Review Article **ISSN: 2349 – 7114**

Asian Journal of Research in Pharmaceutical Sciences and Biotechnology

Journal home page: www.ajrpsb.com

https://doi.org/10.36673/AJRPSB.2021.v09.i03.A13

WHAT'S THE BEST TIME TO TAKE MEDICINE

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ABSTRACT

The purpose of this review is that while millions of us take medicine daily but only few of us pay attention to the time of day we take. Taking some medicine at specific time of the day can help to work better. In this review we take common health problem and important of time factor that affect its efficiency.

KEYWORDS

Medicine, Health, Time, Health problem and Efficiency.

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INTRODUCTION

"There is a time for everything and a season for every activity under the haven" A time to born, a time to die; A time to plant, a time to uproot; A time to teardown, a time to built; A time to weep, a time to laugh; A time to scatter stone, a time to gather stone; A time to search, time to give up; A time to keep, a time to throw away; A time to tear, a time to mend; A time to silent, a time to speak; A time for love, a time for hate; A time for war, a time for peace.

The quoted passage doesn't follow simply to born and death, weeping and giggling, scatter stone and accumulating them, it's far applied to our body to. Our frame has its very own set of season; a lot of them comply with the turn of a day.

At the same time as millions of us taking drug treatments day by day most effective few pay attention to the time of the day we take. It is a great deal extra essential for us, to pay more attention on the time of day we take medicinal drug then what we think. Taking a few medicine at a specific time of the day can help them to work better.

Here are some common health problem and their medication showing the importance of the time factor to take medicine.

CARDIAC MEDICATION

It has been known for some time that heart attacks and strokes are 3 time more likely to occur in morning than any other time of the day, till now it's now not been clean why? sudden cardiac demise most often sticks in morning between 6AM - 10 AM accompanied by small peak in the past due afternoon. Scientist have long trust that there is a link among unexpected cardiac death, main motive of heart attack and people's circadian rhythm, the 24 hour body clock within the brain that regulate sleep cycle.

But now a studies by Case Western Reserve university school of drugs Ohio US. In that they become aware of a protein called KLF15 that play a important function within the regulation of heart electrical activity.

The level of protein changes during the day, like clockwork to allow substance to go into and leave cell inside the heart in an effort to keep regular heart beat. The researcher discovered the extent of theKLF15 protein upward push and fall in a 24 hour cycle. The coronary heart electric impulse slowest at 6Am to midday. Because the duration among impulses sluggish down, this makes the coronary heart much more likely to exit of rhythm, to brief circuit or for electric powered typhoon to occur says Dr Mukesh Jain who led the research, which boom the hazard of heart assault[1,2].

This means that the best time to take heart medicines is the first thing in the morning.

Prof. Russell Foster a circadian rhythm specialist on the University of Oxford said this realisation need to be one of the most important innovations in medicinal drug in the last 20 yr. He additionally says that "clearly, if i was taking antistroke remedy I realize at what time of the day I did take it, it must be brought earlier than you properly wake up; you need to lie there lightly and take it then rise up.

OSTEOPOROSES

Osteoporosis is a progressive bone disease is characterized by means of a lower in bone and mass density which can lead to an increase risk of fracture. Most common prescribe drug for osteoporosis are BISPHOSPHONATES which prevent loss of bone. Bisphosphonates are either take once a day, once a week [on the same day of week] or once a month [on the same day of month] depend on once prescribe.

The most important thing about Bisphosphonates that they are poorly absorbed, does not dissolve well especially in presence of oil and fat. If taken with food or drink other than water only small amount absorbs.

So one should take medicine first thing in the morning with a glass full of water in empty stomach, and must wait minimum 30 minute to 2 hour before eating and drinking other then water.

If you eat or drink anything other than water or take some other medicaments, it's imply you won't get any gain from it and it may be a total waste.

The tablet have to fascinated with complete glass of water and one must sit down or stand, DONOT lie down for 30 min after taking tablet, it's mean you won't get any benefit from it and it could be a total waste.

The tablet must taken with full glass of water and one should sit or stand, DONOT lie down for 30 min after taking tablet, this may help to prevent irritation of oesophagus [a tube that take food to your stomach].

Many osteoporosis patients have to take calcium and Vit. D also, but this can also disturb absorption so patient should wait at least 2 hour after taking Bisphosphonate[3,4].

HIGH BLOOD PRESSURE

High blood pleasure is a serious problem which may lead to coronary heart disease, heart failure, stroke, and kidney disease. A new research suggests that blood pressure medicine taken at night might improve blood pressure and prevent heart attack and stroke then taking same medicine during day.

In a study performed in Spain highlighted the reducing of blood pressure at night.

In healthy people blood pressure dips at night between 10-20%, and reaches to its lowest point of the day between midnight 3Am to 4Am, but in people with high blood pressure often have little or no decrease at night. The researchers said that those whose blood pressure doesn't falls as it should are more likely to suffer from heart attack and stroke. In the 5 year study in Spain men and women with high blood pressure who take at least one of their blood pressure medicines at night has 33% less risk of angina stroke and heart attack then those who took their entire blood pressure tablet in morning.

The study confirms that sleeping time blood pressure as the most relevant predictor of cardiovascular risk. Researcher Ramon Harmida of university if Vigo says "Sleeping time blood pleasure best reduce when tablet taken at bed time"[5-12].

If you are taking one pill ask your doctor weather taking pill at night is better for you or not. If you are taking more than one pill take at least one of them at night before bed.

However those who take their medicine in morning should NOT begintaking them at night on your own, you must speak to your doctor first. As there is a risk of nocturnal Hypotension [abnormally low blood pressure] which could increase risk of stroke.

If your doctor prescribe tablet in morning there might be some specific reason why your doctor prefers you to take medicine in morning.

ARTHRITIS

Arthritis is a form of a joint disorder that involves inflammation of one or more joints.

In Osteo-arthritis patient are likely to find their joint pain worst in the afternoon, according to Texas Tech. University study. The researchers concluded that the optimal time for taking non - steroidal - anti - inflammatory drug such as ibuprofen would be around noon to mid afternoon, so that it takes effect as symptoms begins to build up.

And for rheumatoid arthritis patient generally experience greatest pain in morning so taking painkiller just after their meal in night may be most effective way to prevent pain developing overnight[13-17].

CHOLESTEROL LOWERING MEDICATION

It is now recommended that Cholesterol Lowering Medicine should be taken at bed time instead of taking in the morning. According to research in University of Sunderland, one of the most prescribe statins i.e. Simvastatin, switch from evening to morning there is a significant increase in bad LDL cholesterol[18-20].

In Another research publish in 2008 in the international journal of clinical practice revealed that another statins atrovastatin, taking it in the evening is better than taking it in the morning - it was associated with fewer heart attack, blockage of arteries as well as greater improvement to good cholesterol and better blood vessel function.

It is believe that this is because most cholesterol is produce at night while we are not eating.

GASTROESOPHAGEAL REFLUX DISEASE GERD

General advice to take PPIs [Proton Pump Inhibitors, drug that suppress acid production] 30 minute before first meal or you can say first thing in the morning. But according to a study in the University of Kansas, Drug was more effective against acid reflux when taken in evening. More than 70% of patient with gastro-oesophageal reflux disease who took commonly prescribe drug Rabeprazole, in the afternoon or evening found their symptoms were eased, compared with 42% who took in the morning[21-25].

They suggested this could be because the drug will act throughout the night, when heartburn exacerbated by lying down. They concluded that

before evening meal is the preferred time to take their medicine particularly for those who suffer at night.

HYPOTHYROIDISM OR UNDERACTIVE THYROID

Now a day's many people suffer from Underactive thyroid or Hypothyroidism and it is most common in women.

The thyroid medicine contains levothyroxine, a synthetic version of thyroid hormone T_4. The T_4 need to be first converted to the active form of thyroid hormone T_3 for it to be effective. This takes a long time to occur inside the body.

Traditionally doctor suggest to take medicine in morning but a recent Dutch studies have found that taking medication at bedtime rather than in morning result in higher thyroid hormone concentration. The researchers suggest that as the bowel is slower at night it take longer for levothyroxine tablet to move through the intestinal system. This result in longer exposure to the intestinal wall and so better absorption of the medication. It was also suggested to take thyroid medication consistently at the same time each day[26,27,22,28].

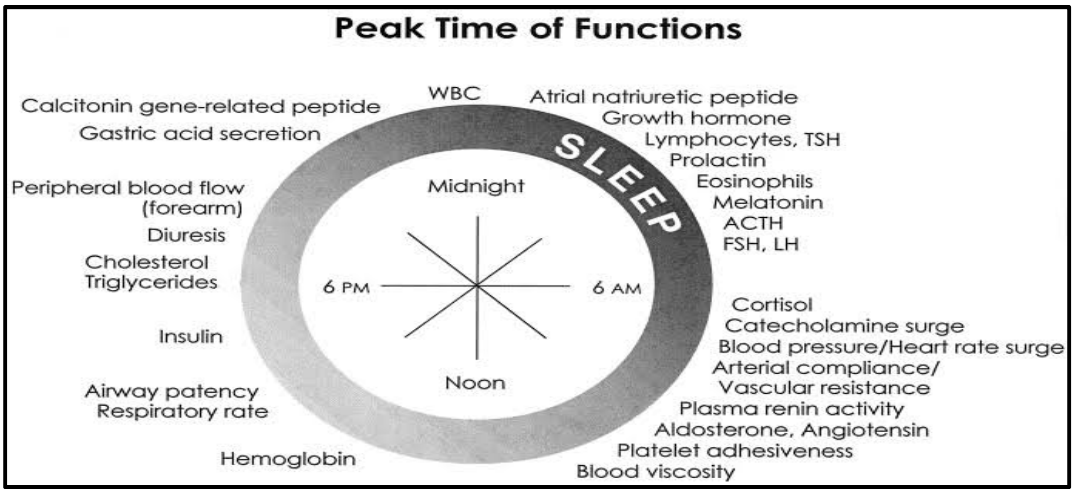

Figure No.1: Body clock

Figure No.2: Cardiac Rhythm

CONCLUSION

In studies on the biological clock, it was emphasized that there are internal and external factors affecting the physical and psychological life of man. They divided the activities of the human body, organs, and hormones into certain time zones "daily". They made this distinction over 24 hours. In these studies, on the biological clock, it was emphasized that the most efficient clock related to human health is in a single time frame per day. However, life consists of day and night. There are cells that workday and night. For example, the `pineal body works at midnight. There are two different times in the day and night period and that the biological time containing the most suitable time for treatments exists in these two time periods. These are some common health problem and their medications and showing that if prescribed drugs are taken at a specific time of day can help them to work better but don't start doing this by your own, Ask your doctor first.

ACKNOWLEDGMENT

The authors wish to express their sincere gratitude to Department of Pharmacy, Kukreja Institute of Pharmaceutical Sciences, Jhajra, Dehradun, Uttarakhand, India for providing necessary facilities to carry out this review work.

CONFLICT OF INTEREST

We declare that we have no conflict of interest.

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Please cite this article in press as: Parth Verma *et al*. What's the best time to take medicine, *Asian Journal of Research in Pharmaceutical Sciences and Biotechnology*, 9(3), 2021, 112-118.