

01



**DRUGS DON'T WORK
IN PATIENTS WHO DON'T TAKE THEM.**

**HAVE A SEIZURE
AFTER MISSING
A DOSE OF
MEDICATION.**



MISSED DOSES

- More often seizures
- Breakthrough seizures
- Status epilepticus
- Other problems: Falls, Injury

WHAT SHOULD DO?



1 DAILY

- within 12 hours - take it as soon as you remember.
- more than 12 hours - leave out it and take the next dose as normal.

2 TIMES A DAY

- within 8 hours - take it as soon as you remember.
- more than 8 hours - leave it and take the next dose as normal.

3-4 TIMES A DAY

- within 2 hours - take it as soon as you remember.
- more than 2 hours - leave it and take the next dose as normal.

Dr. Sattawat Wongwongjunt, MD Division of Neurology,
Department of Medicine, Faculty of Medicine,
Siriraj Hospital, Mahidol University

Reference: 1. Ranjani Marunoth, Keith L. Davis,
et al. *Epilepsy & Behavior*. 2009;14:372-378; 2. Ramon Edmundo DB,
Valerie Rundle-Gonzalez. *Epilepsy & Behavior*. 2012;23:437-441.
3. Derek Bauer, Mark Quigg, et al. *CONTINUUM (MINNEAP MINN)*.
2019;25(2, EPILEPSY):343-361.

***** - Never take 2 doses at the same time. Never take an extra dose to make up for a forgotten one. Taking a larger dose than normal could cause side effects.
- Always take medicine at the same time each day, best fitted to your daily routine.

02



**DRUGS DON'T WORK
IN PATIENTS WHO DON'T TAKE THEM.**

AED NONADHERENCE WAS ASSOCIATED WITH SIGNIFICANT



HOSPITALISATIONS

01

IRR = 1.39
(Incident Rate Ratio)



INPATIENT DAYS

02

IRR = 1.76
(Incident Rate Ratio)



EMERGENCY VISITS

03

IRR = 1.19
(Incident Rate Ratio)

Dr. Sattawat Wongwongjunt, MD Division of Neurology,
Department of Medicine, Faculty of Medicine,
Siriraj Hospital, Mahidol University

Reference: I. R. Edward Faught, Jennifer R. Weiner,
et al. *Epilepsia*. 2009;50(3):501-509.



- Nonadherence to AEDs appears to be associated with serious outcomes, as evidenced by increased utilization and costs of inpatient and emergency services.



**DRUGS DON'T WORK
IN PATIENTS WHO DON'T TAKE THEM.**

RECOMMENDATIONS FOR IMPROVING ADHERENCE: AED REGIMEN

1

Enable tablets to be taken **once or twice daily** to reduce forgetfulness and prevent children having to take medication at school.

Anderson et al (2000)

3

A switch from standard formulation to **slow release** drugs produces fewer side-effects and increases adherence.

Doughty et al (2003)

2

Use **simplest drug regime** possible in terms of dosage and number of tablets—preferably once daily dose..

**Cramer et al (2002)
Asadi-Pooya (2005)**

Dr. Sattawat Wongwongjunt, MD Division of Neurology,
Department of Medicine, Faculty of Medicine,
Siriraj Hospital, Mahidol University

Reference: Jaanne Eatock, Gus A Baker.
Neuropsychiatric Disease and Treatment 2007;3(1) 117-131.



**DRUGS DON'T WORK
IN PATIENTS WHO DON'T TAKE THEM.**

RECOMMENDATIONS FOR IMPROVING ADHERENCE: EDUCATION/INTERVENTIONS

01

EDUCATIONAL PROGRAM

Use of educational programs to provide information about **epilepsy, AEDs, adherence,** and patient decisions, tailor programs for adolescents.

Buck et al (1997b)

02

MEDICATION MONITORING

In clinical trials involving AEDs, data from MEMs (Medication Event Monitoring System) caps can be used to **provide feedback to patients** to show actual drug taking behavior.

Cramer et al (1995)

03

SERUM LEVEL

Postictal serum levels can be used as **feedback to patients** in order to avoid seizures and promote adherence.

Specht et al (2003)