

5. Conditions

[pthread_cond_init\(\)](#), [pthread_cond_signal\(\)](#), [pthread_cond_wait\(\)](#)

```
int pthread_cond_init(pthread_cond_t *restrict cond, const pthread_condattr_t *restrict attr);
pthread_cond_t cond = PTHREAD_COND_INITIALIZER;
int pthread_cond_signal(pthread_cond_t *cond);
int pthread_cond_wait(pthread_cond_t *restrict cond, pthread_mutex_t *restrict mutex);
```

Example:

```
pthread_mutex_t lock = PTHREAD_MUTEX_INITIALIZER;
pthread_cond_t cond = PTHREAD_COND_INITIALIZER;

// some thread, waiting:
Pthread_mutex_lock(&lock);
while (ready == 0) Pthread_cond_wait(&cond, &lock);
// condition occurred and we have the lock here
... do stuff ...
Pthread_mutex_unlock(&lock);

// some other thread, signaling:
Pthread_mutex_lock(&lock);
... do stuff ...
ready = 1;
Pthread_cond_signal(&cond);
Pthread_mutex_unlock(&lock);
```