of growing up in Hong Kong as before and after the IGCSEs large amounts of students often tend to leave for boarding schools to continue their education elsewhere. This can force the remaining pool of students into becoming closer with people they might not have talked to much before.

This, however, is not as bad a thing as it may be made out to be at the time as it reflects the ever changing nature of life. People will come and go and in meeting new people and making new friends, amazing (and sometimes unlikely) friendships are allowed to develop and subsequently blossom. On the contrary, that is not to say that some friendships can't withstand the ordeals of time. Those which do are formidable and something truly to be treasured and cared for. Social media, in regards to these shifting social dynamics in high school, can both exacerbate or ameliorate a person's mental well being.

In providing a platform to share views and connect people, it allows people to stay in contact with those who have moved across the globe or are even just sitting in the room next door. Along with this, its widespread use in today's society with around 76% usage in teens (as of 2015) makes its impact on friendships and well-being an important topic frequently delved into by researchers.

The interconnectivity allowed for by social media means that people can message all the time, and talk to people that they might not otherwise get the chance to. This is generally a beneficial practice, when in moderation. However, it's excessive use can cause not only physical ailments such as eye strain but negative psychological effects on mental well being. One such study suggests that these can be brought on when an individual uses over an hour of social media a day, and proposes people attempt to limit their usage when possible. These detriments could be brought on in a range of situations, such as has been documented when viewing friends' posts on Facebook or Instagram.

## FEATURED ARTICLE 2

This is due to people only posting according to the image they wish to portray of themselves, which can cause unfair comparisons to arise amongst friends and possibly lead to feelings of lower self-worth and self-esteem (in the viewers). It is important to remember that every person's life is not as transparent and ideal as they can sometimes seem on social media.

Another disadvantage, in relation to social media, is how people often tend to post photos (or videos) of friends going out together in groups. This, in essence, is not a problem. Nevertheless, one may arise when others who feel they are part of the group realise they were not invited. This lack of invitation may, or may not, be with malicious intent and it is useful to recognise this and understand the dynamic nature of social circles in school as aforementioned, and that it is more likely that there isn't a reason behind it. Maintaining a calm

approach and not jumping to conclusions in scenarios like this could be useful advice to take into account, if found in a similar situation.

Whilst analysing statistics pertaining to social media is useful, and will elevate our level of understanding, it is fair to say it will still be around in the foreseeable future with both its negative and positive aspects. In addition, adolescence is a phase of life which in time will pass and every person has or will go through it, falling in and out of favour with friends along the way. That to some is one of the beauties of life because wouldn't it be boring if everything always just stayed the same?



# ARE YOU ON THE PATH TO DIABETES?

**TRENDING**

When there are higher than normal levels of sugar in the blood.

**PREDIABETES**

The early, reversible stage of diabetes. Damage is already occurring in the body, but there is still time to change course.

**DIABETES**

The disease becomes increasingly aggressive. Overall health deteriorates rapidly.

# PREDIABETES

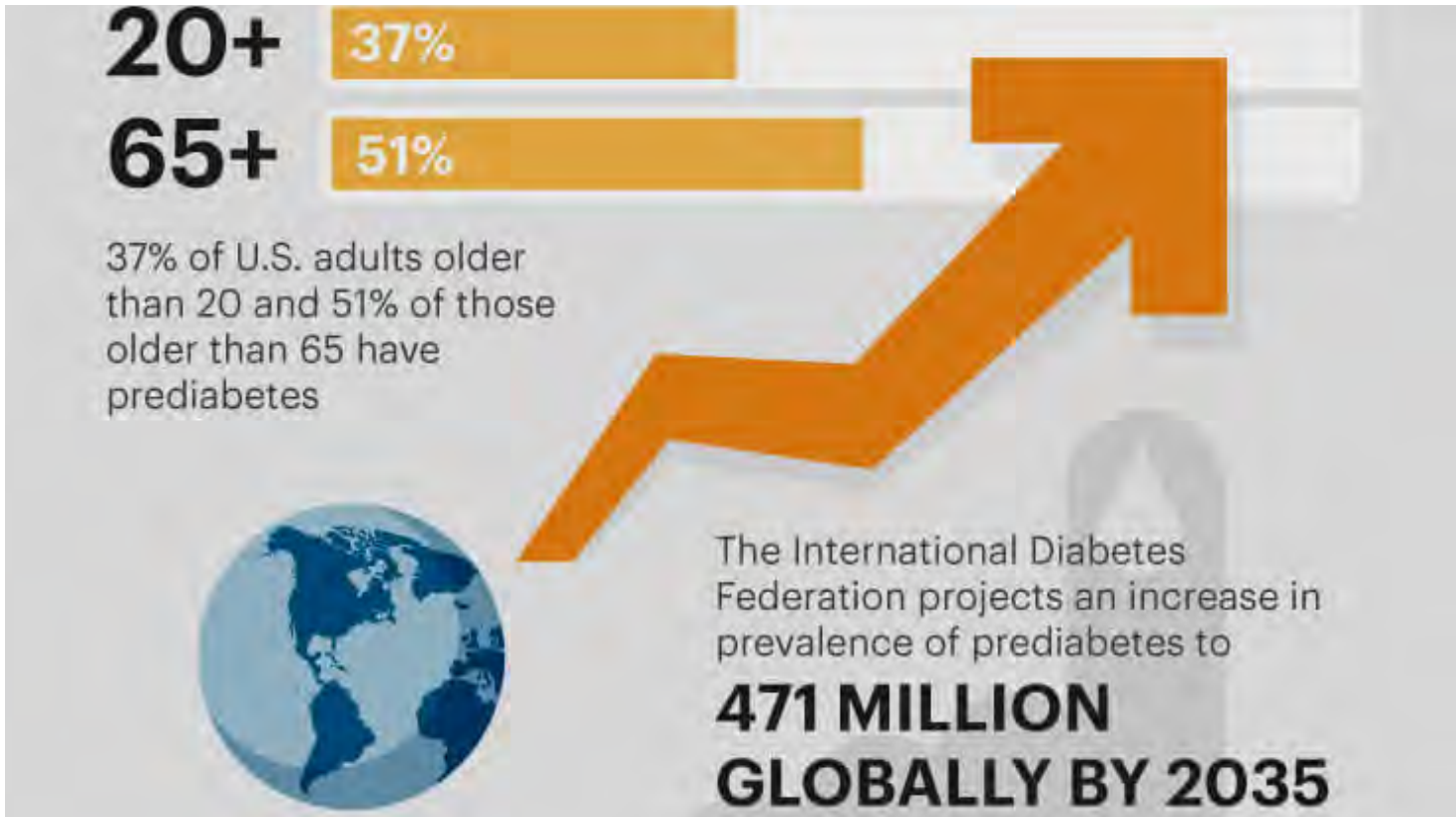
BY ELENA MEGANCK

Prediabetes is defined as abnormally high glycaemic variables (i.e. high blood sugar) and a high risk state for the development of diabetes, where the glycaemic variables are even higher.

Prediabetes is a topic of increasing concern. Not only is it a high risk state, but has also been associated with nephropathy\*, chronic kidney disease, diabetic retinopathy\*, macrovascular disease\*, and more. All of these are common amongst diabetic individuals, but more recently evidence from various studies suggests that these problems and others develop before the symptoms of diabetes themselves appear -- that is, during prediabetes. In 2013, a research team conducted a 15-year follow-up of children diagnosed with Type 2 diabetes, and were shocked by the quantity of 'young adult blindness, amputation, kidney failure requiring dialysis, pregnancy loss and death'.

Before 1997, it was believed that diabetes in children was almost always Type 1. In brief, Type 1 (T1DM) is present at birth, whereas Type 2 (T2DM) develops after birth. It was thought that Type 2 was only relevant to adults. Today it is widely recognised that this is not the case. An increasing number of children are developing T2DM after birth, worldwide, some as young as eight years old. Accordingly, the term 'adult onset diabetes' has been replaced by Type 2 diabetes, as the disease does not limit itself to adult cases.<sup>3</sup>

Why has there been such a dramatic rise of diabetes in children? One major cause is the increase of prevalence of childhood obesity. Over the past 30 years, the number of overweight children has increased over 100%. More worryingly is the fact that the probability of an overweight or obese child remaining obese in adulthood is positively associated with the child's advancing age.



Once the child reaches 6 years old, the probability that the child’s condition will persist is greater than 50%. 70% - 80% of obese adolescents will remain obese as adults. Even the 20% - 30% who lose the excess body weight are not freed from their problems -- the Harvard Growth Study shows that being overweight as an adolescent foreshadows adult morbidity from several chronic diseases and mortality from all causes regardless of adult body weight. Similarly, the Harvard Growth Study follow-up concluded that being overweight as an adolescent predicts ‘a broad range of adverse health effects that were independent of adult health after 55-years follow-up’. There was about double the risk of mortality from all causes, and more than twice the risk of dying from coronary heart disease. The risk of colorectal cancer and gout increased amongst men, and the risk for arthritis increased amongst women. As it is now understood, by the time we have prediabetes it may already be too late to prevent organ damage.

Being overweight in childhood is a more powerful predictor of the above described risks than being overweight during adulthood. BMI appears to remain constant in most cases (70% - 80% of obese adolescents remain obese into adulthood, as mentioned above) showing prevention is key. It is well known that ‘lifestyle modification is the cornerstone of diabetes prevention, with evidence of a 40–70% relative-risk reduction’.<sup>1</sup> According to the Official American Academy of Pediatrics Clinical Guidelines, dietary factors (such as increased total dietary fat intake and increased intake of calorically sweetened beverages) combined with a deficit of vegetable and fruit consumption should be established as a major risk for developing T2DM. However, the question remains: which specific diet reduces the risk of diabetes and obesity complications the most?

In 2010, the Chair of the Nutrition Department at Loma Linda University

## Reversing Prediabetes Through Lifestyle Change



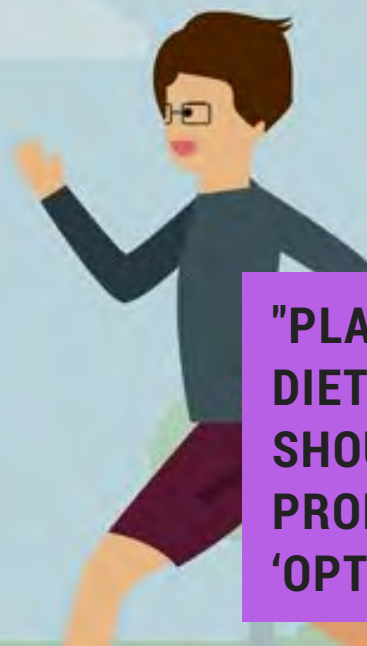
**Lose Weight**



**Exercise**



**Healthier Diet**



**"PLANT-BASED DIETARY PATTERNS SHOULD BE PROMOTED FOR 'OPTIMAL HEALTH'."**

published a study showing that epidemiologic studies have consistently proven that 'vegetarian diets are associated with a lower body mass index (BMI) and lower prevalence of obesity in adults and children'. The paper showed that animal products (meats, eggs and dairy products) increased the risk of obesity, whereas plant foods showed to be either protective (nuts, cereals, legumes) or showed no association (fruits, vegetables, vegetable protein products). Possibly, this is because plant-based diets are high in fibre, complex carbohydrates, nutrient density and water.<sup>8</sup> Additionally, individuals following a plant-based diet appear to have a higher basal metabolic rate (BMR), where they burn more calories even when doing absolutely nothing or sleeping.

It is becoming increasingly obvious that plant-based dietary patterns should be promoted and supported for our 'optimal health'.

### **Definitions:**

**Nephropathy** is kidney damage.

**Diabetic retinopathy** is a type of retinal damage where the blood vessels of the retina (the part of the eye that is sensitive to light and allows our brains to interpret what we see), causing vision loss.

**Macrovascular disease** is a disease of any large blood vessels in the body, such as in the brain or limbs.

**CVD** is the abbreviation for cardiovascular disease, a disease which affects the heart or its blood vessels. It is caused by a buildup of plaque in the vessels, which obstructs the flow of blood, in turn leading to angina (chest pain), heart attack, heart failure (the heart is unable to pump blood around the body properly), etc.

## FEATURED ARTICLE 4



## SCMP: HONG KONG KIDS' LACK OF EXERCISE COULD BE HURTING THEIR GRADES, STUDY FINDING SUGGESTS

Exercise boosts children's academic prowess – that's the consensus view of world experts, published in a leading medical journal. Yet most Hong Kong children don't meet the minimum recommended daily exercise target

Hong Kong children's lack of physical activity could be harming more than just their health – it could also be affecting their grades. Exercise boosts kids' and young people's brain power and academic prowess, according to a new consensus statement from an international panel published

in a leading medical journal.

Further, time taken away from lessons for physical activity is time well spent and does not come at the cost of getting good grades, say the 24 experts who drew up the statement that appears in the British Journal of Sports Medicine.



## FEATURED ARTICLE 4



The panel, which included experts from the UK, Scandinavia, and North America with a wide range of specialisms, gathered at the Copenhagen Consensus Conference in Snekersten, Denmark, in April this year to reach an evidence-based consensus about physical activity

in children aged between six and 18. The consensus includes 21 separate statements on the four themes related to physical activity: fitness and health; intellectual performance; engagement, motivation and well-being; and social inclusion. Both structured and unstructured forms of physical activity in school and during leisure time are covered.

More than three in four Hong Kong children exercise for fewer than 60 minutes daily – the amount recommended by the World Health Organisation for children aged five to 17 – according to a recent survey by Hong Kong Baptist University’s Centre for the Advancement of Social Sciences Research. Seven per cent of children did not exercise at all outside of physical education classes.

Cardio-respiratory and muscular fitness “are strong predictors” of the risk of developing heart disease and type 2 diabetes in later life, and vigorous exercise in childhood helps to keep these risk factors in check, the consensus statement says. Frequent moderate-intensity exercise and, to a lesser extent, low-intensity exercise will still help improve children’s heart health and their metabolism, while physical activity is a key component of the treatment of many long-term medical conditions in six- to 18-year-olds, the scientists’ statement says.

The positive effects of exercise go beyond physical health, the experts say. Regular physical activity can help develop important life skills, and boost self-esteem, motivation, confidence and well-being. It can foster and strengthen relationships with peers, parents, and coaches. And activities that take account of culture and context can promote social inclusion for those from different backgrounds and ethnicities, and those with different sexual orientation, skill levels and physical capacity.



## FEATURED ARTICLE 4

incorporating physical activity into every aspect of school life and providing protected public spaces, such as cycle lanes, parks and playgrounds “are both effective strategies for providing equitable access to, and enhancing physical activity for, children and youth”, the statement says.

### Five ways physical activity helps children’s cognitive functioning, according to the statement:

1. Physical activity and cardio-respiratory fitness are good for children’s and young people’s brain development and function, and for their intellect.
2. A session of physical activity before, during, and after school boosts academic prowess
3. A single session of moderately energetic physical activity has immediate positive effects on brain function, intellect, and academic performance.

4. Mastery of basic movement boosts brain power and academic performance.
5. Time taken away from lessons in favour of physical activity does not come at the cost of getting good grades.





# commentary

BY HARRY PARSONS

## **A view on the importance of exercise**

The word 'lifestyle' encompasses every aspect of our lives, from diet and sleep patterns, to work/life balance, and of course, the focus of this discussion; physical exercise. In order to have a healthy lifestyle, one needs to have a positive balance in all of these areas. In our first PE lesson of the year, Mr Horton explained to us the importance of physical exercise in one's daily routine, and whilst he advocates positive and healthy habits in all parts of life, he is in a position to directly affect our physical exercise more than anything else.

Based off of a publication by the British Journal of Sports Medicine (BJSM), this SCMP article focuses on the importance of regular exercise for children all of ages, and whilst the title of the article only mentions school grades, the article discusses much more than just academic achievements.

The aforementioned BJSM publication released 21 statements regarding physical exercise in children between the ages of 6 and 18 that were agreed upon by a panel of experts. These statements are statistically backed, and can be separated into four distinct categories: 'Fitness and health', 'Cognitive functioning', 'Engagement, motivation, psychological wellbeing' and 'Social inclusion and physical activity implementation strategies'.

To briefly summarise the conclusions drawn by the panel of experts, physical exercise has positive effects on cardiometabolic health (cardiovascular and metabolic health), brain structure, brain function, cognitive function and academic performances. It can also improve our self-esteem and provide us with valuable life skills, such as respect and social

# commentary

BY HARRY PARSONS

responsibility.

The points made about cardiometabolic health are particularly important, as physical exercise between the ages of 6 and 18 can act as both an indicator of cardiometabolic health, and also as a way of improving it. Cardiometabolic diseases include diseases such as Coronary Heart Disease and Type 2 Diabetes. Coronary heart disease caused 4,123 deaths in Hong Kong in 2015, with an average of 11.3 deaths per day. Type 2 Diabetes caused 492 deaths in Hong Kong in 2015, and both of these diseases are in the top 10 causes of death in Hong Kong. Whilst both of these diseases tend to affect people at older ages, potentially lowering the chances of getting it, simply by exercising, would be in everyone's best interests. It is however important to remember that there are other factors affecting the chances of having cardiometabolic diseases, although physical exercise plays an important role.

The links made between brain structure/brain function and physical exercise are likely part of the reason that there is a positive relationship between academic performances and physical exercise. Another explanation is also that exercise periods enable children to switch off from their work, and then come back refreshed and more focused than if they

had stayed working the whole time. Another important point that was brought up by the panel of experts was that physical exercise does not necessarily have to be at the expense of academic success, as time taken to exercise does not come at the cost of scholastic performance in children and youth. This means that there is a way to

find a balance between meeting a child's exercise needs whilst still maintaining high levels of academic success. This is a particular problem in Hong Kong, where over 75% of children do not meet the recommended 60 minutes of daily exercise, with a large number of these children not participating in exercise due to academic commitments. With the right level of organisation, it is possible to balance frequent and beneficial physical exercise periods with schoolwork.

The social benefits from physical exercise can also have positive impacts on children that will carry through into adult life, and can really push them in the workplace. The panel agreed that engaging in regular exercise as a child can positively affect self-esteem, which then leads onto benefits all throughout life. They tend to be happier and value themselves more than children with low self-esteem. Many team sports also teach the values of teamwork and respect, both for oneself and for others.

# commentary

BY HARRY PARSONS

These skills are invaluable in life, and some companies look for active participation in team sports at a young age in their potential job candidates, as this instils core life skills in them that will be invaluable in a professional environment. Physical exercise can also make children more determined and motivated, as well as help in creating friendships with other children their own age.

Overall, the positives associated with physical exercise, whether it is of high intensity or simply a recreational activity, outweigh any potential negatives. The benefits children will receive from participation are varied and will be carried through and continue to positively affect them for the remainder of their lives.





# commentary

BY HUGO WONG

In an already and increasingly academically driven and competitive society such as Hong Kong due to having one of the world's most competitive economies, the importance of high academic achievement is hugely incentivized and encouraged. It has become the norm in Hong Kong for both parents and their children to strive for excellency in this regard, and those that don't are judged and frowned upon. With this academic motivation comes the tendency for students as well as parents to ignore the potential benefits of regular exercise in favor of dedicating time to revision and tutoring in hopes for better grades.

But where does this norm come from? Links and correlations between different parts of the world and their associated average academic performance suggest that culture plays a part in the establishment of this

norm. Chinese culture in particular stresses and praises the importance of hard work and dedication and thus many students put all their focus in academics over the pursuit of other activities such as exercise that would have a better effect on their mental well-being and emotional state.

Another reason that so many students in Hong Kong skip exercise is due to the widespread (perhaps local) belief that exercise has little or no influence on academic performance. This is no surprise: even though research suggests the contrary, a large proportion of research regarding this topic that confirms the positive correlation between grades and exercise has only come from the last few years and there are many people who do not have the interest or time to read articles regarding this among other scientific news. It will take time for such a revelation to become commonly

# commentary

BY HUGO WONG

acknowledged by everyone around the world, especially in Hong Kong where the norm of intense hard work has become deep-seated in Chinese culture and is hard to budge. The emphasis on filial piety and obedience in Chinese culture also contributes to the lack of exercise as many parents that follow the norm of putting in hard work and revision over exercise will also want and urge their children to do the same.

Perhaps the biggest reason as to why many students skip exercise is due to lack of time. Even if students have the energy and passion to participate in sports outside of school, they cannot do so without time. As the workload from schools increases due to pressure from parents, teachers, or from self-imposed demand, it becomes increasingly important to have good time management skills to make room for sports that achieve the benefits of exercise while reducing stress. It is important for students to not stress themselves and to put less emphasis on academics in order to make room for stress-relieving activities, of which exercise is included.

that achieve the benefits of exercise while reducing stress. It is important for students to not stress themselves and to put less emphasis on academics in order to make room for stress-relieving activities, of which exercise is included.

I advise all students reading this to understand that revision time lost due to partaking in physical activities does not necessarily negatively influence grades and can even boost them if done in the right proportions. The Hong Kong government suggests students to do one hour of exercise per day: although this may be too much to handle, I would recommend doing as much as possible, spreading out exercise time to days with more free time instead of putting an exercise requirement on each day.



# DIAGNOSIS OF THE MONTH

## ACNE

By Sarah Page and Audrey Corno

### How bad is your acne?

Check the scale and see where you are compared to other teenagers around the world.

ACCORDING TO THE GLOBAL ASSESSMENT SCALE

1

#### MILD ACNE

Some non-inflammatory lesions are present, a few inflammatory lesions, papules/pustules only

#### SKIN ALMOST CLEAR

Some non-inflammatory lesions present, some non-inflamed papules (papules may be developing and showing colour, although not yet pink-red)

2

#### MODERATE ACNE

non-inflammatory lesions very prominent, with multiple inflammatory lesions, blackheads and whiteheads

3

#### SEVERE ACNE

Many pimples and cysts, potentially painful nodules, cluttered densely on the skin

4

Most people have had their fair share of acne in their life - but has everyone ever truly understood its causes, treatment and how to prevent it?

Acne, scientific name *acne vulgaris*, is the most common chronic skin condition affecting teenagers worldwide. In fact, currently 9.4% of the population suffers from acne, including 85% of people between ages 12-24 in America who have suffered at least minor acne. Acne is a disease that can affect anyone, but is mostly seen in adolescents and young adults. It is more

common in males than females, especially in late teens (roughly 16-20 years old), but it decreases with age after that..

#### How is acne formed?

During puberty, the production of androgen, which is converted to estrogen for females, increases in teenagers. This hormone is responsible for stimulating the sebaceous glands in your skin to produce more sebum (oil). Sebum has antiseptic properties to protect and hydrate the skin and is secreted through a follicle, out of the skin pore.

When glands become overactive, excess sebum forms a plug with keratinocyte skin cells, lining the follicle that has shed off, thus clogging the follicle, called a comedo. The comedo begins as either a whitehead (under the surface of the skin) or blackhead (plug is on the surface of the skin and the sebum oxidises to a yellowish black). Bacteria found on the skin, such as yeast, then infects the blocked pores causing the skin to become red, and swollen as the follicle fills with pus.

**The three main risk factors of acne are diet, environment and stress.**

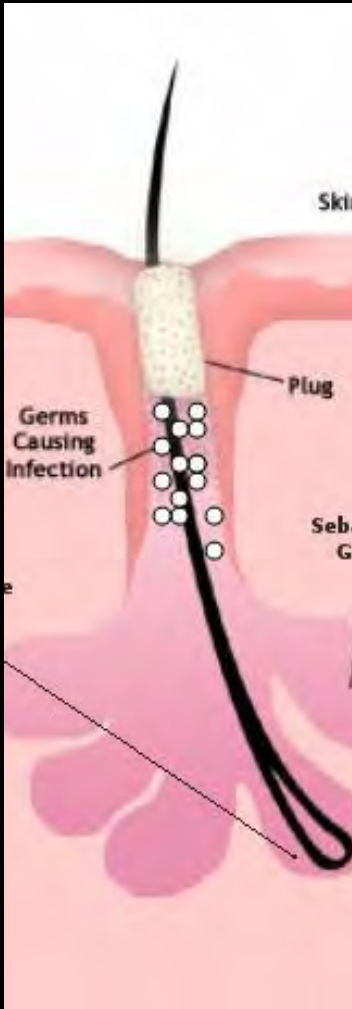
Studies of dietary intervention suggest that there is a positive correlation with acne. Diets with higher dairy intakes and GI (glycaemic index, concentration of glucose) are associated with incidence of acne. Attention chocolate lovers! - chocolate has been shown to cause acne too. But how? A well-supported theory is that certain chemicals in food interfere with the roles of insulin and IGF-1, in the signalling

pathway of acneogenic effects (e.g. sebaceous gland lipogenesis). Other studies illustrate that the indigenous disparate populations of Papua New Guinea and Paraguay, uninfluenced by Western cuisine, are devoid of acne - which is plausible evidence of theories suggesting that diet is an essential factor to acne.

Hot and humid climates are also problematic, because sweat can easily accumulate on the skin, which provides good breeding grounds for bacteria that infect clogged pores. Furthermore, whilst it is widely believed that pollution does not cause acne, there is some truth in the idea that it could be contributing to new spots forming. When constantly exposed to exhaust fumes, debris and smoke, it is no wonder that our skin takes a beating. Impurities in the air can enter the body through breathing and hence the capillaries in the bloodstream, which mix with sebum and worsen acne.







Emotional stress or anxiety can also cause an increase in cortisol and adrenaline release, which can aggravate acne. Other factors include genetics, menstruation, anabolic substances, touching skin with dirty hands, certain skin-care products, etc.

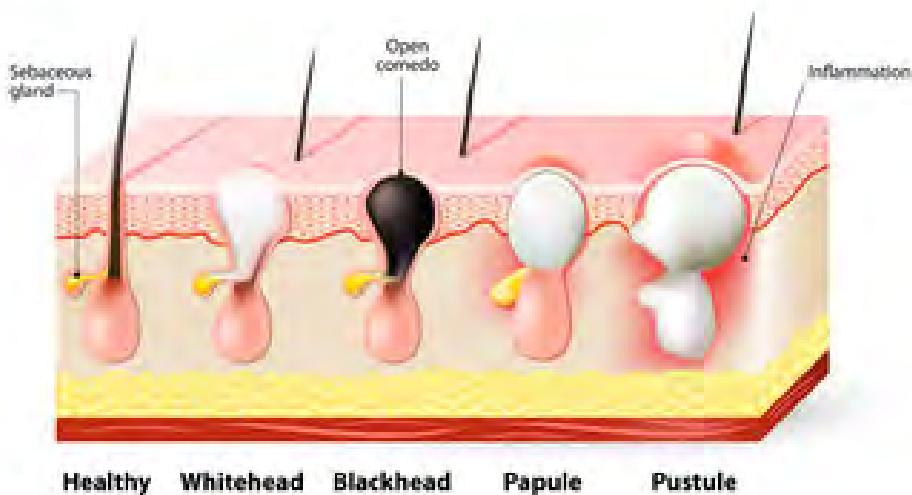
**Acne can also have other physical or psychosocial effects on teenagers.** There is a substantial risk of physical discomfort and physical remainders such as noticeable scars (lumps, darker patches, or dents in the skin due to a lack of connective tissue whilst the wound was healing). It can also be the origin of psychosocial and psychiatric issues as acne can cause high self-consciousness, low self-esteem and negative self-perception,

and feelings of embarrassment. The media's consistent idolisation of flawless, unblemished skin can sometimes result in depression, social anxiety (fear of peer judgement, bullying) or even suicidal ideation. Financial issues may also arise from treating acne, which has created an industry that earns more than \$3 billion annually.

**The best way to deal with acne is to prevent it from being there in the first place.** Thorough, regular skincare habits like washing with soap that has a pH similar to the skin's 5.5 and moisturising using oil-in-water emulsions or hydrogels once daily is recommended. Washing hands frequently and not touching your face is crucial, but so is washing your hair, because sebum and dead skin cells can easily accumulate in it. If the acne is already there, the best thing you can do is to NOT squeeze or pick the pimples in order to decrease scarring.

Each individual is unique, so the right treatment depends on the severity of your acne. Your skin type, how susceptible you are to scarring, other health problems, the success of previous acne treatments (if any) and how you respond, in terms of side effects, could also affect response to treatment.

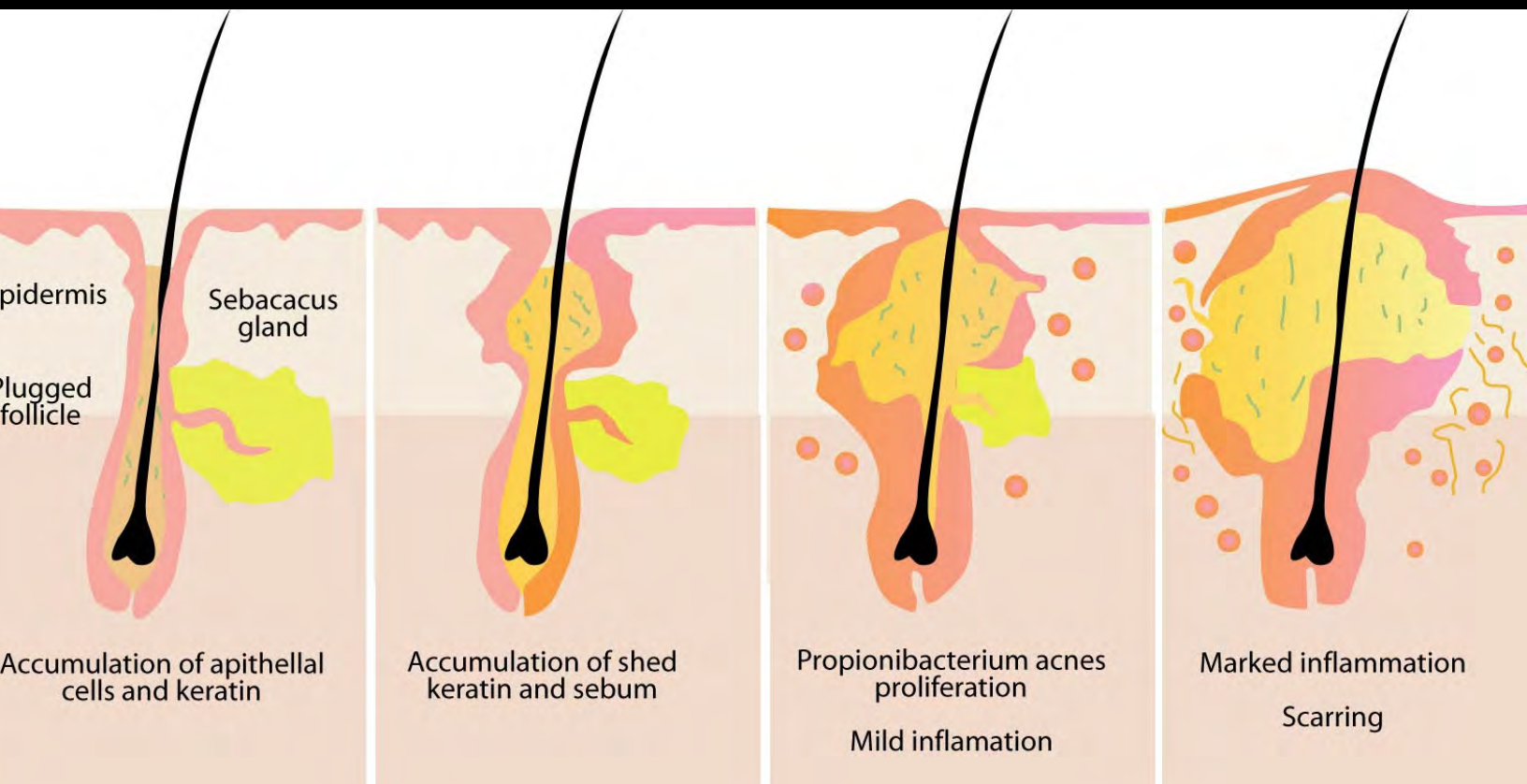
## TYPES OF ACNE PIMPLES



**The two main types of dermatological treatments are topical treatments and oral drug treatments.** Topical treatment is usually in the form of a cream which is applied to the affected area of the skin. Benzoyl peroxide is an antibiotic which is often used as it slows the production of sebum. An alternative is salicylic acid, which helps remove dead skin cells from blocked pores and reduces inflammation and swelling. Oral drug treatments include antibiotics, contraceptives and retinoids. Antibiotics only affect inflammatory acne and reduces bacteria (hence the name). Female hormonal contraceptives containing ethinyl estradiol improve acne, but depending on body chemistry, can also have side effects such as headaches, nausea and deep vein

thrombosis (increased chance of blood clots). Retinoids can also be used to lower the production of sebum and show visible improvements of acne in weeks, but have side effects such as extremely dry skin, achy joints, mood disorders and harmful effects on foetuses.

Acne is nothing to be ashamed of. It is a natural part of adolescence that a lot of people go through. It isn't worth putting oneself through painful, stinging creams or endless makeup to make it go away. In severe cases, a trip to the dermatologist should do. Once the hormones settle and puberty is over with, acne usually takes care of itself. Time does heal everything.



# Sleep Study

By Hadrian Wong

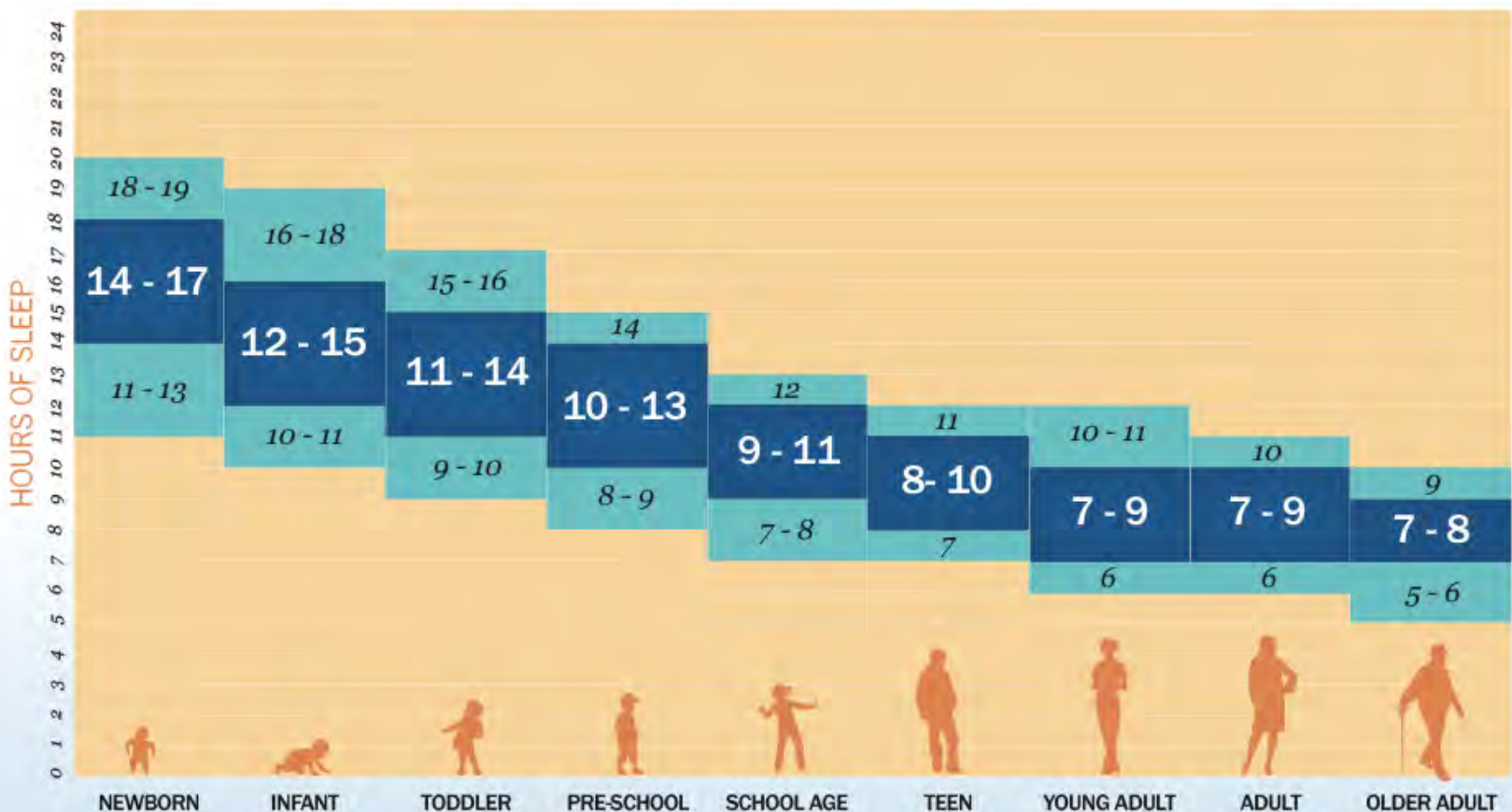
Sleep plays an important part in a growing teen, however with the pressure of exams and trying to do well, many teens either neglect their sleep to study or can not fall asleep due to stress. Many teenagers end up sleeping very late and with very few hours of quality sleep. Although the recommended number of hours of sleep is 8.5 for adolescents, the question is: Why is it so important to get enough quality sleep? Sleep mainly affects three areas of an adolescent: Mental Wellbeing, Physical Health and Daytime Performance.

### Mental Wellbeing:

Sleep is essential to the healthy development of the brain. When sleeping, the brain forms new pathways to help with learning and remembering information. In this way, sleep helps you be more focused, make well-judged decisions and be more creative.

The brain's pre-frontal cortex, which is responsible for decision making and emotional regulation, is especially sensitive to lack of quality sleep. It undergoes significant maturation and is one of the last areas in the brain to develop.

## SLEEP DURATION RECOMMENDATIONS



The ability to control emotions is also related to sleep. With sleep deficiency, you may feel more angry, have mood swings and lack motivation. This may potentially lead to problems getting along with others, feeling more stressed and have problems paying attention. It may go as far as to have greater risks of depression, anxiety and suicidal thoughts.

### Physical Health:

It is obvious that teens are growing and developing at an immense rate. This is why sleeping is so important to their growth. It is during sleep that growth hormones such as testosterone and cortisol are produced. Without regular production of these hormones during sleep, a person's growth may in fact be stunted in the long term.

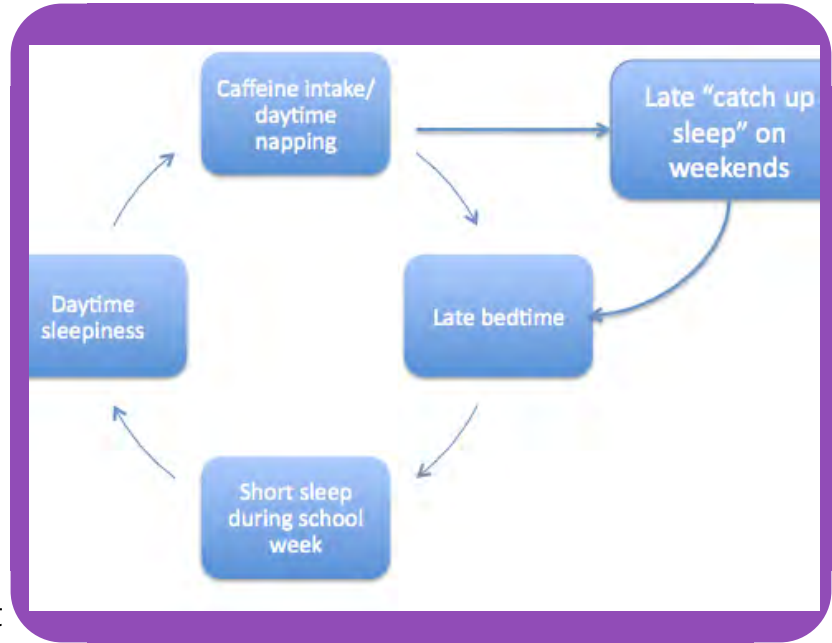
Sleep is involved in the healing and repair of the heart and blood vessels. Studies have shown that there is a correlation between lack of sleep and increase in heart disease, high blood pressure, diabetes and stroke. It is therefore important for teenagers to maintain a good sleeping habit to prevent such cardiovascular diseases from developing in adulthood.

The immune system relies on good sleep to stay strong and healthy. It is important to have a strong immune system for the body to fight off against harmful pathogens.

### Daytime Performance:

Slower reaction time and the ability to focus is obvious consequences of sleep deficiency. Getting the right amounts of sleep is essential in being productive in school. Without it, it is possible to take longer to finish tasks and make more mistakes.

In addition, research has shown that increasing the amount of sleep per night in an individual results in significant improvements in an athlete's ability to perform. This is extremely important as many teenagers participate in sports, whether if be competitively or leisurely. Those who are aiming to perform well should therefore ensure they get much more sleep.



## FIS Sleep Study Commentary

When looking at Fig. 1 of the sleep study on 45 FIS students in the international stream, some students have adequate sleep every night as 48.9% with at least 8 hours of sleep on a school night. However, the majority of students are sleeping under the recommended hours of sleep, with 51.1% sleeping less than 8 hours a night.

Approximately how many hours of sleep do you get on a school night?  
45 responses

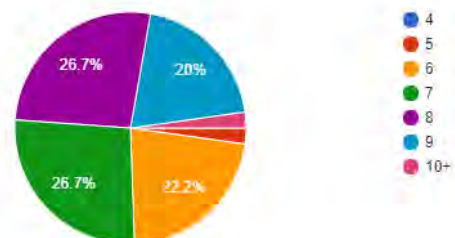


Fig 1

Graph showing average hours of sleep in a school night as students age

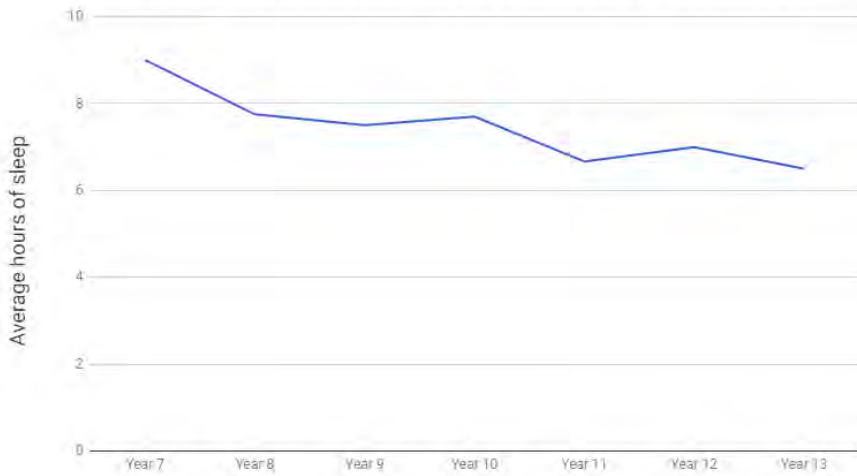


Fig 2

Another trend has been identified in Fig. 2 where with age, FIS students' average sleeping hours decrease. This does not seem to be a surprise as senior students would typically have a larger workload and would also have to deal with the pressure of exams. When comparing this data to the data of the National Sleep Foundation, they have reported that less than 15% of teenagers get at least 8 hours of sleep each night.

On the other hand, when looking at Fig. 3, 91.1% of students have at least 8 hours of sleep when the weekend arrives. Although this may seem to be an optimal result but when looking and comparing both Fig. 4 and Fig. 5, the average bedtime is shifted to a later time. In a study done by the National Longitudinal Study of Adolescent Health, they have noted that there is a link between later bedtimes and an increase in BMI, with weight gain occurring over 5 years. This clearly shows that although our students are getting the optimal amounts of sleep, their bedtimes during the weekends are still not favourable.

Approximately how many hours of sleep do you get on a weekend?  
45 responses

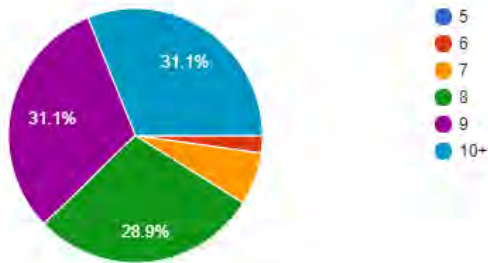


Fig 3

In recent years, another problem contributing to sleep deficiency in not only adolescents but in adults as well is the exposure of blue light from digital devices. From the study, it is seen in Fig. 6 a large majority of students use their digital devices right before their bedtime. Light from digital devices have a higher concentration of blue light than natural light.

At what time would you go to sleep on a school night?  
45 responses

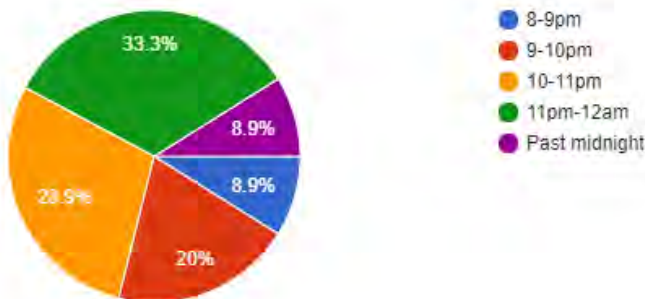


Fig 4

This short wavelength blue light however, affects the levels of the sleep-inducing hormone melatonin. This eventually leads to an individual taking longer to fall asleep and still feeling sleepy after getting up.

In Fig. 7, with only 20% of students taking naps during the day (including myself!), it shows that the majority of the students are very active during the day. Naps in the long term are partially a bad indication as Yue Leng, a University of Cambridge researcher has identified links between naps to higher mortality rates. She has also added that 'daytime napping is an early indicator of underlying ill health'. Another issue with taking too many naps is that an individual may find it harder to fall asleep at night and wake up in the morning, overall changing their sleep pattern.

Naps however aren't all entirely bad. A nap, daytime sleeping ranging from 15 to 90 minutes, can improve brain functions including memory, focus and creativity. At the same time, naps can also lower stress and make you feel refreshed. It could also be said that they lower rates of cardiovascular disease and inflammation.

When analysing Fig. 8, most FIS students would choose to calm themselves and try to fall asleep. At the same time, drinking a glass of water/milk is also a popular option as well as going on their digital device.

Luckily, only one person has made the choice of counting sheep. According to a Student BMJ article, counting sheep is a 'useless way of dropping off to sleep'. They reported that Oxford University researchers have found that insomniac people fell asleep more than 20 minutes before they normally did when they thought of relaxing images whereas those who used counting sheep or similar techniques were found to fall asleep even later than they normally would. This is possibly due to the fact that relaxing images being can help you forget your nerves and worries that keep you awake.

At what time would you go to sleep during the weekends?

45 responses

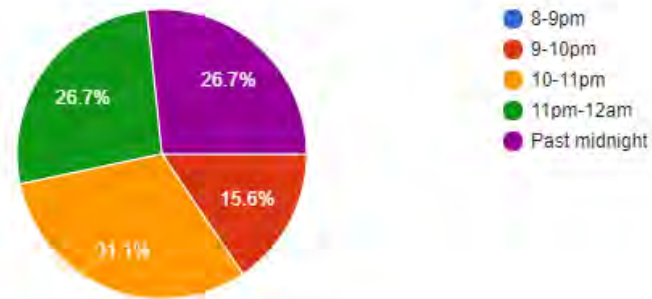


Fig 5

Do you use a digital device right before your sleep? (15 min)

45 responses

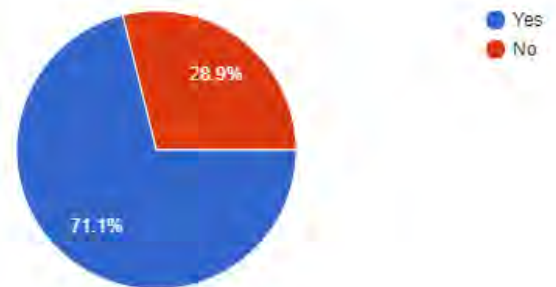


Fig 6

Do you take naps during the day?

45 responses

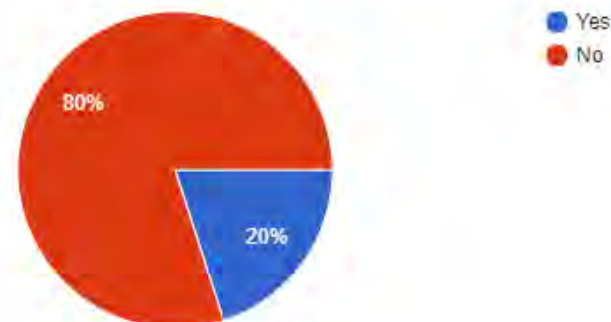


Fig 7

If you cannot fall asleep, what would you do?

45 responses

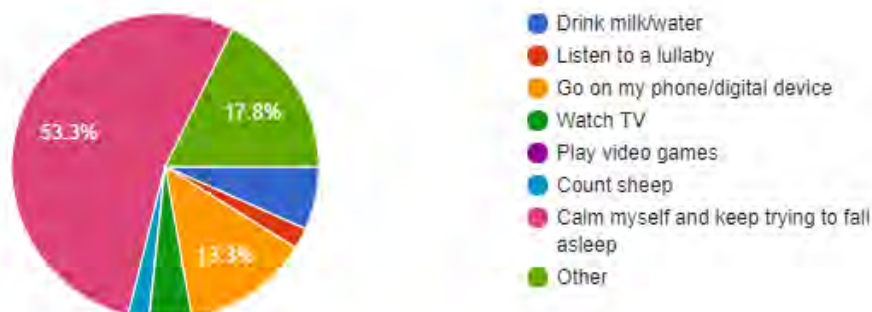


Fig 8

## Advice to Maximise Sleep

### 1. Use a software that adjusts colour temperature of your electronic device at night:

For Windows: f.lux

For Apple Mac OS and iOS: Night Shift

For Android: Twilight

With the issue that many students are using their digital devices before sleep, it is highly possible this may be a factor into sleeping less. One option to combat the issue is to have colour temperature adjusting softwares to reduce the amount of blue light emitted by the screen, hence decreasing blue light's effect on melatonin production during sleep.

### 2. Create a suitable sleeping environment

Research has shown that the best sleeping environment is in a dark, quiet and cool room. This means that it is essential to close your blinds or curtains before sleep, make sure the room is cool by opening the window or turning down the A/C, as well as using white noise apps to block out a noisy environment.

### 3. Set a regular bedtime

Although this may be obvious, it is very important to have a regular time for bed. This is because having scheduled bedtime each night signals the body to develop such sleep patterns. The body can also benefit from waking up at the same time every day to establish such pattern. It is also important to try and have the same bedtime and wake time during the weekends, as the conducted survey has demonstrated that many students have different bedtimes on weekends. Although there may be times that such bedtimes cannot be achieved on a regular basis, don't let that throw you off! Always try and maintain it by having good time management and staying organised.

### 4. Be active during the day

Physical activity can make people feel more relaxed, decrease stress, and of course make you feel much more tired. Try and get at least 60 minutes of exercise a day and in this way you may fall asleep much more easier.



# What to Consider When Applying to Medical School in the UK

BY AARMANN MOHAN

The UK has 33 medical schools and narrowing them down to a choice of four for your university applications through the UCAS Portal does require major thought. There are various aspects that need to be considered prior to applying to your chosen universities.

## Medical Work Experience

Additional Information:

<https://www.thestudentroom.co.uk/jobs/work-experience/medicine-work-experience>

First thing is first, a year prior to applying would be a great time to gain some work experience. These experiences do not necessarily need to be hardcore work in a surgery room. This may include: volunteering in an old age home, teaching young children, helping out in a daycare centre, shadowing a doctor in a clinic, etc.

Universities do acknowledge that not everyone can gain medical work experience in a hospital and this will not put you at any advantage when it comes to applying. A typical work experience lasts approximately two weeks, a week minimum.

## Entry Requirements

Additional Information:

<https://www.themedicportal.com/application-guide/choosing-a-medical-school/>

<https://www.themedicportal.com/application-guide/ukcat/>

<https://www.themedicportal.com/application-guide/bmat/>

It is important to check up on the university's entry requirements in order for you to prepare for them. Education for Medicine School in the UK is required until IB/ A-Levels and IGCSE/GCSE/O-Levels/MYP is required.

Most medical schools require certain subjects to be taken at IB level, these subjects include: higher level chemistry is a must and with the choice of higher level biology (highly recommended), higher level physics or higher level mathematics (i.e. an additional science at higher level complementing chemistry). Top league universities require usually a 776, in your three chosen higher level subjects in the IB.





When it comes to the IGCSE CIE examinations, most universities require ALL chosen subjects to be a grade C and above for entrance.

Chemistry and biology at IGCSE level is highly recommended but not necessary as they can be picked up at IB level again.

Complementing the above examinations, most medical universities require the UKCAT examination. The UKCAT is designed to assess different skills required by doctors – including problem-solving, communication, numerical skills, spatial awareness, integrity, empathy and teamwork skills. You will get your UKCAT results before the application process, so that should be a major consideration. Meanwhile, minority universities accept the BMAT examination. This is an aptitude test required by a handful of medical, dental and veterinary schools. Your knowledge of IGCSE biology, chemistry and physics will surely come handy in this examination, however if you have not taken biology or physics at IGCSE level, the scientific questions asked on these subjects are simple and can be learnt at the time.

### Acceptance Rates + Fees

Universities in the UK, tend to have a low acceptance rate for international students.

There is a quota of international students taken in each year to specific universities (each university being unique). There are certain universities designed with degrees designed for international students, e.g: UCLAN and Aston. Make sure to check upon the set quota for that year prior to applying!

Be aware that holding an EU passport does not guarantee EU fees, and that overseas fees are extremely expensive. You need to be eligible to certain requirements and each university is unique to their requirement to eligibility. Make sure to check this prior to applying as well.



## Interview Styles

Additional Information:

<https://multipleminiinterview.com/>

There are two types of interview are used: multiple mini interviews (MMI) and panel interviews. MMIs, which are increasingly being used across the UK. MMI interviews consists of various stations where you are asked questions about why you think you would make a good doctor or what work experience you've done, as well as stations where you may have to take part in a role play scenario or solve a problem. Panel interviews are usually more straightforward and consist of a panel of two to three medical school staff who will ask you questions. Some common interview questions include: 'Why medicine?', 'Why a doctor and not a nurse practitioner?'

## Personal Statements

Additional Information:

<https://www.ucas.com/ucas/undergraduate/getting-started/when-apply/how-write-ucas-undergraduate-personal-statement>

This is a short write up which tells the admission tutors information about yourself and your experiences to see if you are a

suitable candidate to be invited for the interviews. A well written and engaging personal statement will gain the attention of admissions tutors, and they will want to verify what you have written and get you to elaborate at interview stage. To give yourself the best chance of getting an interview, tailor your statement to match the criteria asked for by the medical school that you apply to by looking at its values and the person specification for applicants.

## Course Types

Additional Information:

<https://www.bma.org.uk/advice/career/studying-medicine/becoming-a-doctor/course-types>

In the UK there are three styles of courses in which universities accept, these include: traditional courses, integrated courses, problem based learning (PBL) courses and/or case based learning (CBL).



	Traditional Courses	Integrated Courses	Problem Based Learning (PBL)	Case Based Learning (CBL)
# of years (pre-clinical)	2-3	5-6	2-3	5-6
# of years (clinical)	3		3	
<u>Style (pre-clinical)</u>	<ul style="list-style-type: none"> <li>- Lectures</li> <li>- Individual learning</li> <li>- Science facts</li> <li>- More essay based</li> </ul>	<ul style="list-style-type: none"> <li>- Lectures</li> <li>- Individual learning</li> <li>- Science facts</li> <li>- Ward rounds + GP placements</li> </ul>	<ul style="list-style-type: none"> <li>- Case studies</li> <li>- Group (5-15 individuals)/ peer learning</li> <li>- Science facts</li> <li>- Less teacher involvement</li> <li>- Independent learning</li> <li>- Student led</li> <li>- Subjective learning objectives</li> <li>- Guided by facilitator</li> <li>- Lectures may be included</li> </ul>	<ul style="list-style-type: none"> <li>- Case studies</li> <li>- Group (5-15 individuals)/ peer learning</li> <li>- Science facts</li> <li>- Less teacher involvement</li> <li>- Independent learning</li> <li>- Student led</li> <li>- Subjective learning objectives</li> <li>- Guided by facilitator</li> <li>- Lectures may be included</li> </ul>
Style (clinical)	Ward rounds or GP placements		Ward rounds or GP placements	Ward rounds or GP placements

\* Traditional and integrated courses are similar, however, integrated courses include ward rounds and GP placements right from the beginning of university entrance.

\* PBL and CBL courses are similar, however, CBL include ward rounds and GP placements right from the beginning of university entrance.

### Subjectivity

Make sure you are aware as to where the university is based. Are you more of a city based or countryside person? In addition to simply just location, would you want are more urbanised university or a smaller one? These factors play a role as to how content you are with life in your new university campus, which in turn plays a role in how successful you are academically in your studies and future examinations.

Each medical school has pros and cons, but wherever you go you will be a doctor by the time you graduate. Consider which course will best support you in your studies and where you think you will be happiest for the next five or six years.

# CAMBRIDGE IMMERSE MEDICINE COURSE

BY CLOE CHEUNG AND ESMÉ SEAVER

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Input these codes to receive £200 off the enrollment fee. These codes can be redeemed on the online registration form.

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## Overview

Prior to the course, we had a lot of preparatory work which consisted of reading 2 books called Life's Vital Link: The Astonishing Role of the Placenta by Y.W Loke and How We Live and Why We Die by Lewis Wolpert. There was also a short textbook that was sent online for us to go through before starting the course. The former book was a bit too difficult to understand at an IGCSE level - especially with difficult biological jargon, but the latter was simple enough to understand..

After the first morning class, we would have 1 hour of lunch, where we were free to go to any restaurant in Cambridge. There is a huge variety of restaurants in Cambridge, and we would definitely recommend a vegetarian restaurant called the Rainbow Café as well as Cambridge Crêpes. After lunch, we would resume our classes. Afterwards, there would usually be a choice of afternoon activities to choose from. There was a huge range of them to accommodate for everyone, such as sports





activities (e.g. kayaking, punting, croquet, etc.) or visits to museums and botanical gardens if you were feeling less active. Sometimes, we would be invited to seminars and workshops that were aimed at university applications. For example they held informative seminars on the LNAT and the BMAT/UKCAT. They also had a public speaking/debating workshop. After these activities, we would have some free time and then dinner. The food at the campus was quite good and could accommodate for any dietary restrictions. After dinner, you had the choice to take part in the evening activity e.g. quiz night, escape room, ghost tours, etc. or go to homework club. Any time during the day you could schedule meetings with mentors (who are current students studying at Cambridge) in order to discuss your personal statement, have a mock interview or simply ask them questions.

During the course, there would be at least one assignment given to be completed by some time during the final week. For our medicine course, we had to write a 2000-word essay and give a quick presentation on a medical discovery that we found important. There was plenty of free time to work on the essay as well as opportunities to attend homework club so the workload was manageable. Also, listening to each other's presentations was quite interesting, especially since there was a wide range of topics, such as organ transplants, vaccinations, etc. We wrote our essays on anaesthesia (Cloe) and HeLa cells (Esme).

During the weekend, we visited Oxford and London. In Oxford, we were given a tour of the town, as well as visit a number of colleges of Oxford University. After the tour, we were given an afternoon of free time, so we wandered around Oxford to do some shopping. We then split up for free time.

We even got to visit Blackwell's, a bookstore that holds the world record for a single room with the largest number of books inside it. To end the day, we had a formal 3 course dinner at hall in one of the colleges of Oxford University. In London, we had the choice to go to the British Museum, the National Gallery or have a bus tour. We chose the British Museum, which was pretty interesting. Afterwards, we had some free time to get lunch and do some shopping. Finally, we rode the London Eye and made our way back to Cambridge.

## *What material we covered*

We had a huge range of topics (1 topic a day) so that we got a good taster of what it is like to study Medicine at Cambridge. We covered topics such as epigenetics, regenerative medicine, reproductive medicine, genomic imprinting and much more! We had experienced tutors

that would come and lecture us on the topic of the day, as well as occasional excursions to small museums and labs. For example, we got the chance to visit a museum of historical, medicinal and scientific equipment. We also got to visit a lab where placentas of different organisms were displayed.

## *Review*

For medicine in particular, there were two separate classes with different teachers (due to the large number of participants enrolling into the medicine course) therefore the lessons were run very differently. The one we were placed in had lecture-style lessons. However the other class was more practical-based, as they would get the chance to dissect different organs. For example, they dissected kidneys and sheep brains. Both classes had their advantages. For example, our class covered more information in depth, while the other class had more experiments.





You might be able to request to be put in one class however otherwise you wouldn't have control over which class you are put in.

This course was a very informative course of what it would be like to study medicine or biomedical sciences at Cambridge and at university in general. Our tutors were very experienced and knowledgeable. Both were researchers and therefore were able to give us very modern and updated information about each topic, especially in the area of genetics. They were patient and explained the knowledge in much detail, so we really learned quite a lot during the 2 weeks. The classes were also interactive, for example, we had a small debate on the future of medicine, which was quite fun. However, we would recommend completing at least some of the preparatory material as lessons would go quite in depth very quickly for each topic.

Therefore, in order to get the most out of it, it is preferable to have a pretty solid foundation in biology but it is not required.

Overall, Cambridge Immerse was a wonderful experience, not only in terms of what we learnt, but also the fact that we had the chance to meet and connect with people all over the world, building strong friendships. The campus and accommodation are also wonderful. It is quite an academic course, but there was a good balance between learning and fun activities to do, so you wouldn't feel as if you were stuck in school for a whole day. But don't worry if you aren't interested in Medicine because Cambridge Immerse offers a huge variety of subjects to enroll in, e.g. Law and International Relations. We really enjoyed this course and we recommend it to everyone.

(Just a reminder as well this course does **not** count as work experience.)

# Final Thoughts

## Esmé's final thoughts:

In hindsight, I would recommend doing this course the summer after Y12. In this way, you can take full advantage of the opportunity to have mock interviews and have mentors (who study at Cambridge) personally review your personal statement. This will be especially useful if you are planning to apply to Cambridge as these mentors know exactly what they are looking for. However, we both found this course very useful despite not having started IB yet.

## Cloe's final thoughts:

Cambridge Immerse allowed me to meet people from all over the world, so I really got to connect with different people and make a lot of strong friendships. Since I have such a small social circle in Hong Kong, going to this course gave me a huge opportunity to expand my circle and get me out of my comfort zone by interacting with both teenagers and adults. Just by talking with others my age (or even a bit older!) allowed me to see and understand different perspectives on many topics. Cambridge Immerse really gave me the opportunity to grow as a person.





